Completion Report

Project Number: 30540
Loan Number: 1667
December 2009

Philippines: Agrarian Reform Communities Project

Asian Development Bank

CURRENCY EQUIVALENTS

Currency Unit – Pesos (P)

		At Appraisal (21 October 1998)	At Project Completion Mission (10 September 2009)
P1.00	=	$0.0233	$ 0.0207
$1.00	=	P42.85	P 48.239

ABBREVIATIONS

ADB	–	Asian Development Bank
ALAD	–	allotment advice
APO	–	area project office
ARB	–	agrarian reform beneficiary
ARC	–	agrarian reform community
ARCP	–	Agrarian Reform Community Project
ARMM	–	Autonomous Region of Muslim Mindanao
BAWASA	–	*barangay* water and sanitation association
CARP	–	Comprehensive Agrarian Reform Program
BCA	–	benefit–cost analysis
BLGF	–	Bureau of Local Government Finance
CSO	–	civil society organization
CPMO	–	central project management office
DAR	–	Department of Agrarian Reform
DENR	–	Department of Environment and Natural Resources
DILG	–	Department of the Interior and Local Government
DMF	–	design and management framework
DOF	–	Department of Finance
EIRR	–	economic internal rate of return
FAPSO	–	Foreign-Assisted Project Office
FMR	–	farm-to-market road
ha	–	hectare
HH	–	household
km	–	kilometer
LAA	–	land allotment advice
LBP	–	Land Bank of the Philippines
LGU	–	local government unit
LMS	–	land management sector
LSSC	–	land survey steering committee
M&E	–	monitoring and evaluation
MIS	–	management information system
MDFO	–	Municipal Development Fund Office
NCB	–	national competitive bidding
NEDA	–	National Economic and Development Authority
NGO	–	nongovernment organization
NPV	–	net present value
O&M	–	operation and maintenance
PCR	–	project completion review
PMB	–	project management board
PWS	–	potable water supply
VOC	–	vehicle operating cost

NOTES

(i) The fiscal year (FY) of the government ends on 31 December.
(ii) In this report, "$" refers to US dollars.

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CONTENTS

BASIC DATA

A. Loan Identification

1.	Country	Philippines
2.	Loan Number	1667
3.	Project Title	Agrarian Reform Communities Project
4.	Borrower	Republic of the Philippines
5.	Executing Agency	Department of Agrarian Reform
6.	Amount of Loan	$93,162,000
7.	Project Completion Report Number	PHI 1152

B. Loan Data

1.	Appraisal	20 October 1998
	– Date Started	23 October 1998
	– Date Completed	
2.	Loan Negotiations	20 November 1998
	– Date Started	20 November 1998
	– Date Completed	
3.	Date of Board Approval	18 December 1998
4.	Date of Loan Agreement	1 March 1999 (signing date)
5.	Date of Loan Effectiveness	31 May 1999
	– In Loan Agreement	31 July 1999
	– Actual	
6.	Closing Date	31 December 2005
	– In Loan Agreement	26 December 2007
	– Actual	3
	– Number of Extensions	
7.	Terms of Loan	0.75%
	– Commitment Charge	Pool-based variable rates until 31 December 2002 and LIBOR-based (floating) for OCR
	– Interest Rate	25 years
	– Maturity (number of years)	6 years
	– Grace Period (number of years)	

8. Disbursements

a. Dates

Initial Disbursement	Final Disbursement	Time Interval
14 October 1999	26 December 2008	96 months
Effective Date	**Original Closing Date**	**Time Interval**
31 July 1999	31 December 2005	77 months

b. Amount ($)

Category (1)	(2)	Original Allocation (3)	Last Revised Allocation (4)	Amount Cancelled[a] (5 = 3 – 4)	Amount Disbursed (6)	Undisbursed Balance[b] (7 = 4 – 6)
01	Civil Works	61,828,000	48,799,131	13,028,869	48,873,653	(74,522)
02	Equipment & Vehicles	1,029,600	1,009,515	20,085	914,673	94,842
03	Training & Fellowships	1,133,500	2,185,131	(1,051,631)	1,983,381	201,750
04	Professional Services (Consulting)	3,875,200	4,412,735	(537,535)	4,442,886	(30,151)
05	Survey Contracts	3,070,100	2,400,384	669,716	2,305,174	95,210
06	O&M Costs, CPMO & APOs	900,200	1,538,918	(638,718)	1,791,293	(252,375)
07	Interest and Commitment Charges	14,440,000	12,285,000	2,155,000	12,285,000	0
08	Unallocated	6,885,400	14,186	6,871,214	0	14,186
99D	Imprest Account, DAR	0	0	0	0	0
99M	Imprest Fund, MDFO	0	0	0	0	0
Total		**93,162,000**	**72,645,000**	**20,517,000**	**72,596,060**	**48,940**

APO = area project office, CPMO = central project management office, DAR = Department of Agrarian Reform, LIBOR = London interbank offered rate, MDFO = Municipal Development Fund Office, O&M = operation and maintenance, OCR = ordinary capital resources.

[a] Two partial cancellations were carried out: $13,905,000 on 30 September 2003 and $6,612,000 on 3 November 2004.

[b] The final undisbursed balance of $48,940 was cancelled on 26 December 2008, and the OCR loan was closed on the same date.

9. Local Costs (Financed)
   - Amount ($) 47.238
   - Percent of Local Costs 50.08%
   - Percent of Total Cost 39.47%

C. Project Data

1. Project Cost ($'000)

Cost	Appraisal Estimate	Actual
Foreign Exchange Cost	51,352	25,357
Local Currency Cost	117,501	94,328
Total	168,853	

2. Financing Plan ($'000)

Cost	Appraisal Estimate	Actual
Implementation Costs		
Borrower Financed	75,700	47,089
ADB Financed	78,765	60,312
Other External Financing	0	0
Total	**154,465**	**107,401**
IDC Costs (including service charges)		
Borrower Financed	0	
ADB Financed	14,435	12,285
Other External Financing	0	
Total	**168,853**	**119,685**

ADB = Asian Development Bank, IDC = interest during construction, OCR = ordinary capital resources.

3. Cost Breakdown by Project Component ($'000)

Component	Appraisal Estimate	Actual
A. Base Cost		
1. Rural Infrastructure	78,300	72,758
2. Land Survey	3,086	2,684
3. Development Support	40,593	18,813
4. Project Management	8,857	13,146
Subtotal (A)	**130,836**	**107,401**
B. Contingencies		
1. Physical	9,097	
2. Price	14484	
Subtotal (B)	**23,582**	
C. Interest and Commitment Charge During Implementation	14,435	12,285
Subtotal (C)	**14,435**	**12,285**
Total	**168,853**	**119,685**

4. Project Schedule

Item	Appraisal Estimate	Actual
Date of Contract with Consultants		
Project Management Consultants	July 1999–Dec 2005	April 1999–Dec 2007
Nongovernment Organizations	July 1999–Dec 2002	June 1999–Dec 2003
Civil Works Contract		
Date of Award	1 January 2000	1 January 2000
Completion of Work	31 December 2005	1 December 2007
Equipment and Supplies		
Dates		
First Procurement		30 September 1999
Last Procurement		31 December 2006
Completion of Equipment Installation		Not applicable
Other Milestones		
First Partial Cancellation		30 September 2003
Second Partial Cancellation		3 November 2004
Final Cancellation		26 December 2008

5. Project Performance Report Ratings

	Ratings	
Implementation Period	**Development Objectives**	**Implementation Progress**
31 December 1998	S	S
From 1 January to 31 December 1999	S	S
From 1 January to 31 December 2000	S	S
	Impact and Outcome	**Implementation Progress**
From 1 January to 31 December 2001	S	S
From 1 January to 31 December 2002	S	S
From 1 January to 31 December 2003	S	S
From 1 January to 31 December 2004	S	S
From 1 January to 31 December 2005	S	S
From 1 January to 31 December 2006	S	S
From 1 January to 31 December 2007	S	S

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members[a]
Fact Finding	8–26 September 1997	4	60	a, b, c h,
Appraisal	20–23 October 1998	5	20	a, b, d, e, f, g
Project Inception	19 August–13 September 1999	2	14	a, p
Project Review Mission 1	28 August–8 September 2000	4	49	a, g, p, s
Special Loan Administration	21 November 2000	1	1	a
Project Review Mission 2	15 May–15 June 2001	3	57	a, t, p
Project Review Mission 3	26 November–5 December 2001	2	8	a, p
Project Review Mission 4	15 May–4 June 2002	2	23	k, p
Midterm Review	5–20 May 20003	3	42	k, p, t
Project Review Mission 5	31 August–15 September 2004	2	30	c, p
Project Review Mission 6	3–14 October 2005	2	24	l, p
Project Review Mission 7	11–19 December 2006	4	22	m, n, o, q
Project Review Mission 8	19–21 December 2007	3	7	m, n, o
Project Completion Review [b]	28 July–27 August 2009			m, n, q

[a] a – senior project specialist, b – senior programs officer, c – economist, d – economist/rural development specialist, e – counsel, f – programs officer, g – social sector economist/specialist, h – consultant (institutional specialist), i – social sector specialist, j – control officer, k – poverty reduction specialist, l – senior water resources specialist, m – senior social sector development specialist, n – financial analysis specialist, o – water resources management specialist, p – assistant/associate project analyst, q – project officer, r – consultant agrarian reform specialist, s – consultant (management & institutional development specialist), t – consultant rural infrastructure engineer/specialist.

[b] The project completion report was prepared by Agustina Musa, Financial Due Diligence Specialist (team leader); Manoshi Mitra, Senior Social Development Specialist and Homer Taylor, Project Analyst (team members).

I. PROJECT DESCRIPTION

1. Agriculture continues to play a significant role in the economy of the Philippines, both in terms of its direct contribution to production and employment and as a basis for activities in the manufacturing and service sectors. During the first 6 years of the 1990s, agriculture's direct contribution to the country amounted to about 22% of gross domestic product, and agro-industry accounted for another 13%, while as much as one-third of the value added in the service sector was linked to agriculture. Agriculture remains the most important source of employment, directly providing income to 43% of the country's labor force.

2. Land reform in the Philippines has a long history,[1] and earlier initiatives have not significantly achieved the intended improvements in tenure, equity, and sustainable agriculture growth. The earlier programs were limited to land distribution only, rather than providing a comprehensive package of agriculture reforms, basic infrastructure, and support services. The Comprehensive Agrarian Reform Law of 1988 addresses the limitations of the previous programs by incorporating a package of support services in land redistribution. The Agrarian Reform Communities Project was intended to complement the reform. Its expected impact was to increase the income of farmers in selected agrarian reform communities (ARCs), and the expected outcome was to improve the quality of life of agrarian reform beneficiaries (ARBs) by providing basic infrastructure and enhancing agricultural production and productivity in a sustainable manner. The project had the following four components: (i) rural infrastructure improvement focused on rural roads, community irrigation systems, and potable water supply; (ii) a land survey that included surveying and distributing alienable and disposable public lands to ARBs; (iii) ARC development that provided to agricultural and rural enterprises development support; and (iv) capacity building and project management.

3. The project was meant to benefit ARBs, which comprise about 10% of the rural poor in the country. Of 984 ARCs nationwide, the project was intended to assist 140 ARCs in 12 regions and 35 provinces, benefiting about 28,000 households with investments in agriculture and rural infrastructure and the incremental employment generated by the project. The Project design and monitoring framework (DMF) including actual achievements compared with the planned key measurable indicators of project impact, outcomes and outputs, is in Appendix 1.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

4. The Comprehensive Agrarian Reform Law and its implementing framework, the Comprehensive Agrarian Reform Program (CARP), were introduced in 1988 as a government priority. The strategy[2] of the Asian Development Bank (ADB) explicitly addressed the need to expeditiously complete the CARP and strengthen agriculture support services. The government requested[3] ADB to fund a project preparatory technical assistance (TA)[4] to analyze the sector and the relevant government and other institutions that would participate in the proposed project

[1] The Public Land Act of 1903 established a homestead system, providing up to 16 hectares of uncultivated public land to settlers. A series of tenure-improvement and land-redistribution programs followed, notably Presidential Decree 27 of 1972.

[2] ADB. 1998. *Philippines Country Operations Strategy*. Manila.

[3] During ADB's programming mission in November 1996.

[4] ADB. 1997. *Technical Assistance to the Philippines for the Agrarian Reform Communities Development Project*. Manila (TA 2767). Completed in August 1997, following the fact-finding mission in September 1997 and appraisal mission fielded in October 1998).

and to formulate the project design. The report and recommendation of the President (RRP)[5] was prepared based on the project preparatory TA report; the findings of the two ADB missions[6] and visits to selected regions and research organizations; a review and evaluation of the feasibility study; and discussions with national, provincial, and district officials; private sector agribusinesses; and other key stakeholders.

5. The project design was relevant and consistent with the rural and agricultural development strategy of both the government and ADB. The project fully supported the beneficiary-oriented, decentralized, and equitable growth-focused development strategy promoted by ADB. There were no significant changes made during project implementation, as project design and formulation were considered relevant from appraisal to completion in terms of consistency with ADB's country strategy and program, the Philippines' development objectives, soundness of the design, and adequacy of the formulation process. The selected government institutions, cooperatives, civil society organizations (CSOs) and beneficiaries actively participated in the management of the project. However, the roles of commercial financial institutions and the private sector were less significant. The Land Bank of the Philippines (LBP) could not provide the credit portfolio as intended for ARBs due to the inability of ARC cooperatives and/or individual borrowers to comply with eligibility criteria set by the LBP.

B. Project Components and Outputs

6. The project specified most of the qualitative and quantitative measurable indicators for its impact, outcome, components, and outputs. As in Appendix 1, the achievement of quantitative targets met or exceeded expectations at appraisal. This view was supported by all project review missions, including the midterm and project completion review (PCR) missions. Further investments are still required, however, especially to complete the unfinished construction of rural infrastructure and improve the quality and sustainability of other investments. The following are analyses of the progress of each project component:

1. Rural Infrastructure

7. The rural infrastructure component was prioritized to improve physical and social infrastructure in the ARCs. It was conducted effectively to ensure that the investments could improve the livelihood of beneficiaries. At appraisal, the identified infrastructure included access roads, bridges, culverts, communal irrigation (diversion and small water-impounding or pumping schemes), and potable water supply (rehabilitating existing wells, installing additional wells, and developing spring sources). The physical targets were revised following a recommendation from an ADB review mission[7] as project progress lagged[8] because of inadequate counterpart fund allocation up to 2003. Of 365 access road subprojects, 5 roads with a total length of 16.79 kilometers (km) were canceled for lack of local government unit (LGU) counterpart funds. As of 31 December 2007, the project was able to complete 1,199 km of roads and 2 km of bridges along the roads—about 80% of the target at appraisal. The LGUs have struggled to find additional funds for the unfinished construction and the extension and rehabilitation of some existing infrastructure.

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[5] ADB. 1998. Report and Recommendation of the President to the Board of Directors for the Agrarian Communities Development Project. Manila.

[6] The project preparatory TA was followed by a loan fact-finding mission fielded in April 1999 and an appraisal mission in June 1999.

[7] Fielded 31 August–15 September 2004.

[8] As of 31 August 2004, when the loan period was 81% elapsed, the project had achieved only 40% physical progress.

8. **Roads.** At appraisal, the project was to provide all-weather roads mostly through rehabilitation and some new construction. There were, however, some changes in demand during project implementation, as concrete roads were preferred over gravel for the following reasons: (i) In the areas where the main products were rice and corn, portions of the roads were used for drying grain. (ii) The operation and maintenance (O&M) cost was lower. (iii) Since some of the existing roads proposed for improvement were already all weather, the most effective intervention was to upgrade to concrete roads. Roads account for 57% of the total investment for this subcomponent, and the changes affected the overall portfolio of the project. As of December 2007, the project had completed 1,204 km (1,199 km roads and 2 km of bridges along them), or 80% of target at appraisal. The project benefited households through better access to markets, schools, and other public services and attracted more traders to visit the project areas. These improvements have helped beneficiaries get more competitive prices for agricultural inputs and produce. However, some farmers sold their lots for various reasons, such as financing their children's higher education, seeking overseas job opportunities, purchasing motorcycles, and repaying debts.

9. **Irrigation.** After loan effectiveness, the subproject approval committee and project management board revised the irrigation target from 6,500 hectares (ha) to 8,453 ha in light of lower prices for irrigation system materials than estimated in the detailed feasibility studies of this subcomponent. During project implementation, seven irrigation subprojects for 872 ha, of the total 8,453 ha revised target, were canceled for lack of LGU equity. Irrigation for 6,791 ha (105% of the appraisal target) was completed by 2007. At the PCR mission, outstanding works for irrigation stood at about 1,000 ha. As shown in Appendix 1, irrigation facilities have contributed to improved crop productivity and profitability. The indirect benefits of irrigation for the region as a whole were increases in direct agriculture production as well as allied agricultural activities. This contributed to the increase in other rural agro-services, marketing, income, and employment. The detailed effects of the benefits are discussed in Appendixes 1 and 8.

10. **Potable Water Supply.** At appraisal, the project targeted constructing 900 potable water supply (PWS) units: 80 using spring sources, 800 artesian wells, and 20 deep-well pumps. This was revised to 160 units, mostly using wells, spring sources, and/or piped water supply, and shifting from level 2 (public taps) to level 3 (house connections). The changes were mainly to (i) bring water nearer to houses by distributing taps stands along the main pipelines; (ii) accommodate technical problems related to difficulty in locating suitable sources of potable water, as well as reassessments of their economic viability; (iii) ease the collection of water fees; and (iv) create opportunities for LGUs to fund larger subprojects with assistance from other donors including congressmen. At project completion, 98 PWS units had been constructed, or 61% of the revised target. The revised design, from public taps to the indoor connections, may have reduced poor households' access to the services due to the additional cost of installation and lack of technical capacity in some systems to serve all households in the project areas. Further assessments are still required of the long-term sustainability of such services, as some level 2 systems have not functioned well and the water fees charged for level 3 systems are too low to cover the O&M costs or the potential expansion of services. Detailed planned and actual achievement of the infrastructure component is in Appendix 2.

2. Land Survey

11. This component intended mainly to finance the subdivision survey of public alienable and disposable lands distributed under CARP and expedite titling. About 220,000 ha had been identified, and most of the areas had been surveyed, but subdivision surveys were still needed

to facilitate the issuance of individual land titles to ARBs. The project was intended to finance the subdivision survey for about 100,000 ha and the distribution of land titles to individual beneficiaries. At project completion, the project had accomplished the subdivision survey of 101,084 ha (101% of the target at appraisal). Of this, 97,934 ha, or 95% of appraisal target, was inspected, verified, and approved, and survey plans were released as the bases for generating individual titles. A total 43,547 land titles and/or patents were processed and distributed to 43,185 ARBs and farmer beneficiaries. The distributed land titles covered 84,560 ha, or 85% of target at appraisal. The shortfall was due to limited counterpart funds for hiring additional personnel in the Department of Environment and Natural Resources Land Management Sector regional offices and complex issues encountered in the generation, documentation, and processing the individual land titles. The detailed planned and actual achievement of the land survey component is in Appendix 3.

12. Only 57% of the lands for which subdivision was carried out were in project ARCs, and the remainder were in ARC provinces. The project's intention to provide a comprehensive package to complement land reform has essentially not been implemented in the newly distributed lands outside of the project areas. Follow-up is required to ensure that the beneficiaries can improve their livelihoods through a comprehensive package of agricultural development, basic infrastructure, and support services.

3. Development Support

13. This component was designed to increase the production, productivity, and incomes of beneficiaries by providing technical, social, and economic support services. The strategy was part of existing ARC development strategy of the Department of Agrarian Reform (DAR). The component had the following four subcomponents: (i) agricultural development support, (ii) rural enterprise support, (iii) community and institutional development, and (iv) ARC access to credit. It also aimed to complement investments and activities of other TA from other funding agencies.[9] Appendix 4 compares targets at appraisal and actual achievements. As may be seen in the appendix, some quantifiable targets and performance indicators were not properly formulated at appraisal, as there were no measurable indicators for alternative farming systems and LGU activation.

14. The project introduced organic farming systems and capacitated LGUs by providing training to 712 extension workers and 4,022 farmer leaders. About 500 demonstration plots were established, or 266% of the appraisal target, and training was provided to 700 extension workers, or 472% of the appraisal target. The project trained 16,183 farmers (the appraisal had not set a quantitative target). Approximately 18,000 farmers were helped to adopt improved technologies in high-value and commercial crop, livestock, and aquaculture production. However, the outcomes of training and support for diversifying agricultural production were rather limited. Often the technologies themselves were not tried and tested, so many activities either closed down or struggle to survive. Beyond training, real investments for agricultural support services were limited, and the numbers of ARBs reached by the investments were comparatively small, such as only 5–10 households per investment activity. The sustainability of the outcomes of such activities has suffered for lack of links with larger processing or marketing agencies.

15. To support the development of rural enterprises, the project facilitated training for rural enterprises at the cooperative and household level. For this, 1,313 cooperative officers and

[9] Including projects funded by the Food and Agriculture Organization of the United Nations and the United Nations Development Programme.

farmer beneficiaries were trained, or 274% of the appraisal target. The subcomponent also assisted 296 cooperatives by providing economic and management support for specific enterprises. The assistance to the cooperatives included establishing joint ventures, marketing and production arrangements, and other business schemes with the private sector. During implementation, the project may have quantitatively achieved its intended targets for this subcomponent, but many of the enterprises no longer existed by the time of the PCR mission.

16. For community and institutional development, as designed at appraisal, the Project provided assistance to the ARCs on the following subjects: (i) capacity building, gender, and development; (ii) organizing households for cooperative and program development, including capital buildup and resource generation, and (iii) management capacity building for the DAR, LGUs, and the Autonomous Region of Muslim Mindanao. The project covered all the 165 ARCs in terms of organizing and strengthening cooperatives, or more than the appraisal target of 120 ARCs. In the ARCs, the project worked with 963 groups and organizations to assist the communities in developing their business plans and subprojects, and it trained about 10,000 community leaders on cooperative business management. Further assistance in enterprise development and establishing links with the private sector is required to ensure that cooperatives and household enterprises remain viable.

17. At appraisal, the LBP was to provide credit for farm and rural enterprise investments from its resources. Out of the $30.4 million target, only 8% was disbursed. The major reasons for this low rate of utilization were (i) LBP's stringent policy on assessing credit viability, (ii) the existence of past-due loans to most ARB cooperatives, and (iii) high LBP interest rates that discouraged the cooperatives and ARBs from borrowing. Collaboration with large private enterprises may be required to improve beneficiaries' access to commercial financing. The project explored alternative sources of credit to address the issue regarding the LBP.[10] The project established 396 credit unions in 128 out of 165 ARCs, or 55% more than the appraisal target. This resulted in 24,000 ARBs gaining access to credit, or 18% more than the appraisal target. LGUs have worked intensively with the cooperatives and other CSOs, assigning them as priority providers of labor for all infrastructure subprojects. The project encouraged these ARBs to allocate about 10% of their payments to be retained as capital buildup in their cooperatives. Details of the planned and actual achievement of the credit subcomponent are in Appendix 5.

4. Project Management and Capacity Building

18. As planned at appraisal, the DAR established the central project management office (CPMO) and a monitoring and evaluation unit under the Foreign-Assisted Project Office that employed many consultants. Notably, the consultants took an implementation role rather than advisory and technical-support role. This reduced the mainstreaming of project planning and management at the DAR central office. The DAR established three decentralized area project offices in Davao, Iloilo, and Cotabato, which were also staffed by consultants. The project established a monitoring and evaluation system for the ARC level and updated the project operational manual on standardized contract documents, infrastructure quality monitoring, O&M systems, and other topics. Progress monitoring reports, an impact assessment undertaken by independent consultants, and additional inputs from the midterm review mission justified project extension. In addition to the specific measurable targets set in the DMF, the project was able to enhance the technical and managerial skills of 2,989 staff of the DAR and 2,123 staff of LGUs through capacity building, consultations, training, coaching, and mentoring. The project supported skills enhancement for subproject implementation management, the O&M of rural

[10] Following ADB's fourth review mission in 2002.

infrastructure, ARC development planning, gender and development, and various packages of agricultural technology development. Appendix 6 lists training programs conducted by the project. The trained staff of the DAR and LGUs may still need additional skills and knowledge to deal with the private sector and facilitate access for beneficiaries to viable business opportunities and markets.

C. Project Costs

19. At appraisal, the project cost inclusive of taxes, cost and physical contingencies, and service charge was estimated at $168.9 million, consisting of $51.4 million in foreign exchange costs and $117.5 million in local currency costs. The actual project cost at loan closing was $139 million, or 18% lower than the appraisal estimate. The deviations were varied within components and subcomponents. The cost of road infrastructure, mainly for roads and bridges, was 27% higher than the appraisal estimate. As noted in para. 8, the difference was mainly due to the change in design from all-weather gravel roads to concrete roads. The combined unit cost for gravel and concrete roads was about $57,143 per km. This is 18% higher than the appraisal estimate.

20. Although the irrigated area achieved was 6,792 ha, or 5% higher than the appraisal target of 6,500 ha, the cost of irrigation was only 63% of the appraisal estimate. The actual cost per hectare of $1,167 was only 40% of the appraisal estimate of $2,952. The lower cost was from the introduction of shallow tube wells as an alternative irrigation option with a lower investment cost. The lower overall project cost was also attributable to the following: (i) the depreciation of the Philippine peso against the dollar,[11] which led to loan cancellations[12] for total potential loan savings of $20.5 million, (ii) the assumption that the remaining loan proceeds could not be fully utilized because of time constraints,[13] and (iii) the reduced contribution of the LBP. Appendix 7 presents details of the budgeted and actual cost of the project.

21. The updated economic viability of the project was computed by component. The overall project remained viable, as its updated economic internal rate of return was computed at 19.6%, albeit lower than the appraisal estimate of 24.0%. Detailed analysis of project viability and the economic and financial analysis of the project are in Appendix 8.

D. Disbursements

22. Two imprest accounts were established: one with the Bureau of Local Government Finance under the Department of Finance for infrastructure to be channeled through municipal development fund office (MDFO), and one with the DAR for all other eligible expenses. Most loan proceeds were disbursed through these imprest accounts, and several direct payment and commitment procedures were also used. Appendix 9 presents the detailed planned and actual disbursements from various financiers. Several LGUs used force accounts, as they had the facilities and funds to speed up implementation. At appraisal, the targeted disbursement of funds from all financiers for 1999–2004 was cumulatively 13% in 2000, 50% in 2002, 74% in 2003, and 100% in 2005. The actual disbursement period was from 1999 to 2008, for a 3-year delay of completion. Slow disbursement hampered the implementation of rural infrastructure work that was approved earlier. The problems were compounded by delays in replenishing imprest accounts up to 2002 and the withholding of loan proceeds under the MDFO ceiling in the 2000 General Appropriations Act. In addition, the reenacted government budget from 2002

[11] $1 was at P42 at appraisal but to P50 in 2003 and P55 in 2004.
[12] $13.9 million in September 2003 and $6.6 million in November 2004.
[13] The project was supposed to close by December 2005.

to 2004 hampered the project. The DAR was constrained to maintain the same budget as that of the previous year.

23. Fund availability was vastly improved in late 2003 and 2004, when the Foreign-Assisted Project Office extended funding support to the project by borrowing about $7.6 million from other projects. In addition, the CPMO undertook some internal control measures such as adjustments in the tranching of subproject funds and the judicious recall or cancellation of certificates of availability of funds. These actions further improved project financing and allowed faster disbursement in support of all components of the project. Appendix 9 shows the annual disbursements of the project. Except for the problems regarding the unavailability of counterpart funds for joint financing, the designed fund-flow mechanisms were effective, as there were no major difficulties encountered. To reduce constraints on the flow of ADB funds, most LGUs proposed implementing parallel financing for future investments in their areas. They suggested that ADB learn the mechanisms of other donors, such as for the infrastructure projects funded by the Japan Bank for International Cooperation.

E. Project Schedule

24. The project was originally scheduled to be implemented from 31 July 1999 to 31 December 2005, but delays in counterpart fund release severely affected ADB loan disbursement, especially for rural infrastructure, as these funds were disbursed through joint financing.[14] The project required two extensions. The first extension was from December 2005 to June 2007, mainly to allow the completion of the infrastructure component, and the second extension was from July 2007 to December 2007, principally to complete the remaining infrastructure targets that were adversely affected by the deficit of ADB loan funds due to the appreciation of the peso against the dollar, in which the loan was denominated. Aside from the delays and extension for infrastructure, other project components encountered some delays for various reasons. Land surveys faced difficulties in preparing bid documents and contract awards because of bureaucratic procedures in government institutions and other stakeholders involved in this component. Agricultural development support spilled over into the extension period to improve the quality of investment activities and include more rural areas in this component. Appendix 10 presents the project implementation schedule as planned at appraisal and actually implemented.

F. Implementation Arrangements

1. Executing and Implementing Agencies

25. The implementing arrangements essentially remained as envisaged at appraisal. The DAR, the executing agency (EA) of the project, established the CPMO under its Foreign-Assisted Project Office to undertake day-to-day operations. The CPMO was assisted by CARP implementing agencies (IAs), LGUs, CSOs, and the private sector. Other government agencies included the National Irrigation Administration of the Department of Agriculture, Department of Environment and Natural Resources, MDFO, LBP, and regional government of the Autonomous Region of Muslim Mindanao. As designed, area project offices were established in Luzon, Visayas, and Mindanao to support CPMO operations in those areas. The project organizational structure is in Appendix 11.

[14] LGUs were required to have funds in cash before the ADB loan could be released

26. The CPMO was responsible for appraisal, processing and supervising subprojects, budget preparation, accounts consolidation, procurement, and disbursements. Decentralization of project implementation to the DAR provincial offices, LGUs, and ARCs was useful in raising local commitment and resources for subproject planning and execution. LGUs were forthcoming with regard to providing services and resources. Various implementation and coordination mechanisms were put in place from the national to the ARC level to guide and facilitate project implementation. The deployment of consultants during peak implementation periods certainly contributed to project completion. However, the DAR's overdependence on long-term consultants' undertaking routine project tasks did not contribute to sustainability. This dependence on consultants meant that institutional memory has not been retained in the DAR and IAs. Despite this, project implementation arrangements were generally effective in light of local government devolution. LGUs were strengthened, became more responsible in managing the rural infrastructure component, and offered useful inputs to address many challenges faced by the project.

G. Conditions and Covenants

27. The project did not face significant delays in complying with each loan covenant, and none of the major covenants was modified, suspended, or waived, as most covenants were relevant to project needs and realistic. The DAR effectively (i) coordinated uniform policies to implement the ARC development strategy; (ii) prepared environmental principles and safeguard policies as part of detailed design and feasibility of each subproject; (iii) developed a comprehensive method of assessing the impact of agrarian reform; (iv) provided equal opportunity for women to participate (they were more than 50% of participants in training and other project activities); and (v) carried out subprojects in accordance with government operation manual rules that were acceptable to ADB. The project has fully complied with most covenants. The government encountered only minor problems in complying with some covenants, such as delays in providing adequate counterpart funds. The delays were due to various issues including bureaucratic procedures.

H. Consultant Recruitment and Procurement

28. As planned at appraisal, the project did not recruit any international consultants. It employed 4,701 person-months of national consultant inputs, against 4,212 person-months targeted at appraisal.[15] The short-term consultants rendered services totaling 504 person-months, against the appraisal estimate of 169 person-months. The consultants were engaged in accordance with government regulations and ADB Guidelines on the Use of Consultants (2007, as amended from time to time). The project also recruited 21 CSOs for community-managed investments. The deviation arose from adjustment to updated needs, especially to help LGUs properly implement subprojects, including the additional hiring of several engineers and the extension work given to several consultants. According to the IAs, most consultants performed satisfactorily. Project follow-up was, however, very limited as the consultants were not available after project closing. Appendix 13 presents planned and actual consulting services used.

29. As anticipated at appraisal, most infrastructure subprojects were not attractive to international contractors, as they were relatively small and spread over a wide geographical area. All contracts were awarded through national competitive bidding (NCB) and/or implemented through force accounts in accordance with the government's standard procedures, which were acceptable to ADB. The procurement of vehicles and equipment was carried out

[15] The Government of the Philippines, 2008, Project Completion Report for Agrarian Reform Communities Project.

following ADB Procurement Guidelines (2007, as amended from time to time) and in line with government procedures. The project was unable to procure the intended number and type of vehicles and therefore did not fully utilize its $15 million allocation because of government financial policies and austerity measures to limit the number of vehicles purchased by loan projects. This did not significantly affect project implementation, as officials used their existing vehicles.

30. Procurement for implementing the land survey component was done through NCB at a cost of $3.3 million. Procurement of civil works for rural infrastructure subprojects was done through NCB and force accounts. According to several LGUs, force accounts were preferable as they allowed using assets owned by LGUs and were cheaper than NCB. However, the government allows only about $42,000 for this procedure. Procurement in both components was decentralized and consistent with ADB's procurement guidelines and the government's procurement laws.

I. Performance of Consultants, Contractors, and Suppliers

31. Consultants, CSOs, private contractors, and other suppliers of civil works, vehicles, equipment, surveys, training, and other services performed well in general and finished their work properly. Some faced substantial delays in delivering their inputs. However, the delays did not significantly affect the quality of the outputs, as each supplier was recruited to accomplish certain independent procurement packages without any additional costs. Some delays were generally attributed to various causes beyond the control of suppliers, such as unfavorable weather; the peace and order situation, especially in Mindanao; beneficiaries not being available during service delivery; and delays in inspecting, verifying, and approving various subprojects and in the availability of counterpart funds. The performance of consultants, contractors, and suppliers is rated *satisfactory*.

J. Performance of the Borrower and the Executing Agency

32. The assessment of DAR capabilities at appraisal was reasonably accurate, and adequate covenants were included to ensure that all stakeholders would properly administer the project. As the borrower's representative for project administration and the EA, the DAR worked well to ensure compliance with loan covenants and the proper delivery of project outcome and outputs. The DAR and the IAs satisfactorily undertook project planning, coordination, and management of investment activities, including the promotion of coherence in policies and approaches from the national level to the municipal. Adjustments in the work program were made to address various issues, including funding constraints experienced in 2003–2005. The changes included revising project coverage, changes in DAR provincial office leadership and organization, and the reform of some bureaucratic procedures. Nonetheless, with the support of the MDFO, Department of Budget and Management, and other oversight agencies, the CPMO overcame the bottlenecks and obstacles faced by the project. The performance of the borrower, the EA, and other participating agencies is rated *satisfactory*.

K. Performance of the Asian Development Bank

33. During project implementation, ADB fielded 12 missions (1 inception, 9 loan review, 1 midterm review, and 1 completion review) using 428 person-days of consultant and staff services. All missions served their purpose of effectively monitoring the progress of project administration and took the actions necessary to address issues. They helped the government adjust project scope to ensure that it would fully achieve its intended outcome and outputs.

Various recommendations of the missions were generally accepted by the DAR and IAs, and there were no major disagreements between ADB and the government over provisions in the loan agreement, procurement, implementation schedules, or other matters pertaining to project implementation. The agreements were satisfactorily carried out and complied with. Actions included helping the government to make some changes in investment activities through wider stakeholder participation. ADB regularly monitored project administration, including providing training on ADB procedures for procurement and disbursement and familiarizing project staff with other ADB standard operational procedures. Although there were some delays in fielding the midterm review and regular review missions, and some inappropriate advice and reasons for cancelling some of the loan, the performance of ADB is rated *satisfactory*.

III. EVALUATION OF PERFORMANCE

A. Relevance

34. The project is consistent with the priority of the government's economic development policy and ADB policy to reduce poverty especially in rural areas. It helped in decentralization, which is another priority of the government. By providing adequate infrastructure and facilitating access to credits, markets, and technical assistance for promoting agribusiness and rural enterprises, the project contributed significantly to establishing new businesses and expanding and modernizing existing businesses, thereby reducing the disparity in rural–urban incomes and development in the project area. The project considerably contributed to increased rural income in the project areas. Although detailed figures were not recorded, there was an increase in farm and non-farm employment resulting from improved road access and irrigation and other investments supported by the project.

35. The project's design, rationale, and strategies were relevant, as the project made significant contributions to improving the quality of life of ARBs and other smallholder farmers in the project areas. Project interventions were based on the problems, needs, and solutions identified and agreed upon using a multi-stakeholder development-planning approach. Implementation strategies were likewise oriented towards promoting organized community participation. Except in the development-support component, the participatory, demand-driven, and community-based approach helped ensure that project performance was truly responsive to the actual situation in the ARCs and relevant to the aspirations of community members. Overall, the project is assessed as *relevant* both in targeting beneficiaries and in adopting the appropriate strategies. Further improvements could have been made, especially in selecting, monitoring, and following up on activities in the development-support component to improve the viability and sustainability of investments.

B. Effectiveness in Achieving Outcome

36. As presented in the DMF (Appendix 1), the project achieved most measurable indicators set during appraisal for its outcome. Irrigation subprojects promoted the timely supply of water to improve sustainable agricultural production and productivity. It helped beneficiaries realize higher yields and contributed to the increase of yields per hectare of some crops and livestock by 29%, which was more than the 15% target set at appraisal. The project introduced alternative farming systems, offered management assistance, and facilitated access to credit in 165 ARCs, more than the 80 ARCs targeted at appraisal. Road improvement helped reduce transport and handling costs, improve access to more competitive markets, and increase transport availability and the frequency of trips. PWS was provided to 195 *barangays,*[16] more than the 75 *barangays*

[16] Villages or subdistricts under a municipality.

targeted at appraisal. Although some follow-up investments are still required to improve access for the poor and maintain the systems, PWS units have benefited households by reducing time spent collecting water and the cost of treating water-borne diseases.

37. Other significant outcomes of the project included the increase in agricultural land utilized and more cultivated land being devoted to untraditional crops, improved capacity of farmers to repay loans and mortgages, additional land acquired by households, and increased capability in LGUs to implement and maintain rural infrastructure subprojects following infrastructure-related training. Despite some minor shortcomings, as some poor households have not gained access to water supply or have sold their land to meet basic needs, the project was *effective* in achieving its outcomes.

C. Efficiency in Achieving Outcome and Outputs

38. At project completion, the project remained economically viable. Economic viability was computed by component, particularly rural infrastructure and development support. Estimates of economic viability were done at appraisal, midterm review, and project completion in 2007. Previous estimates indicate that the project was economically viable, with an economic internal rate of return (EIRR) of 24.0% at appraisal and 19.6% upon completion.

39. The PCR mission reviewed overall project status, validated project accomplishments in selected provinces, and determined the preliminary impacts of project components. It assessed whether or not the interventions collectively resulted in reducing poverty among ARC households. The economic viability of the project has been re-estimated (Appendix 8 has the detailed financial and economic analysis). The assumptions on project benefits and costs were revised accordingly. The re-estimation shows that the project was efficient in achieving its outcomes and outputs and remains economically viable with an EIRR of 19.6%. This is lower than previous estimates, mainly because of the decrease in the component EIRR for development support. The project has an overall net present value of P1.4 billion at a 15% discount rate. As sensitivity analysis shows that the project would remain viable with a 10% increase in project cost and a 10% decrease in benefits, it is assessed to be efficient. The decrease in the estimate of project viability highlights the importance of following through to ensure sustainability. The components have an estimated project life of 1–20 years, and the computations are based on the benefits accruing throughout the project life. Unless sustained, the estimated benefits will not accrue and will jeopardize the efficiency of the project. Overall, the project is rated *efficient*.

D. Preliminary Assessment of Sustainability

40. The four components of the project have provided significant social and economic benefits. The project constructed 1,204 km of farm-to-market roads, including several bridges; irrigated 6,791 ha of agricultural land; and established 98 units for potable water supply. The government has put in place various requirements and mechanisms to ensure the sustainable O&M of the subprojects. These include sound engineering design and execution, participatory social processes, capacity building for key stakeholders, periodic monitoring and rating by provincial teams of inspectors, and stipulations in agreements between and among the DAR, LGUs, and partner ARC organizations. LGUs complied with requirements such as annual allocations specifically for the O&M of subprojects. The loan conversion and internal revenue allotment have encouraged the LGUs to take care of the O&M of subprojects. The subprojects have been adequately maintained, with 78% rated good and 14% rated fair. Providing additional

support to unfinished infrastructure and improving access for the poor to infrastructure are still required as follow-up actions.

41. Despite some delays in titling, land titles for 97,000 ha (97% of the target) have been released and 86% of targeted lands have been distributed to ARBs. However, most of these beneficiaries have not benefited from other project components. Infrastructure supports have enhanced ARC connectivity with markets, technology providers, credit institutions, and other stakeholders. Project investments in agriculture, rural enterprise, access to financial institutions, and capacity building contributed to the sustainable improvement of household income and employment opportunities. However, the services have not been fully completed to serve more of the poor or areas with newly distributed land. Coordination among various stakeholders, including government institutions, the private sector, and financial institutions, will help services continue. Overall, the project is rated *likely sustainable*.

E. Impact

42. According to the baseline survey in 2001, the average ARC household income was $1,323, which was lower than the national poverty threshold of $1,340 but higher than the $857 estimated at appraisal. The project contributed to the increase in ARC household incomes to an average of $2,231, which is more than the current national poverty threshold of $1,681. The increment of 69% is higher than the appraisal target of 39%. The availability of more jobs on and off farms, including land preparation, harvesting, and agricultural commodity processing, as well as the supporting infrastructure, have significantly contributed to improving the incomes of ARBs and others.

43. The project's beneficiaries perceived that their incomes and quality of life have improved with more economic opportunities and the provision of roads, bridges, irrigation, improved agriculture, rural enterprises, and water and sanitation facilities. Hence, the project was able to improve the living standards of its beneficiaries. The project also promoted business development through collaboration with private firms and financial institutions. Through training and TA, the project helped the government and other participating institutions improve their operational systems and procedures toward achieving providing more user-oriented services. Although not all households in the project areas have been made better off by the project, overall, the institutional and other impacts of the project are rated *significant*.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

44. With a lower total cost, the project was efficiently implemented and generally in line with the arrangements envisaged at appraisal. Most of the physical targets, including their measurable indicators, were exceeded. Delays in disbursing the loan funds due to constraints on national and LGU budgets did not substantially hinder the project. The project adjusted the recruitment of consultants and staff and the implementation of other investments in accordance with the availability of budget from various financiers. Although the LBP was able to disburse only $2.5 million, against a target of $30.4 million at appraisal, the project helped some beneficiaries gain access to other financial, technical, and private institutions to establish income-generating investments. The project established demonstration farms to help farmers and others adopt improved technology and worked closely with extension services and other stakeholders to ensure that the project achieved its intended outputs and outcome. Most issues

were adequately addressed, allowing the project to chalk up an overall physical performance of 125% and an EIRR of 19.6%. Overall, the project is rated *successful*.

B. Lessons Learned

45. **Reference to the Project DMF.** ADB and project staff continuously used the DMF to monitor project progress, provide direction for project operations, and promote connectivity among project components and regarding fund allocation. Using the DMF, project staff were encouraged to enhance their efforts to reach measurable indicator targets for each of the project interventions, cover more beneficiaries and project areas, and focus resource use to ensure effective and manageable service delivery.

46. **Participatory Development.** Promoting social acceptability and enhancing beneficiary participation and ownership are key factors that determine success in achieving intended targets. They are critical to enabling stakeholders to sustain and replicate the gains of the project. The participation of LGUs as the major partners of the DAR in implementing the project was a critical factor toward achieving the intended outputs of the project and ensuring sustainability.

47. **Flexibility on Specific investments.** The project experienced changes in demand from targeted beneficiaries for specific investments of various subprojects, such as greater preference for concrete roads over gravel roads because of their lower O&M costs and the mobilization of other financial services and private sector institutions to finance various income-generating activities. This flexibility enhanced the ability of the project to achieve its intended outputs, encouraged more participation, and ensured the sustainability of project investments.

48. **Less Viable Agribusiness Supports.** The project supported agribusinesses and other enterprises to improve the livelihoods of beneficiaries. Ideally, participatory planning was first conducted between beneficiaries and their LGUs to prioritize the most viable investments. Scattered investments in various products in each *barangay* without detailed feasibility studies contributed to less viable and sustainable investments.

49. **Multi-stakeholder Coordination.** As the EA, the DAR was able to coordinate effectively all IAs at the central, provincial, municipality, and ARC level to work together administering the project. Coordination was largely facilitated by DAR's current setup of having offices at all levels from the national center to the municipal office. The DAR built trust and confidence through various consultations, capacity building, training, workshops, seminars, and the joint implementation of project activities.

50. **Grants, Loan, and Equity Contribution.** The project dealt with the lowest to the highest income classes. Income class, however, did not directly determine the ability of LGUs to provide their equity contribution for proposed subprojects. About 58% of LGUs availing themselves of irrigation facilities were from 4th to 6th income classes and were able to provide the 30% equity and successfully complete the subprojects. These LGUs did not rely only on their regular allocations but went to the extent of obtaining additional funds from external sources to be able to fully provide their contribution to the project. Important sources of external funds for municipal LGUs are congressional oversight allocations of district representatives and senators and contributions from the provincial government. This is an important lesson, particularly for the follow-on project, as LGU equity contribution shares are much higher and LGUs need to seek other fund sources for their contributions.

51. **Access to Financial Services.** The credit component of the project was less successful. The LBP did not find the ARC cooperatives in the target areas suitable for loans, as many of them had existing accounts that were past due or had not reached the allowable thresholds in LBP's cooperative accreditation criteria. While several ARC cooperatives made some gains in terms of improving their creditworthiness with regard to cooperative banks and microfinance institutes, most need professional support to improve their internal systems of accounting and financial management and to restructure their membership and business activities.

C. Recommendations

1. Project Related

52. The following are the project-related recommendations:

(i) **Future Monitoring.** As of now, some project investments such as farm-to-market roads, land distribution, and irrigation subprojects have not been completed. Regular progress reports on the unfinished investments, including their follow-up actions, should be included in the monitoring of the new project.[17]

(ii) **Covenants.** The government should address various issues, including the bureaucratic procedures that caused inadequate and delayed provision of counterpart funds.

(iii) **Further Action or Follow-up.** For the follow-on project, the participation of LGUs should not be limited to the rural infrastructure component but be extended to agribusiness, enterprises, social capital formation, and capacity development in project management and procurement. The focus of local project offices may be expanded to cover all project components. For the rural infrastructure component, parallel financing for subprojects should be sought to improve financial flow management.

(iv) **Credit Assistance.** The government should improve land rights mechanisms to make farmland more bankable. Providing farmers with more infrastructure and technical support and greater supervision will ensure that they are able to raise a high-value crop, market their produce and repay their loans. Further studies are required on how farmers and small enterprises without bankable collateral can access financial services. Collaboration with the private sector should be encouraged to improve economies of scale and the viability of agriculture financed by commercial banks.

(v) **Additional Assistance.** There is an urgent need to assess the potential of public–private partnership to boast economies of scale for various revenue-earning investments. Partnerships that can be developed under new projects include establishing wholesale agricultural markets, slaughterhouses, harbors, processing companies, and other facilities to boost agribusiness development in project areas. Collaboration with the Private Sector Operation Division should also be explored.

(vi) **Timing of the Project Performance Evaluation Report.** An evaluation of project impact should be carried out 3 years after completion, especially to monitor the sustainability of infrastructure and other project investments.

[17] ADB, 2008, Loan 2465 – PHI: Agrarian Reform Community Project II.

2. General

53. The following are the general recommendations:

(i) The availability of counterpart funds to support the implementation of each subproject by each LGU should be carefully and comprehensively assessed, and detailed mitigation measures should be carefully planned and monitored, including any for potential parallel financing. This will avoid delays in project accomplishment.

(ii) The capacity of EA and IAs to participate in administering the project should be assessed during appraisal. At least in the first 2 years of the loan, it is required to crosscheck for consistency and linkages when preparing estimated costs, including component and expenditure accounts; review financing plans; plan implementation; and assess project scheduling to improve project monitoring and evaluation.

54. A general recommendation for project implementation is that ADB, the EA, and the IAs should properly review the project DMF in formulating detailed project implementation plans and performance targets. Project performance reports should be regularly monitored by ADB and harmonized and made consistent with the monitoring system formulated by government agencies.

PROJECT PERFORMANCE AGAINST INITIAL DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators in Original Design	Achievements[1]
1. Goals/Impact		
Increased opportunities for improving socioeconomic status in selected agrarian reform communities (ARCs)	Raised household income from an average of ₱36,000 to ₱60,000 by 2003; reduced depth of poverty; Increase farm and non-farm employment by 40 percent; and Improve access to potable water in 75 barangays.	Annual household incomes of agrarian reform beneficiary (ARB) farming families rose from ₱ 55,590 in 2001 to P93,702 at project completion. An increase in farm and other employment was observed at project completion (no statistics), and 39 ARCs received potable water systems (28 level I and 70 level II), benefiting 15,504 households in 165 *barangays*.
Monitoring Mechanisms	Project benefit monitoring and evaluation (M&E) reports; Project completion report (PCR); Impact assessments; Family income and expenditure surveys	Project benefit M&E was well done and the project completion review (PCR) and family income and expenditure surveys were submitted in a timely way.
Assumptions (A) and Risks (R)	Farm product prices develop as projected; Local government units (LGUs) meet budgetary requirements and integrated ARCs in their development plans; ARCs able and willing to participate in Project (A); Negative impact of financial crisis and El Nino/El Nina not substantial (A); Political thrust for ARC development remains under the new Government and the ARC program gets sufficient financing (A)	Good prices of most products as projected. Most LGUs complied with budgetary requirements, including encouraging ARCs to effectively participate in the project. Most assumptions and risks were properly projected, and mitigation measures were formulated to address various issues.
2. Objectives/Purpose		
Increased and sustainable agricultural production and productivity in selected ARCs; Agribusiness employment opportunities; Improved access to potable water (LGUs, nongoverment organizations [NGOs]); Improved access infrastructure; Sustained ownership and support services by local stakeholders	Raised yields of crops/livestock grown in ARCs by 15%; Introduce alternative farming systems and high-value crops to at least 80 ARCs; Provide assistance in management and credit to agri-based small enterprises in at least 80 ARCs; and Improve access to potable water in 75 barangays by 60%; Reduce transport and handling cost by 30%; .NGOs and/or people's organizations (POs) active in all ARCs; and at least 70 percent of the LGUs and beneficiaries meet their counterpart requirements and maintain the infrastructure.	Rice yields increased from 3,250 kg to 4,100 kg per hectare (ha), or by 29%. Alternative farming systems and high-value crops were introduced to 165 ARCs. Management and credit assistance to agri-based enterprises were provided in the 165 ARCs. As 195 *barangays* gained access to potable water, water-fetching time was reduced from 25.56 to 19.32 minutes per trip, or a 73% reduction. Average transport cost per person per trip was reduced by P2.34, or 11%. Hauling costs were reduced by 14% for paddy, fruit, coconut, livestock, and fertilizer. Transport availability increased by 10 to 12 hours per day for all types of vehicles. Frequency of trips increased by an average of 2 to 4 times daily. A total of 21 NGOs were contracted for

[1] Based on baseline data gathered in 2000 versus achievement in 2009.

Design Summary	Performance Targets/Indicators in Original Design	Achievements[1]
		community organization and development in the ARCs covered by the project, and 97% of LGUs were able to provide equity counterpart funds, but only 45% of the LGUs with completed subprojects have complied with project operation and maintenance (O&M) requirements.
Monitoring Mechanisms	Project benefit M&E reports; Impact assessment; Project progress report; Income classification (and revenue collection) of the municipality; Completion of land distribution	Most required data and information were available on time.
Assumptions (A) and Risks (R)	Environmental ill effects because of new agriculture practices (R); Infrastructure well managed and maintained (A); Cooperatives properly managed (A)	There were no negative environmental impacts, as most investments were to rehabilitate infrastructure, introduce organic agriculture, and improve less-viable cooperatives.
3.1 Rural Infrastructure Access infrastructure rehabilitated and constructed; Community irrigation system (CIS) rehabilitated and constructed; and Access to potable water improved	Rehabilitate/construct about 1,500 km of farm-to-market roads (FMRs), including bridges; Rehabilitate/ construct about 6,500 CISs; Develop about 900 water supply systems; Infrastructure is maintained by the ARCs and LGUs according to the maintenance targets.	Construction was completed of 1,201.31 km of FMRs and bridges, irrigation facilities covering 6,791 ha of agricultural land, and 98 units of potable water systems. Completed infrastructure was turned over to the LGUs, IAs, and *barangay* water and sanitation associations, which are also responsible for O&M.
Monitoring Mechanisms	Project progress report and review missions; Subproject arrangements signed by province and municipality; Project benefit M&E reports; Targeted LGU budget line for ARC maintenance and investments	Project benefit M&E was well done and progress reports were submitted regularly.
Assumptions and Risks	Local contractors and LGUs are effective; No delays in fund releases; ARC beneficiaries meet their full equity contributions in time; Counterpart funds are adequate and released on time; Provinces and municipalities cannot agree on implementation arrangements and cost-sharing for maintenance	Most local contractors and LGUs worked effectively but faced some delays in fund releases due to joint financing for each subproject; Most risks were avoidable, as the project team encouraged all stakeholders to work effectively together.
3.2 Land Survey Survey and distribution of alienable and disposable public lands completed	100,000 ha surveyed by 2002, surveyed land is distributed and titled to beneficiaries within six months of the survey.	About 97% of completed surveys submitted to the Department of Environment and Natural Resources (DENR) were approved and released, while 86% of the land was distributed to farmer beneficiaries. Distribution and titling were delayed by 1 year.

Design Summary	Performance Targets/Indicators in Original Design	Achievements[1]
Monitoring Mechanisms	Survey contracts and reports; Titles or equivalent issued per project progress report; and Project benefit M&E reports	Project benefit M&E was well done, and progress reports were submitted regularly.
Assumptions and Risks	Survey bids and awards are not delayed; Survey validation is not delayed	Some delays occurred in bids, awards, and survey validation to comply with government and ADB procedures.
3.3 ARC Development Support		
Agricultural Development support implemented; Rural enterprise development support implemented; Community and institutional development support implemented; and ARC's access to credit enhanced	Introduced alternative farming systems in selected ARCs; Established about 140 demonstration plots; Activated LGU agriculture extension services in all selected ARCs; Trained 120 extension workers and 480 farmer leaders; Introduced small enterprises to cooperatives and ARBs; Trained 480 leaders of cooperatives and ARBs in enterprise planning and management; Assisted cooperatives in joint ventures, marketing and production arrangements, and other schemes with the private sector; Organized and strengthened cooperatives and interest groups in 120 communities; Prepared community and business plan for 120 ARCs; Trained community leaders on cooperative management and other concerns in 120 ARCs; Credit unions formed in at least 50% of the ARCs; At least 20,000 ARC beneficiaries have access to production and enterprise (trading, processing, etc) credit; and saving rate in ARC is improved; at least 80 percent of the credit is repaid on time.	Alternative farming systems were introduced, with 512 alternative demonstrations plots established in 165 ARCs, 712 extension workers and 4,022 farmer leaders trained and introduced to alternative farm systems, 686 agricultural extension workers activated, and 16,183 farmers trained. Extension workers actively introduced small enterprises to cooperatives and agrarian reform beneficiaries and trained 1,313 leaders of cooperatives and ARBs on enterprise planning and management. The project assisted 296 cooperatives, joint ventures, marketing and production arrangements, and other schemes with the private sector, and 963 organizations in 165 ARCs were formed and strengthened, 165 ARCs prepared their community and business plan, 10,015 community leaders in 165 ARCs were trained on cooperative management, 396 credit unions were formed in 128 out of 165 ARCs, and 3,564 ARC beneficiaries gained access to production and enterprise credits. The repayment rate was at 94% paid on time.
Monitoring Mechanisms	Project progress report and review missions; Loan approvals; Project benefit M&E reports; Cooperation agreements between ARC/LGU and private sector; Food and Agriculture Organization (FAO)-Technical Support to Agrarian Reform and Rural Development (TSARRD) progress reports; Project benefit M&E reports; and Impact assessments and studies	Most required data and information were made available in a timely way.
Assumptions and Risks	Beneficiaries adopt recommended farming practices; Agricultural extension workers are effective; Private sector available and interested in cooperation with ARCs; FAO-TSARRD and United Nations	Some beneficiaries' adoption of farming practices lacked sustainability because of inadequate agriculture extension services. Some private companies worked with ARCs. The LBP did not provide the credit portfolio

Design Summary	Performance Targets/Indicators in Original Design	Achievements[1]
	Development Programme continue support; Government agencies and NGOs are effective; Community leaders and LGUs are responsive; Credit available through the Land Bank of the Philippines (LBP)	as intended, as many beneficiaries could not provide bankable collateral and had outstanding debts and/or the proposed investments did not fulfill the standard criteria set by the bank
3.4 Capacity Building for ARC development and Project Management		
CPMO and benefit monitoring and evaluation (M&E) set up and institutional strengthening undertaken; Management for ARC development in Autonomous Region of Muslim Mindanao (ARMM) strengthened; ARC development decentralized; NGOs and LGUs better integrated in the ARC program in a more structural and sustainable way; ARC program strengthened with regard to (i) improved ARC Operations Manual, (ii) M&E, and (iii) impact assessment	Project is fully implemented by the Central Project Management Office (CPMO) by 2003; CPMO is established under the Department of Agrarian Reform (DAR)-Foreign Assistance Project Services Office (FAPSO) and operational three months after loan effectiveness; 3 area (decentralized) Project offices in Davao, Iloilo, and Cotabato established and functioning; Project benefit (M&E) system operational six months after loan effectiveness; Impact assessment conducted regularly at least once a year; NGOs and LGUs are actively involved in functioning Project coordination boards at the provincial and municipality levels	The project was fully implemented by the CPMO by 2003. The CPMO was established in January 2000, 5 months after loan effectiveness. Area project offices were established in Davao, Iloilo, and Cotabato and functional in 2002. Project benefit M&E became operational 6 months after loan effectiveness. Impact assessment was regularly conducted by the Department of Agrarian Reform's Foreign-Assisted Projects Office.
Monitoring Mechanisms	Project progress report and review missions; Focal-point discussion with NGOs during midterm review; Impact assessment studies; Project benefit M&E reports; ARC Operations Manual	Impact assessment studies were conducted with NGOs' active participation, and other data and information became available.
Assumptions and Risks	Project office is set up on time; Consultants and seconded staff are effective; LGUs are responsive and implementable arrangements between provinces and municipalities as well NGOs can be made; Good coordination of agencies and cooperatives	Project offices were established properly, and most key stakeholders were well coordinated and actively participated in the project.
4. Key Activities		
4.1 Rural Infrastructure Complete barangay consultations and participatory bottom-up planning; Include the subprojects in the regular LGU planning and finance procedures; prepare budget and allocate funds; Design detailed engineering for all roads, bridges, CISs and potable water systems	Capacity-building support for local planning and budgeting, particularly in ARMM; Three rural infrastructure engineers or total of 198 person-months of consulting services from 1998 to 2003	*Barangay* consultations in the covered ARCs were completed. Twenty-three rural infrastructure engineers were hired, rendering 1,310 person-days of services. Detailed engineering designs for rural infrastructure subprojects were completed. Tender and contract documents were prepared for approved civil works and equipment. Completed infrastructure subprojects

Design Summary	Performance Targets/Indicators in Original Design	Achievements[1]
completed; Prepare tender and contract documents for civil works and equipment; Procure equipment; Construct civil works; and Regularly maintain the infrastructure through LGUs and ARCs.		received regular maintenance. Most activities were accomplished as planned.
Monitoring Mechanisms	Project benefit M&E reports and review missions	Most supporting data and information were available.
Assumptions and Risks	Barangay consultations and ARC project prioritization do not coincide with LGU planning; LGU is not willing or able to maintain the infrastructure; Consulting firms bidding for contract; Coordination arrangements with the National Irrigation Administration at the local level	Assumptions and risks were well formulated, and mitigation measures were explored to properly address various issues encountered by the project.
4.2 Land Survey Prepare contract documents for land survey; Conduct alienable and disposable land survey; Distribute land to ARBs.	Contract amounting to P108 million; Implementation arrangements between DAR, Land Registration Authority, and LBP	Contract documents were prepared for land surveys covering 97,000 ha amounting to P133 million. Instead of the Land Management Bureau being the main implementing agency, both DENR, through its regional office, and the DAR, through its provincial office, implemented component activities. DENR regional offices, in collaboration with the national Comprehensive Agrarian Reform Program office for alienable and disposable lands and DAR provincial offices for lands covered with collective certificate of land ownership awards (CLOAs) distributed 84,560 ha to 43,185 ARBs.
Monitoring Mechanisms	Survey contracts and reports; Emancipation patents issued per project progress report; Emancipation patents issued per project progress report	Most supporting data, documents, and other information were available.
Assumptions and Risks	Land distribution progresses	Progress was as planned.
4.3 ARC Development Support Procure equipment for provincial and municipal LGUs; Assign seconded staff from DAR to provincial and municipal LGUs; Organize training courses and cross visits; Conduct basic and advanced training courses; Establish 150 demonstration sites; Provide agricultural and enterprise credits.	Total value of equipment will amount to P11 million; Total of 26 persons seconded; Total value of training courses amounts to almost P9 million; Total investment costs for demonstration sites amount to P3 million; Agricultural credits for a total of P830 million, commencing in 1999, and enterprise credits amounting to P150 million, commencing in 2000	No staff was seconded from the DAR to provincial or municipal LGUs. About P285 million was spent on training conducted under a different component, with training required for a total of 2,076 batches. The project invested in establishing 512 demonstration plots. A total of P189 million in agriculture and enterprise credits were extended to 23,564 ARBs.

Design Summary	Performance Targets/Indicators in Original Design	Achievements[1]
Monitoring Mechanisms	Project progress report and review missions; Reports of LBP; Reports of provincial DAR offices; Impact assessment	Most data and supporting information were available.
Assumptions and Risks	Seconded staff is motivated; Training teachers available and training carried out efficiently; Currency crisis does not substantially reduce lending potential of LBP to ARCs	Most staff were highly motivated. LBP lending to ARCs was affected by the failure of ARBs to comply with commercial bank requirements.
4.4 Capacity building and project management Recruit of contractual professionals; Assign seconded staff from DAR; Recruits consultants; Establish decentralized Project offices; Purchase office equipment, including hard-and software, and vehicles; Provide training for the Project management; Provide special capacity building programs for ARMM.	48 additional staff contracted (including 3 for the Bureau of Local Government Finance) and 26 support staff seconded from provincial and regional DAR offices; 169 person-months consultancy services recruited locally; Investment costs for office equipment amount to P720 million for CPMO and P2.1 million for provincial offices; for computer/printer to P690 million (CPMO) and P2.5 million (Provincial offices); and for 2 vehicles for P1.5 million (CPMO) and 26 vehicles and 2 boats, totaling some P18.5 million.	A total of 36 staff were contracted and one seconded from the DAR regional office for Region XII to the area project office in Mindanao. A total of 4,071 person-days of long-term and 504 person-days of short-term consultancy services were utilized in the project. Investments of P45 million were made for office equipment and vehicles for the CPMO and DAR–FAPSO regional and provincial offices.
Monitoring Mechanisms	Project benefit M&E reports and review missions Impact assessment	
Assumptions and Risks	Directors are competent and hold positions for at least 3 years; Seconded staff is motivated; Consultants are motivated; Timely releases of counterpart funds. Line agencies (particularly the Department of Interior and Local Government, Department of Finance, LGUs, and leagues of local governments) provide training	Required data and information were available.

ARB = agrarian reform beneficiaries, ARC = agrarian reform community, ARMM = Autonomous Region of Muslim Mindanao, CLOA = certificate of land ownership awards, CPMO = Central Project Management Office, DAR = Department of Agrarian Reform, DENR = Department of Environment and Natural Resources, FAO = Food and Agriculture Organization, FAPsO = Foreign-Assisted Projects Office, FMR = farm-to-market roads, LBP = Land Bank of the Philippines, LGU = local government unit, M&E = monitoring and evaluation, NGO = nongovernment organization, PCR = project completion report, TSARRD = Technical Support to Agrarian Reform and Rural Development.
Source: ADB and the Government.

RURAL INFRASTRUCTURE TARGETS AND ACHIEVEMENT

Table A2.1: Rural infrastructure targets and actual achievement

Sub-component	Targets at appraisal		Some changes			By Dec 2007	
	Original	Revised	Approved[a]	Cancelled	Financed	Completed	%
Access roads (km)	1,500	1,200	1,251	17	1,234.5	1,201	80.1
subprojects			365	5	360.0	352	
Irrigations (ha)	6,500	6,500	8,453	662	7,790.7	6,792	104.5
subprojects			53	7	46.0	43	
Potable water supply	900	160	103	5	98.0	98	10.9
subprojects			68	5	63.0	63	
Households	37,600	37,600	16,880	1,376	15,504.0	15,504	41.2

ha = hectare, km = kilometer.
[a] By subproject approval committees and project management board after loan effectiveness.
Sources: Government of the Philippines and Asian Development Bank project completion report mission in 2009.

Table A2.2 Rural Infrastructure Budget and Actual Costs

Type of Subprojects		Appraisal ($'000)				Actual ($'000)			
		Quantity	Unit	Unit Cost	Amount	Quantity	Unit	Unit Cost	Amount
	Gravel					708.43	km	37.29	26,419
Access	Concrete	1,500	km	42.29	63,438	535.74	km	67.92	36,386
	Rehab					5,079.45	ha	0.88	4,445
Irrigation	New	6,500	ha	2.58	16,792	2,711.25	ha	1.31	3,559
PWS	Level 2	900	unit	4.65	4,181	28	unit	2.54	71
						70	unit	33.13	2,319
	Level 3	37,600	HH	0.11	4,152	15,503	HH	0.15	2,390
Total					88,562				75,587.21

ha = hectare, HH = household, km = kilometer, PWS = potable water supply.
Sources: Government of the Philippines and Asian Development Bank project completion report mission in 2009.

LAND SURVEY TARGETS AND ACHIEVEMENT

Table A3.1: Global Target and Cumulative Accomplishments of Land Survey
(as of December 2007)

	Target	Accomplishment			
	Total	DAR	DENR	ha	%
Approved by LSSC	100,000	56,203	46,874	103,077	103
With Issued Fund Allocation (ALAD/LAA)	100,000	56,203	46,874	103,077	103
Bidded & Awarded to Surveyors	100,000	55,673	42,261	97,934	98
Completed Field Survey and Submitted to LMS-DENR for Approval	100,000	56,009	44,192	100,201	100
Approved and Released by LMS-DENR	100,000	53,643	43,614	97,257	97
Distributed Area	100,000	43,135	43,090	86,255	86

ALAD = allotment advice, DAR = Department of Agrarian Reform, DENR = Department of Environment and Natural Resources, ha = hectare, LAA = land allotment advice, LMS = land management sector, LSSC = land survey steering committee.
Sources: Government of the Philippines and Asian Development Bank project completion report mission in 2009.

Table A3.2: Breakdown of Land Survey Location

	DAR			DENR			OVERALL TOTAL		
YEAR	Within ARC[a]	Other ARCs[b]	Total	Within ARC[a]	Other ARCs[b]	Total	Within ARC[a]	Other ARCs[b]	Total
2000	3,200	3,560	6,760	50	2,373	2,423	3,250	5,933	9,183
2001	16,617	4,568	21,185	4,801	3,262	8,063	21,418	7,830	29,247
2002	12,714	9,689	22,402	11,191	5,768	16,959	23,904	15,457	39,361
2003	3,048	2,279	5,327	4,549	10,267	14,816	7,597	12,545	20,143
	35,578	20,096	55,674	20,591	21,670	42,261	56,168	41,766	97,934
TOTAL	64%	36%	100%	49%	51%	100%	57%	43%	100%

ARC = agrarian reform community, DAR = Department of Agrarian Reform, DENR = Department of Environment and Natural Resources.
[a] Within ARC refers to the municipalities covered by the Agrarian Reform Communities Project.
[b] Other ARC refers to other ARCs under the Comprehensive Agrarian Reform Program but within the covered provinces.
Sources: Government of the Philippines and Asian Development Bank project completion report mission in 2009.

Table A3.3: Comparative Breakdown of Land Survey Contracts by Agency

Implementing Agency	Area Bidded (hectares)	Contract Cost ($)	Average Unit Cost ($/hectare)
DAR	55,674	1,577,378	28
DENR	42,261	1,189,843	28
Total	97,934	2,767,220	28

DAR = Department of Agrarian Reform, DENR = Department of Environment and Natural Resources.
Source: Government of the Philippines.

Table A3.4: Breakdown of Land Survey Coverage by Year

Year	By Agency	LSSC Approved Coverage (hectares)	With ALAD/LAA (hectares)	Bidded/Awarded (hectares)
2000	DAR	6,887	6,887	6,760
	DENR	2,423	2,423	2,423
	Total	9,310	9,310	9,183
2001	DAR	21,653	21,653	21,185
	DENR	7,639	7,639	8,063
	Total	29,292	29,292	29,247
2002	DAR	22,251	22,251	22,402
	DENR	16,809	16,809	16,959
	Total	39,060	39,060	39,361
2003	DAR	5,412	5,412	5,326
	DENR	20,003	20,003	14,816
	Total	25,415	25,415	20,143
Total by Agency	DAR	56,203	56,203	55,674
	DENR	46,874	46,874	42,261
	Overall	103,077	103,077	97,934
	%		100%	95%

ALAD = allotment advice, DAR = Department of Agrarian Reform, DENR = Department of Environment and Natural Resources, LAA = land allotment advice, LSSC = land survey steering committee.
Source: Government of the Philippines.

DEVELOPMENT SUPPORT PLAN AND ACHIEVEMENT

Table A4: Plan and Actual achievement of ARC Development Support

Subcomponents	Unit	Appraisal	Actual	%
3.1. Agriculture development support				
Introduced alternative farming systems				
- trained extension workers	person	(…)	712	
- trained farmer leaders		(…)	4,022	
- established demonstration plots	plot	140	512	266
- number of ARCs			165	
- activated LGU agriculture extension services	LGU	(…)		
- trained extension workers	person	120	686	472
- trained farmers	person	480	16,183	3,271
Introduced small enterprises to cooperatives/ARBs	(…)	(…)	(…)	
3.2. Rural enterprise supports				
- leaders of cooperatives and ARBs trained in enterprise planning and production	person	480	1,313	174
- coops assisted in joint ventures, marketing, production arrangements, and other schemes with private sector	cooperative	(…)	296	
3.3. Community & institutional development				
- coops and interest groups in communities organized and strengthened	community organization	120 (…)	165 963	38
- community and business plans prepared	ARC	120	165	38
- community leaders trained on cooperative management and other concerns	ARC	120	165	38
- community leaders	person	(…)	10,015	
3.4. Access to credit				
- ARCs forming credit union	%	50	78	55
- ARCs served	ARC	82.5	128	55
- credit unions established	union	(…)	396	
- ARBs access to credit (enterprises, trading, processing, etc)	ARB	20,000	23564	18
- ARB saving rate improved	(…)	(…)		
- credit on time repayment rate	%	80	94	18

ARB = agrarian reform beneficiary, ARC = agrarian reform community, LGU = local government unit.
Sources: ADB. 1998. *Report and Recommendation of the President to the Board of Directors for the Agrarian Communities Development Project*. Manila; Government of the Philippines.

CREDIT SUBCOMPONENT PLAN AND ACHIEVEMENT

Table A5: Various Indicators of Credit Subcomponent

Remarks	Unit	Appraisal	Actual	Variation	% of target
Total cost for credit	$	28,000,000	4,500,068	(23,499,932)	16
LBP financing	$	30,400,000	2,446,815	(27,953,185)	8
Other sources	$	0	1,704,762	1,704,762	
ARCs established credit unions	ARCs	83	396	313	477
ARBs gained access to credit	ARBs	20,000	23,564	3,564	118
Saving rate	$	0	133,333	133,333	na
Repayment on time	%	80	94	14	118
Agricultural credit	P	830,000,000	(…)	(…)	
	$	17,291,667	(…)	(…)	
Enterprise credit	P	150,000,000	(…)	(…)	
	$	3,125,000	(…)	(…)	
Total credit targeted	P	980,000,000	89,254,867	(890,745,133)	9
	$	20,416,667	1,859,476	(18,557,190)	9

( ) = negative, ARB = agrarian reform beneficiary, ARC = agrarian reform community, LBP = Land Bank of the Philippines.

Sources: ADB. 1998. *Report and Recommendation of the President to the Board of Directors for the Agrarian Communities Development Project*. Manila; Government of the Philippines.

TRAINING AND WORKSHOPS

Table A6.1: Trainings and Workshops Conducted (1999 to 2007)

	Item	Number of participants			Number of Batches	Total Days
		Male	Female	Total		
A.	**Conducted for ARBs Development Support and Rural Infrastructure Components**					
1	Agribusiness and Rural Enterprise Development	3,531	2,454	5,985	250	480
2	Credit and Financial Management	2,345	1,898	4,243	167	323
3	Operation and Maintenance of Rural Infrastructure Subprojects	1,832	566	2,398	94	216
4	Gender and Development	768	1,229	1,997	65	146
5	Accounting and Bookkeeping	463	608	1,071	59	130
6	Leadership and Values Formation and/or Enhancement	1,383	1,006	2,389	95	191
7	Strategic Development Planning Workshop	1,335	1,002	2,337	89	219
8	Sustainability Planning Workshop	1,031	597	1,628	49	98
9	ARC Development Planning andFSD)	553	177	727	38	132
10	Various Planning, Implementation, Monitoring, Evaluation, and Assessment Seminars	1,887	1,250	3,137	96	190
11	Workshops on Orientation, Formation, and Consultations (ARCWG, RIWG, POs) Policy Formulation, Review, and Updating Coop Operations, Management, Planning, and Ownership	5,699	3,629	9,328	268	412
12	Others (Water Management and Soil Conservation, Project Proposal Preparation, Effective Directorship)	4,644	2,872	7,516	290	533
	Subtotal	**25,471**	**17,288**	**42,756**	**1,560**	**3,070**

ARB = agrarian reform beneficiary. FSD = farming System development, ARCWG = agrarian reform community working group, RIWG = rural infrastructure working group, PO = people organization
Source: The Government, 2008

Table A6.2: Training for DAR Provincial Offices, LGUs and other Stakeholders

	Item		Number of participants			Number of Batches	Total Days
			Male	Female	Total		
B.	1	Major Trainings	375	125	500	10	
	2	Coaching Activities for Luzon region	1,170	390	1,560	50	
	3	Workshop on Securing Environmental Clearances for ARC Subprojects	144	96	240	3	
		Subtotal	**1,689**	**611**	**2,300**	**63**	
		Municipal Development Fund Office					
		Account Closure Guidelines and Procedures Workshop	151	373	524	23	86
		Development Support and Rural Infrastructure Components					
	1	ARC Development Planning	152	159	311	40	490
	2	ARCOCA and Strategic Planning	54	56	110	17	83
	3	Business Planning	62	82	144	17	65
	4	Gender and Development	38	100	138	9	45
	5	Cooperative Management	60	70	130	23	56
	6	Social Preparation for RI	508	379	887	95	344
	7	LGU Extension Services	427	285	712	201	
	8	Others (Data Cleansing and Leveling-Off Session, NGO Evaluation)	177	200	377	28	102
		Subtotal	**1,478**	**1,331**	**2,809**	**430**	**1,185**
		Grand Total (A+B)	**28,789**	**19,603**	**48,392**	**2,076**	**4,341**

ARC = agrarian reform community, DAR = Department of Agrarian Reform, LGU = local government unit, NGO = nongovernment organization. ARCOCA = ARC organization capacity assessment, DSIS

Source: Government of the Philippines, 2008.

BUDGET AND ACTUAL COSTS

Table A7.1: Project Cost by Component

($'000)

		Appraisal			Actual		
		Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost
A.	**Rural Infrastructure**						
1.	Access Infrastructure	13,600.0	45,208.6	58,808.6	5,726.7	56,533.4	62,560.2
2.	Irrigation	5,107.1	10,497.0	15,604.1	732.5	7,294.9	8,027.4
3.	Potable Water	1,942.9	1,944.0	3,886.9	199.8	1,970.7	2,170.5
	Subtotal	**20,650.0**	**57,649.6**	**78,299.6**	**6,659.0**	**66,099.0**	**72,758.0**
B.	**Land Survey**	**0**	**3,085.7**	**3,085.7**	**668.0**	**2,016.0**	**2,684.0**
C.	**Development Support**						
1.	Agricultural Development Support	189.4	994.0	1,183.4	187.7	1,449.0	1,636.6
2.	Rural Enterprise Development Support	0	3,682.3	3,682.3	356.6	2,753.0	3,109.6
3.	Community and Institutional Development Support	0	7,727.8	7,727.8	994.7	7,679.5	8,674.2
4.	Credit	9,800.0	18,200.0	28,000.0	337.8	2,608.1	2,946.0
	Subtotal	**9,989.4**	**30,604.1**	**40,593.5**	**1,876.7**	**16,936.7**	**18,813.4**
D.	**Project Management**						
1.	Central Project Management Office	49.9	3,105.6	3,155.5			
2.	Provincial Offices (DAR)	395.6	4,069.4	4,465.0			
3.	Area Offices	66.1	1,170.3	1,236.4			
	Subtotal	**511.5**	**8,345.3**	**8,856.9**	**3,870.0**	**9,276.1**	**13,146.1**
Total Base Cost		**31,151.0**	**99,684.7**	**130,835.7**	**13,073.7**	**94,327.8**	**107,401.5**
Physical Contingencies		2,135.1	6,962.	9.097.3	0	0	0
Price Contingencies		3,630.1	10,854.2	14,484.3	0	0	0
	Subtotal	**36,916.2**	**117,501.2**	**154,417.3**	**13,073.7**	**94,327.8**	**107,401.5**
Interest During Implementation		13,115.0	0	13,115.0	11,177.5	**0**	11,177.5
Commitment Charges		1,320.3	0	1,320.3	1,105.5	**0**	1,105.5
Grand Total Cost		**51,351.5**	**117,501.2**	**168,852.6**	**25,356.7**	**94,327.8**	**119,684.5**
Percentage (%)		30%	70%	100%	21%	79%	100%

DAR = Department of Agrarian Reform.
Sources: ADB and the Government of the Philippines.

Table A7.2: Project Cost by Financing Plan

($'000)

Cost	Appraisal Estimate	Actual
Implementation Costs		
Borrower Financed	75,700	47,089
ADB Financed	78,765	60,312
Other External Financing	0	0
Total	**154,465**	**107,401**
IDC Costs (including service charges)		
Borrower Financed		
ADB Financed	14,435	12,285
Total	**168,853**	**119,685**

ADB = Asian Development Bank, IDC = interest during construction, OCR = ordinary capital resources.
Sources: ADB and the Governmentof the Philippines.

ECONOMIC AND FINANCIAL ANALYSES

A. Introduction

1. The Project completion review mission in August 2009 (the Mission) prepared economic and financial viability analysis using cost-benefit computations separately for each subproject type (i.e., access infrastructure, irrigation, potable water supply, and agribusiness development and rural enterprise support) and consolidated them to determine the overall viability of the entire project.

2. The mission conducted field validations of a cross-section of ARCP agrarian reform communities (ARCs) in the provinces of Nueva Ecija, Iloilo, and Bukidnon. The mission reviewed the status of subprojects in the focus ARCs and conducted field validations and focus group discussions with beneficiaries and other stakeholders. The mission was able to compare the actual costs (particularly operation and maintenance) and benefits against the plan at Appraisal. These findings were incorporated into the estimation of the economic viability of the project for the project completion report. The mission used initial estimates in the midterm review and the DAR project completion report as references but updated these estimates based on its own findings.

3. The mission concluded that the project was economically viable with an overall economic internal rate of return (EIRR) of 19.55% and a net present value (NPV) of P1.39 billion using a discount rate of 15%. The EIRR estimate is lower than the appraisal estimate of 24.00% and the midterm review estimate of 21.74%. The scaling down of the benefits of the agribusiness development and rural enterprise component resulted in the lower EIRR estimate. By individual subproject type, the EIRR varies from 17.13% for rural enterprises to 44.48% for rural water supply.

Table A8.1: Economic Viability Estimates by Subproject Type

Type of Subproject	Appraisal		Midterm Review		DAR (Completion)		PCR Mission	
	EIRR (%)	NPV @ 12% (P'000)	EIRR (%)	NPV @ 15% (P'000)	EIRR (%)	NPV @ 15% (P'000)	EIRR (%)	NPV @ 15% (P'000)
1. Access	17.8	469,880	20.17	743,392	22.25	700,594	23.96	876,225
2. Irrigation	18.6	109,414	25.75	126,468	27.27	95,890	24.31	88,648
3. Potable Water Supply	21.4	44,899	38.25	76,383	33.64	35,246	44.48	70,898
4. Agri-Development	37.2	1,087,134						
5. Rural Enterprise	29.3	227,734	40.2	12,242	34.2	2,977,665	17.13	1,246,171
Overall Project	**24.0**	**1,939,061**	**21.74**	**761,488**	**29.9**	**3,787,282**	**19.55**	**1,388,495**
Benefit–Cost Ratio			**1.29**		**1.6**		**1.2**	

ARC = agrarian reform community, DAR = Department of Agrarian Reform, EIRR = economic internal rate of return, NPV = net present value, PCR = project completion review.
Source: The PCR Mission assessment.
Note: The bases of the appraisal were 24 selected pilot sites. The midterm review was based on 151 ARCs, and the DAR and PCR mission were based on all 165 project ARCs.

B. Economic and Financial Analysis

4. The mission updated the economic and financial analyses of the project, focusing on assessing the economic viability of the different subproject types. Overall, since the ARCP is not a revenue-generating project, only economic viability was determined. Financial costs were adjusted to get the economic costs and the corresponding EIRRs.

1. Major Assumptions

5. **Period of Analysis.** The period of analysis used in the economic viability computations was 20 years for road access, 16 years for irrigation and potable water supply, and 9 years for agricultural enterprise activities under the development support component.

6. **Prices.** Financial prices were converted to economic prices using appropriate methodologies and conversion factors. The mission used a shadow exchange rate factor of 1.2 for traded components and a shadow wage rate factor of 1.6 for unskilled labor, consistent with National Economic Development Agency and Investment Coordination Board standards. All prices were expressed at the 2007 level. A simulation of the effect of price changes to the project's viability was imputed in the sensitivity or switch value analysis.

7. **Project Costs.** The analysis was performed for the project with all quantifiable costs considered, including that of project management. These costs were categorized into civil works, the purchase of goods and equipment, the provision of technical assistance, services, and incremental operating costs related to project implementation. Taxes and price contingencies were excluded from the analysis.

8. **Quantified Benefits.** The benefits considered in the benefit-cost analysis were the computed sources of economic benefits from the project per type of component, which consisted of (i) vehicle operating cost savings, (ii) producers' surpluses, (iii) economic revenues and user fees, and (iv) time savings. Other benefits included specifically for potable water supply (PWS) were reduced morbidity, mortality, and household medical expenses. The flow-of-benefits analysis of the whole project followed the actual phasing of implementation of the components in the project's 8-year duration.

2. Access Infrastructure

9. The primary benefit derived from the repair or construction of 1,200 kilometers (km) of access infrastructure in the 165 covered ARCs was savings in the cost of hauling agricultural produce as a result of reduced vehicle operating cost (VOC). The absence of roads or their state of disrepair during project implementation made it extremely difficult for farmers to move products from farm to market and vice versa. Other benefits observed but not incorporated in the revised economic viability run for the road access subcomponent are the increased number of enrollees in schools along or near the roads and less student tardiness.

10. To aggregate the conditions of the 165 ARCs, a coefficient was derived to estimate VOC savings generated from the improved access infrastructure. This was done by weighted averaging of the hauling and transporting modes in the project areas. The average without-project VOC was P280 per ton-km and with project was P158 per ton-km.

11. The mission included the benefits to passengers in the analysis. It re-estimated the total passenger traffic in the areas influenced by rural access facilities at 250,000 trips for the 165 covered ARCs. The regular users of the road were mainly farmers and other employed household members. Computed VOC savings for the passenger traffic is P21.08 per kilometer. Other assumptions are presented in Table A8.2.

Table A8.2: Assumptions for the Economic Viability Analysis of Access Infrastructure

Assumptions		Average Amount	Unit
O&M Cost for Gravel Roads		40,000	Pesos/km
O&M Cost for Concrete Roads		20,000	Pesos/km
O&M Cost for Bridges and Culverts		2,500	Pesos/km
Vehicle Operating Cost Savings with-without Project		122	Pesos/km
Compound Population Growth Rate		1.52	%
Average Yield of Agricultural Produce			
	Paddy	3.40	Tons/hectare
	Corn	2.57	Tons/hectare
	Sugarcane	52.70	Tons/hectare
	Coconut/Copra	2.39	Tons/hectare
Average Percentage of Agricultural Produce Exported			
	Rice	64	%
	Corn	72	%
	Sugarcane	98	%
	Coconut/Copra	95	%
Average Hauling Cost Savings with Project		1.72	Pesos/kilogram
Average Passenger Transport Savings with Project		21.08	Pesos/passenger
Average Percentage of Commuters Out of Total Population		26	%
Average Operating Days of Commuters		215	Days
Average Operating Days of Vehicles		277	Days

km = kilometer, O&M = operation and maintenance.
Source: PCR Mission assessment

13. The results of the benefit-cost analysis for ARCP's access infrastructure covering 352 subprojects with a total length of 1,200 km indicate that the component is viable with an EIRR of 23.96% and an NPV of P876.2 million at a 15% discount rate. The details are presented in Table A8.3.

Table A8.3: Benefit–Cost Analysis for Access Infrastructure

Year	Actual Year	Number Of Subprojects Completed or Maintained	Length in Km as Completed or Maintained	Total Financial Investment Cost	Total Adjusted Financial Cost[a]	Total Economic Investment and O&M Cost	Total Benefits	Net Benefits
0	2000	4	34					
1	2001	8	86	10,650,844	8,907,263	111,249,539		(111,249,539)
2	2002	14	187	8,306,527	6,946,605	328,739,587	20,617,289	(308,122,298)
3	2003	17	346	5,063,871	4,177,586	389,547,850	84,027,582	(305,520,268)
4	2004	22	551	15,484,427	12,969,360	392,812,627	165,326,578	(227,486,049)
5	2005	25	798	18,152,835	15,022,461	440,899,366	270,013,855	(170,885,511)
6	2006	30	1098	24,797,777	20,659,122	481,500,716	363,377,406	(118,123,310)
7	2007	30	1098			849,532,969	502,330,156	(347,202,813)
8	2008	30	1098			49,639,541	768,436,038	718,796,497
9	2009	30	1098			50,152,181	818,266,072	768,113,891
10	2010	30	1098			50,679,853	881,451,985	830,772,132
11	2011	23	1064			51,151,077	952,765,926	901,614,849
12	2012	17	1012			49,473,996	964,786,719	915,312,722
13	2013	13	752			44,171,315	921,923,967	877,752,652
14	2014	9	547			37,783,314	815,273,213	777,489,899
15	2015	9	300			31,633,933	720,016,748	688,382,816
16	2016	0	300			31,633,933	720,016,748	688,382,816
17	2017	0	300			31,633,933	720,016,748	688,382,816
18	2018	0	300			31,633,933	720,016,748	688,382,816
19	2019	0	300			31,633,933	720,016,748	688,382,816
20	2020	0	300			31,633,933	720,016,748	688,382,816
21	2021	0	300			31,633,933	720,016,748	688,382,816
22	2022	0	300			31,633,933	720,016,748	688,382,816
23	2023	0	300			31,633,933	720,016,748	688,382,816
24	2024	0	300			31,633,933	720,016,748	688,382,816
25	2025	0	300			31,633,933	720,016,748	688,382,816
							PV Cost	**1,672,786,759**
							PV Benefits	**2,549,011,954**
		NPV at 15%	**876,225,195**					
		EIRR	**23.96%**					
							BCR	**1.52**

BCR = benefit–cost ratio, EIRR = economic internal rate of return, km = kilometer, NPV = net present value, O&M = operation and maintenance, PV = present value.

[a] Adjusted financial cost is total investment cost minus taxes, contingencies, and pre-engineering costs.

Source: PCR Mission assessment.

3. Irrigation

14. The rehabilitation and construction of communal irrigation systems served 7,821 hectares of rice paddies. The availability of water as a production input coupled with technology support from the agricultural development services of the project led to the attainment of producer surpluses that came mainly from increased cropping intensity and yield.

15. The increase in cropping intensity resulted from the expansion of effective irrigation service area (areas included in the design but not actually served by existing irrigation system) and from the generation of new irrigable areas to be served through the construction or expansion of irrigation facilities. The average cropping intensity for both types of irrigation used in this analysis is 85% for without-project and 160% for with-project. Average yields from the irrigated farms increased from 2,000 kg to 4,000 kg per hectare with the project. Aside from the irrigation facilities for rice-producing areas, other inputs from the project induced a shift to cultivating other crops. Other assumptions used in determining the economic viability of the irrigation component are shown in Table A8.4.

Table A8.4. Assumptions in the Economic Viability Analysis for Irrigation Subprojects

	Assumptions	Factors	Financial Values (P)	Economic Values (P)
1.	**Total project cost (less pre-engineering, contingencies, and taxes)**		**331,499,615**	**332,833,466**
2.	**Materials cost as a percentage of total project cost**	**70%**	**232,049,731**	**250,613,709**
	Foreign component of materials	40%	92,819,892	111,383,871
	Local component of materials	60%	139,229,838	139,229,838
	Economic conversion factor of forex materials	1.2		
3.	**Labor cost as a percent of total project cost**	**30%**	**99,449,885**	**75,581,912**
	Unskilled	60%	59,669,931	35,801,958
	Skilled	40%	39,779,954	39,779,954
	Economic conversion factor for unskilled labor	0.6		
4.	**Maintenance cost**		**8,993,000**	**8,093,700**
	Cost per hectare		**1,150**	**1,035**
	Materials cost as a percent of maintenance	**60%**	**690**	**704**
	Foreign component of materials	10%	69	83
	Local component of materials	90%	621	621
	Labor cost as a percent of maintenance	**40%**	**460**	**331**
	Unskilled labor	70%	322	193
	Skilled labor	30%	138	138
5.	**Total area (hectares)**	7,820		
6.	**Farm gate prices (pesos/ton)**	0.71	8,500	6,035
		Without Project	**With Project**	**Increment**
7.	Cropping Intensity	0.85	1.60	0.75
8.	Palay yield at full development (tons/hectare)	3	5	1.00
9.	Assumed first year yield (tons/hectare)	3	4	1.00
10.	Years to reach full development	10	6	(4)
11.	Annual yield growth	2%	5%	3%
12.	Cost of production per cropping, Financial	12,554	19,095	6,541
13.	Cost of production per cropping, Economic	8,913	13,557	4,644

Source: PCR Mission assessment

15. During the field visits, the mission found that, among three irrigation projects validated, one system was not yet operational since there were technical problems with regard to water discharge. Discussions with the DAR indicate that there are irrigation systems in ARCP ARCs that are currently not functional due to management problems. However, the stakeholders (e.g., the National Irrigation Administration, local government units, and irrigation associations) are taking the actions necessary to make their irrigation facilities functional again. The delay in the benefits assumed for the non-functional systems is 3 years from subproject physical completion. This was incorporated in the benefit-cost computations.

16. The 7,821 hectares of rehabilitated systems and constructed projects were in 46 subprojects. The benefit-cost analysis indicates that this component of the ARCP is economically viable, with an EIRR of 24.31% and an NPV of P88.65 million at a discount rate of 15%. The details are presented in Table A8.5.

17. In addition to the direct benefits, the improved irrigation has provided some indirect benefits to the communities, i.e., those accrued to the wider sectors of the local economy. The indirect benefits include backward linkage effects because of additional inputs (labor and materials) used in irrigated agriculture due to improved crop productivity. The systems improved income and employment in the agro-industry and non-farm sectors of the rural economy. Therefore, the indirect benefits of irrigation play a larger role in poverty alleviation and maintaining food security than the direct benefit in term of increased crop productivity.

Table A8.5. Benefit-Cost Analysis for Irrigation Subprojects (P)

Year	Actual Year	Number of Hectares Implemented and Maintained	Number of Sub-projects	Total Financial Investment Cost	Total Adjusted Financial Cost[a]	Total Economic Investment Cost	Total Economic O&M Cost	Total Economic Cost	Total Benefits	Net Benefits
0	2000									
1	2001	100.00	1	13,051,428	12,451,949	13,051,428		13,051,428		(13,051,428)
2	2002	200.00	2	26,998,462	24,814,961	26,998,462	49,840	27,048,302	5,961,953	(21,086,349)
3	2003	689.30	6	44,209,490	40,892,322	44,209,490	346,340	44,555,830	9,343,288	(35,212,542)
4	2004	1,006.05	10	33,163,334	35,540,895	33,163,334	591,981	33,755,315	15,414,344	(18,340,971)
5	2005	2,606.05	19	122,038,440	123,660,305	122,038,440	1,778,005	123,816,445	39,404,112	(84,412,333)
6	2006	4,194.79	30	93,372,312	94,139,185	93,372,312	5,768,598	99,140,910	74,642,653	(24,498,257)
7	2007	7,820.70	46				10,009,206	10,009,206	81,254,287	71,245,081
8	2008	7,820.70	46				10,029,310	10,029,310	89,484,807	79,455,497
9	2009	7,820.70	46				11,616,265	11,616,265	101,695,804	90,079,539
10	2010	7,820.70	46				11,706,242	11,706,242	106,396,305	94,690,063
11	2011	7,820.70	46				11,733,000	11,733,000	106,396,305	94,663,305
12	2012	7,820.70	46				11,762,433	11,762,433	106,396,305	94,633,872
13	2013	7,820.70	46				11,711,818	11,711,818	106,396,305	94,684,487
14	2014	7,820.70	46				11,534,422	11,534,422	106,396,305	94,861,883
15	2015	7,820.70	46				11,232,586	11,232,586	106,396,305	95,163,719
16	2016	7,820.70	45				10,183,181	10,183,181	106,396,305	96,213,124
									PV Benefits	**285,862,767**
									PV Cost	**208,777,172**
									NPV at 15%	**88,648,435**
									EIRR	**24.31%**
									BCR	**1.37**

BCA = benefit–cost ratio, EIRR = economic internal rate of return, NPV = net present value, O&M = operation and maintenance, PV = present value.

[a] Adjusted financial cost is total investment cost minus taxes, contingencies and pre-engineering costs.

Source: PCR Mission assessment.

4. Potable Water System

18. The project was able to construct 98 units of potable water supply in 63 of the 165 covered ARCs. The major quantified benefits in the analysis are water revenue from user fees of P30–P50 per household per month. Revenue represents the economic value of water calculated in terms of user fees (based on consumers' willingness to pay), while the time savings is the opportunity cost of labor valued in terms of wage rates. Other benefits used in determining the viability of the PWS are (i) reduction in morbidity and mortality and (ii) savings in medical expenses of the households served. Table A8.6 presents the specific assumptions used in the economic viability computations for the PWS.

19. It was observed during the PCR mission that approximately 50% the level 2 PWS constructed (i.e., one faucet shared by 10–12 households) have been converted to level 3 (i.e., individual faucets installed in houses), so household members no longer need to fetch water from outside. The conversion to level 3 provides additional benefits to households in terms of time savings, which account to 68% of PWS benefits. The estimated average cost of conversion is P700 per household, which is the cost for the water meter and piping from the tap stand to the house. However, the conversion has also reduced direct access for the poor. Also, the PCR mission encountered several PWS that were not functioning because of management problems. There were PWS that could not serve the intended number of households because water discharge was inadequate. These considerations were incorporated in re-estimating the benefit and cost streams in the economic viability analysis for PWS.

20. The PWS component scores very high in economic viability. The component has an EIRR of 44.51% and an NPV of nearly P71 million at a discount rate of 15%. This is higher than the midterm review estimate of 38.25% because of additional benefits brought about by conversion to level 3.

Table A8.6. Assumptions in the Economic Viability Analysis of PWS Systems

Assumptions	Factors	Financial Values (P)	Economic Values (P)
Investment cost		114,716,000.00	120,619,285
Material cost as a percentage of investment	71%	81,448,360.00	93,339,821
	73%	59,457,302.80	71,348,763
Local component	27%	21,991,057.20	21,991,057
Labor cost as a percent of investment	29%	33,267,640.00	27,279,465
Unskilled labor	45%	14,970,438.00	8,982,263
Skilled labor	55%	18,297,202.00	18,297,202
Maintenance cost per year	5%	5,735,800.00	5,460,482
Material cost as a percentage of maintenance	60%	3,441,480.00	3,854,458
Foreign component	60%	2,064,888.00	2,477,866
Local component	40%	1,376,592.00	1,376,592
Labor cost as a percentage of maintenance	40%	2,294,320.00	1,606,024
Unskilled labor	75%	1,720,740	1,032,444
Skilled labor	25%	573,580	573,580
Adjustment factor for forex	1.2		
Adjustment factor for unskilled labor	0.6		
Benefits			
Population in the area directly serviced by the PWS		77,520	77,520
Average household size		5	5
Water fee per household		50	50
Percentage economically active population	60%		
Daily wage rate		180	108
Number of working days a year		312	312
Annual wage rate		56,160	33,696
Wage rate per hour		23	14
Mortality rate	0%		
Morbidity rate	10%		
Number of days inactive due to water borne illness		10	10
Average medical expenses		1,200	1,200
Hours per year for fetching water without project		365	365
Hours per year for fetching water with project		183	183

PWS = potable water system, forex = foreign exchange
Source: PCR Mission assessment.

Table A8.7: Cost–Benefit Analysis for PWS Subprojects

Year	Actual Year	Number of Units Implemented and Maintained	Number of Subprojects	Total Financial Investment Cost	Total Adjusted Financial Investment Cost	Total Economic Cost	Total O&M Cost	Total Cost	Total Benefits	Net Benefits
0	2000									
1	2001									
2	2002	36	3	10,331,376	8,867,074	10,977,013	-	10,977,013	5,717,741	(5,259,272)
3	2003	46	18	17,399,152	14,228,065	14,025,018	1,321,123	15,346,141	8,517,973	(6,828,168)
4	2004	47	21	3,337,385	2,696,854	2,756,079	2,441,895	5,197,974	8,318,269	3,120,295
5	2005	62	25	6,637,410	5,514,223	5,422,525	2,677,204	8,099,729	9,036,500	936,771
6	2006	90	50	74,730,000	30,505,828	32,240,274	3,716,352	35,956,626	13,250,558	(22,706,068)
7	2007	98	62	40,811,739	33,464,476	36,462,638	4,596,279	41,058,918	21,665,028	(19,393,889)
8	2008	98	62				5,823,166	5,823,166	52,397,772	46,574,607
9	2009	97	61				5,825,980	5,825,980	52,539,014	46,713,034
10	2010	97	61				5,825,980	5,825,980	56,889,369	51,063,389
11	2011	97	61				5,825,980	5,825,980	57,104,777	51,278,798
12	2012	97	61				5,825,980	5,825,980	57,712,430	51,886,450
13	2013	90	50				5,702,191	5,702,191	51,340,789	45,638,599
14	2014	67	45				3,725,611	3,725,611	51,027,392	47,301,781
15	2015	62	42				3,496,284	3,496,284	44,924,776	41,428,492
16	2016	58	38				3,387,582	3,387,582	40,201,015	36,813,434
									PV Cost	**75,849,474**
									PV Benefits	**146,747,236**
									NPV at15%	**70,897,762.32**
									EIRR	**44.48%**
									BCR	**1.93**

BCA = benefit–cost ratio, EIRR = economic internal rate of return, NPV = net present value, O&M = operation and maintenance, PV = present value, PWS = potable water supply.
Source: PCR Mission assessment.

5. All Infrastructure Subprojects

21. Taken as whole, the rural infrastructure component of the ARCP is deemed economically viable. The consolidated analysis has derived an EIRR of 24.32% with an NPV of P906.57 million at a discount rate of 15%. The details are presented in Table A8.8.

Table 8.8: Benefit–Cost Analysis for All Infrastructure Subprojects

(P)

Year	Actual Year	Total Financial Cost	Total Adjusted Financial Investment Cost	Total Economic Investment Cost	Total Economic O&M Cost	Total Economic Investment and O&M Cost	Total Benefits	Net Benefits
0	2000							
1	2001	23,702,272	21,359,212	124,300,967		124,300,967		(124,300,967)
2	2002	45,636,365	40,628,639	366,715,062	49,840	366,764,902	32,296,983	(334,467,919)
3	2003	66,672,513	59,297,973	447,782,357	1,667,463	449,449,820	101,888,843	(347,560,978)
4	2004	51,985,146	51,207,109	428,732,040	3,033,876	431,765,916	189,059,191	(242,706,725)
5	2005	146,828,685	144,196,989	568,360,331	4,455,209	572,815,540	318,454,467	(254,361,073)
6	2006	155,150,842	145,304,135	607,113,302	9,484,950	616,598,252	451,270,617	(165,327,635)
7	2007	40,811,739	33,464,476	885,995,607	14,605,485	900,601,092	609,044,616	(291,556,476)
8	2008				15,852,476	15,852,476	893,035,715	877,183,239
9	2009				17,449,094	17,449,094	955,355,351	937,906,256
10	2010				17,532,222	17,532,222	1,023,828,731	1,006,296,510
11	2011				17,588,488	17,588,488	1,095,281,100	1,077,692,613
12	2012				18,347,160	18,347,160	1,107,641,853	1,089,294,693
13	2013				17,414,009	17,414,009	1,060,794,868	1,043,380,859
14	2014				15,260,033	15,260,033	953,910,098	938,650,066
15	2015				14,728,870	14,728,870	854,809,976	840,081,105
16	2016				13,570,763	13,570,763	851,606,369	838,035,606
17	2017				31,633,933	31,633,933	720,016,748	688,382,816
18	2018				31,633,933	31,633,933	720,016,748	688,382,816
19	2019				31,633,933	31,633,933	720,016,748	688,382,816
20	2020				31,633,933	31,633,933	720,016,748	688,382,816
							PV Benefits	**2,763,884,540**
							PV Cost	**1,857,315,626**
							NPV at 15%	**906,568,914**
							EIRR	**24.32%**
							BCR	**1.49**

BCA = benefit–cost ratio, EIRR = economic internal rate of return, NPV = net present value, O&M = operation and maintenance, PV = present value.
Source: PCR Mission assessment

6. Agribusiness Development Support

22. Agricultural development support in the ARCP concentrated on introducing technology to enhance production or facilitate agribusinesses in the ARCs. Benefits from agricultural production enhancement and enterprises are mostly revenues derived from enterprises or agricultural activity. Using the shadow exchange rate and shadow wage rate factors, the traded goods and materials and unskilled labor were converted into their economic values. Table A8.9, which was derived from the reports of ARCP central project management office, presents the more common types of agricultural technology and agribusinesses that the project facilitated in

ARCs and the estimated number of co-operators and/or adopters involved. This information was used in determining the economic viability of this component.

Table A8.9: Agricultural Production Technology and Enterprises under the Agri-Development Support Component

Type of Technology Implemented (including introduction of new technology through demo farm)	**Average Area (hectares)/ Head per Farmer**	**Farmer Practice Before ARCP**		**Net Income Derived from ARCP Technology Intervention (P)**	**Number of Farmers Involved**
		Type of Crop/ Livestock	**Net Income (P)**		
Major Crops					
Hybrid Rice Commercialization Project	0.10		15,090	17,554	900
Organic Rice Production	0.88		8,311	13,136	422
Coconut Fertilization/ Rehabilitation	0.50	Coconut	2,086	7,862	40
High-Value Crops					
Off-Season Vegetable Production	0.02	Rice	7,520	37,566	2,582
Banana Production	1.02			1,620	1,856
Ube Production	0.50	Marginal		5,455	404
Cassava Production	1.61	Vegetable	3,280	6,239	210
Livestock					
Goat Raising (head)	2			1,625	3,479
Swine Raising, Fattening, and/or Breeding (head)	2			6,831	437

ARCP = Agrarian Reform Communities Project.
Source: PCR Mission assessment.

23. The PCR mission noted, however, that most of the agricultural enterprises were no longer sustained by either farmers or cooperatives. Based on the focal group discussion and key informant interviews, and corroborated in discussions with DAR field offices, there was a high adoption rate during the initial cycles of the subprojects. However, during the subsequent cycles, a downtrend in adoption rate was observed. For the computations, the decreasing rate of adoption of ARCP-introduced technology is assumed at 90% for the first cycle, 70% for the second cycle, 50% for the third cycle, and 30% for the fourth cycle.

24. The benefit-cost analysis for the agricultural development support component indicates an EIRR of 17.13%. This is way below the initial estimate of 40.2% by the midterm review mission and the DAR estimate of 34.2% in its project completion report. Table A8.10 presents the details of the viability analysis.

C. Overall Project Economic Viability Indicators

25. The result of the economic viability computations shows that, after 8.5 years of project implementation, the sources of benefits anticipated during project appraisal are still the primary sources of benefits. The project has an overall EIRR of 19.6% with a net present value of P1.39 billion at a 15% discount rate and a benefit–cost ratio of 1.2. Table A8.11 presents the consolidated benefit-cost analysis of the project.

Table A8.10: Benefit-Cost Analysis of Development Support Subprojects

Yr	Component Cost	Without Project		With Project		Incremental		Total Cost	Net Benefits
		Production Cost	Gross Income	Production Cost	Gross Income	Cost	Income		
1	66,422,496.00	3,485,158.20	8,121,772.12	93,253,284.13	151,456,335.00	89,768,125.93	143,334,562.88	156,190,621.93	(12,856,059.05)
2	46,473,855.00	31,410,202.56	44,329,728.11	283,597,561.69	569,816,254.00	252,187,359.13	525,486,525.89	298,661,214.13	226,825,311.77
3	173,560,311.00	33,300,798.96	46,632,469.13	287,347,178.72	581,014,538.00	254,046,379.76	534,382,068.87	427,606,690.76	106,775,378.12
4	189,087,200.00	45,830,625.12	62,424,014.97	314,028,892.52	612,246,190.00	268,198,267.40	549,822,175.03	457,285,467.40	92,536,707.64
5	179,421,700.00	86,696,318.72	113,955,427.15	448,931,185.23	860,475,688.00	362,234,866.51	746,520,260.85	541,656,566.51	204,863,694.34
6	106,198,248.00	98,672,894.08	129,052,320.85	492,753,851.12	929,098,336.00	394,080,957.04	800,046,015.15	500,279,205.04	299,766,810.11
7		98,672,894.08	129,052,320.85	492,753,851.12	929,098,336.00	394,080,957.04	800,046,015.15	394,080,957.04	405,965,058.11
8		78,938,315.26	129,052,320.85	394,203,080.90	929,098,336.00	315,264,765.63	800,046,015.15	315,264,765.63	484,781,249.52
9		78,938,315.26	129,052,320.85	394,203,080.90	929,098,336.00	315,264,765.63	800,046,015.15	315,264,765.63	484,781,249.52
10		78,938,315.26	129,052,320.85	394,203,080.90	929,098,336.00	315,264,765.63	800,046,015.15	315,264,765.63	484,781,249.52
								NPV at 15%	**1,246,171,885.23**
								EIRR	**17.13%**

EIRR = economic internal rate of return, NPV = net present value.
Source: PCR Mission assessment.

Table A8.11: Consolidated Benefit-Cost Analysis

YEAR	Investment and Maintenance Costs					Total Cost	Project Benefits				Total Benefits	Net Benefits
	Rural Infrastructure Development	Land Survey	Development Support	Project Implementation Management	O&M and Recurrent Costs		Access	Irrigation	PWS	Develop-ment Support		
2000	78,434,675	8,895,570	54,321,605	683,122		142,334,972	0	0		0	0	(142,334,972)
2001	355,912,889	18,460,697	53,743,840	89,958,788	15,562,477	533,638,691	20,617,289	0	0	(12,856,059)	7,761,230	(525,877,461)
2002	1,073,548,654	96,150,472	174,619,087	85,823,730	17,436,979	1,447,578,922	84,027,582	5,961,953	5,717,741	226,825,312	322,532,587	(1,125,046,335)
2003	330,944,629	43,716,329	182,892,941	43,121,259	29,477,392	630,152,550	165,326,578	9,343,288	8,517,973	106,775,378	289,963,217	(340,189,333)
2004	240,178,651	506,152	123,528,182	50,841,214	29,640,631	444,694,831	270,013,855	15,414,344	8,318,269	92,536,708	386,283,175	(58,411,656)
2005	760,732,937	-	92,484,365	37,171,932	32,044,968	922,434,203	363,377,406	39,404,112	9,036,500	204,863,694	616,681,712	(305,752,490)
2006	573,916,079	-	187,369,388	57,218,235	25,075,036	843,578,738	502,330,156	74,642,653	13,250,558	299,766,810	889,990,176	46,411,438
2007	244,913,981	-	27,330,244	51,516,040	42,476,648	366,236,913	768,436,038	81,254,287	21,785,243	405,965,058	1,277,440,625	911,203,712
2008	1,582,960				50,639,541	52,222,501	818,266,072	89,484,807	52,499,007	484,781,250	1,445,031,136	1,392,808,635
2009					50,152,181	50,152,181	881,451,985	101,695,804	52,639,798	484,781,250	1,520,568,837	1,470,416,655
2010					50,679,853	50,679,853	952,765,926	106,396,305	56,996,587		1,116,158,817	1,065,478,964
2011					61,151,077	61,151,077	964,786,719	106,396,305	57,211,995		1,128,395,018	1,067,243,941
2012					59,473,996	59,473,996	921,923,967	106,396,305	57,819,647		1,086,139,919	1,026,665,923
2013					54,171,315	54,171,315	815,273,213	106,396,305	51,448,007		973,117,525	918,946,210
2014					38,783,314	38,783,314	720,016,748	106,396,305	51,134,609		877,547,662	838,764,348
2015					31,633,933	31,633,933	720,016,748	106,396,305	45,031,983		871,445,036	839,811,104
2016					31,633,933	31,633,933	720,016,748	106,396,305	40,309,305		866,722,358	835,088,425
2017					31,633,933	31,633,933	720,016,748				720,016,748	688,382,816
2018					31,633,933	31,633,933	720,016,748				720,016,748	688,382,816
2019					31,633,933	31,633,933	720,016,748				720,016,748	688,382,816
2020					31,633,933	31,633,933	720,016,748				720,016,748	688,382,816
											NPV Benefits	**3,618,601,533**
											NPVCOST	**2,982,482,842**
											NPV at 15%	**1,388,494,676**
											EIRR	19.55%
											BCR	1.2

BCA = benefit–cost ratio, EIRR = economic internal rate of return, NPV = net present value, O&M = operation and maintenance, PWS = potable water supply.
Source: PCR Mission assessment.

26. The switch-value method or sensitivity analysis shows that the whole investment package for the ARCP is fairly viable, even with price increases up to 24%. It likewise remains viable assuming a 10% increase in cost coupled with a 10% decrease in benefits. Table A8.12 presents the results of the sensitivity analysis.

Table A8.12. Sensitivity Test for ARCP Economic Viability

		Increase in Project Cost (%)					
	19.55	**0**	**5**	**10**	**15**	**20**	**30**
	0	20	18	17	16	15	14
Decrease	**5**	18	17	16	15	14	12
in	**10**	17	16	15	14	13	11
Project	**15**	16	15	14	13	12	10
Benefits	**20**	14	13	12	11	11	9
(%)	**30**	12	11	10	9	8	7

ARCP = Agrarian Reform Communities Project.
Note: The shaded areas are combinations that render the project unviable.
Source:

D. Unquantified Benefits

27. No direct benefits were quantified for the capability building provided by the project. These inputs were, however, critical to creating an enabling environment and empowering project stakeholders. The impact assessment of the ARCP revealed that training provided to ARCs on community development and household planning and budgeting, among other topics, have developed self-reliance for economic sustainability beyond ARCP assistance. Likewise, training in governance and various technical topics, i.e., operation and maintenance for infrastructure, has improved the effectiveness of the project implementers (i.e., *barangay* councils, local government units, and DAR offices) in the delivery of their services.

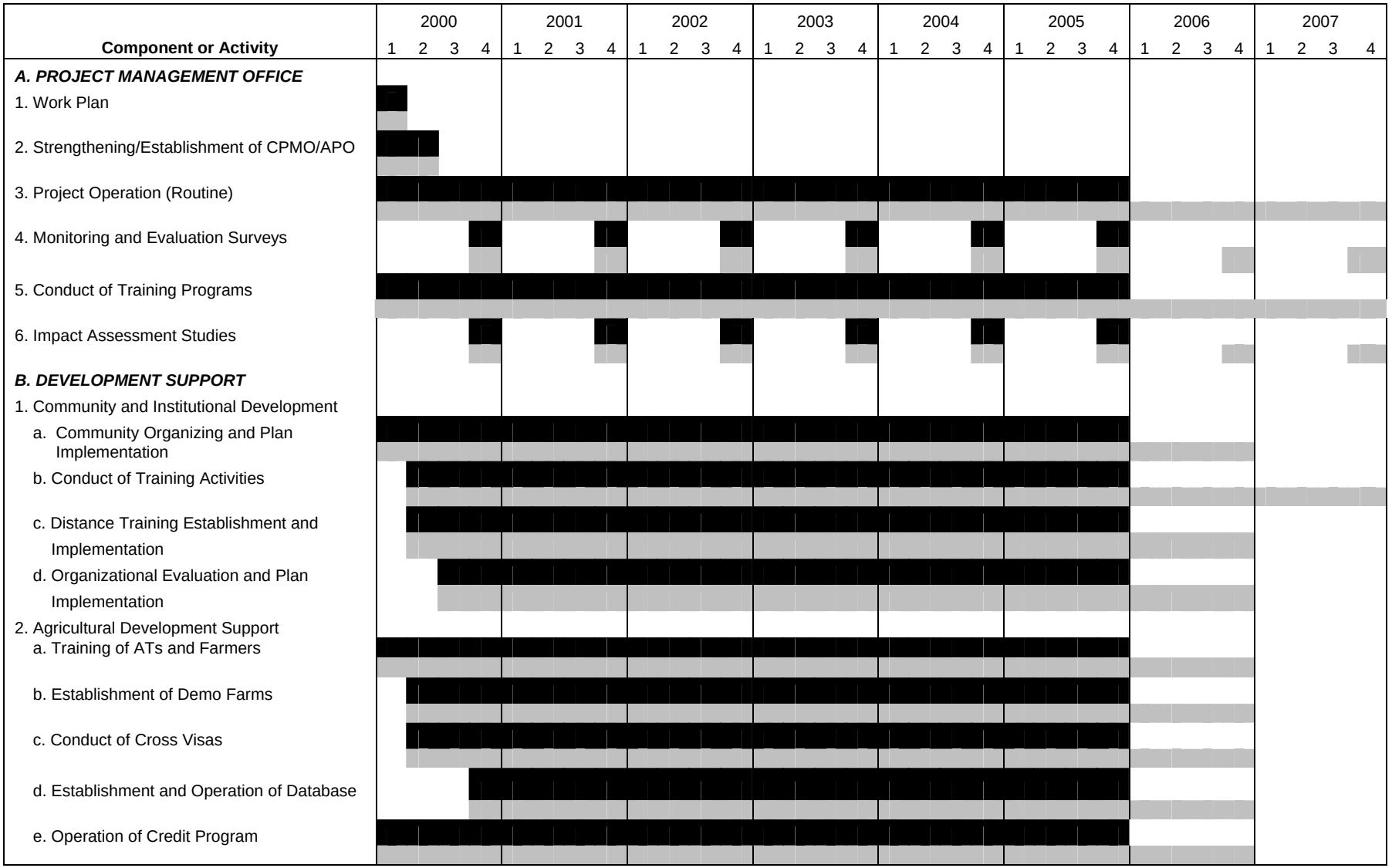
PLANNED AND ACTUAL DISBURSEMENT

Table A9.1: Plan and Actual Disbursement
($ million)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Appraisal plan	6.9	14.3	24.3	36.9	45.8	36.9	0.0	0.0	0.0	0.00	165.1
- plan (%)	4.2	8.6	14.7	22.4	27.7	22.4					100.0
- accumulated	6.9	21.2	45.5	82.4	128.2	165.1	0.0	0.0	0.0	0.00	165.1
Accumulated (%)	4.2	12.8	27.6	49.9	77.6	100.0					100.0
Actual disbursement	0.1	6.0	13.6	36.3	19.0	15.6	21.2	9.8	7.7	0.00	129.3
(%)	0.1	4.7	10.5	28.1	14.7	12.0	16.4	7.5	6.0	0.03	100.0
Accumulated	0.1	4.7	15.3	43.4	58.0	70.1	86.5	94.0	100.0	100.00	

Source: Asian Development Bank and Government of the Philippines.

PLANNED AND ACTUAL IMPLEMENTATION SCHEDULE

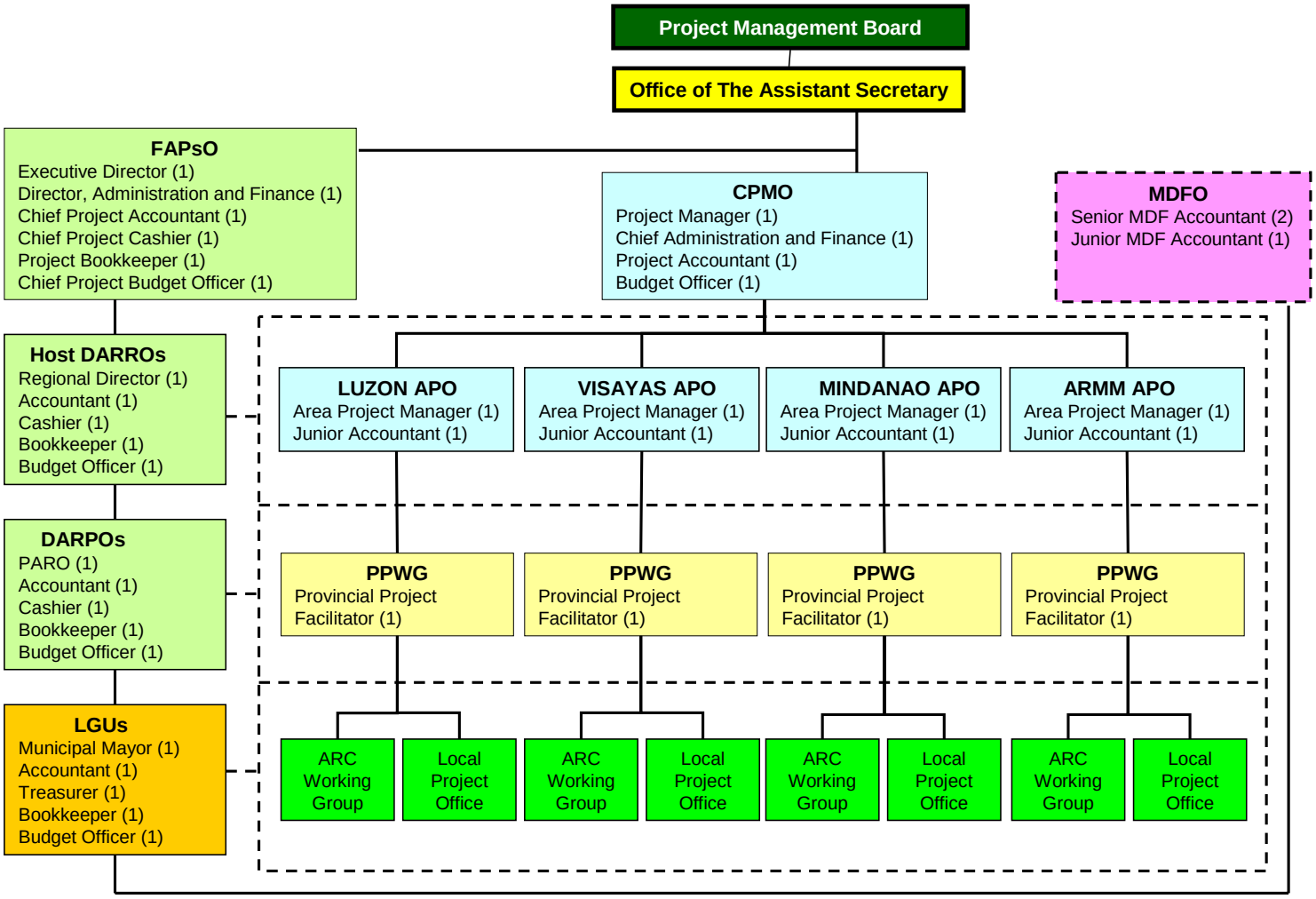


Component or Activity	2000				2001				2002				2003				2004				2005				2006				2007			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
3. Rural Enterprise Development																																
a. Recruitment and Fielding of BOWs																																
b. Establishment and Operation of CCGA																																
c. Establishment and Operation of Market and Investment Linkages																																
d. Conduct of Training Programs																																
C. RURAL INFRASTRUCTURE																																
1. Preparation of FS (ARCs) Engineering Designs																																
2. Processing and Approval of ARC FS																																
3. Implementation of Infrastructure Subprojects																																
4. Routine Supervision and Monitoring of Construction																																
5. Follow-up on Completed Projects Operation and Maintenance																																
D. LAND SURVEY																																
1. Preparation of Bidding Documents																																
2. Award of Contract																																
3. Conduct Land Survey																																

APO = APO = area project office, ARC = agrarian reform community, AT = agricultural technician, BOW = business development worker, CCGA = cooperative contract growing arrangement, CPMO = central project management office, FS = feasibility study.
Source: Government of the Philippines.

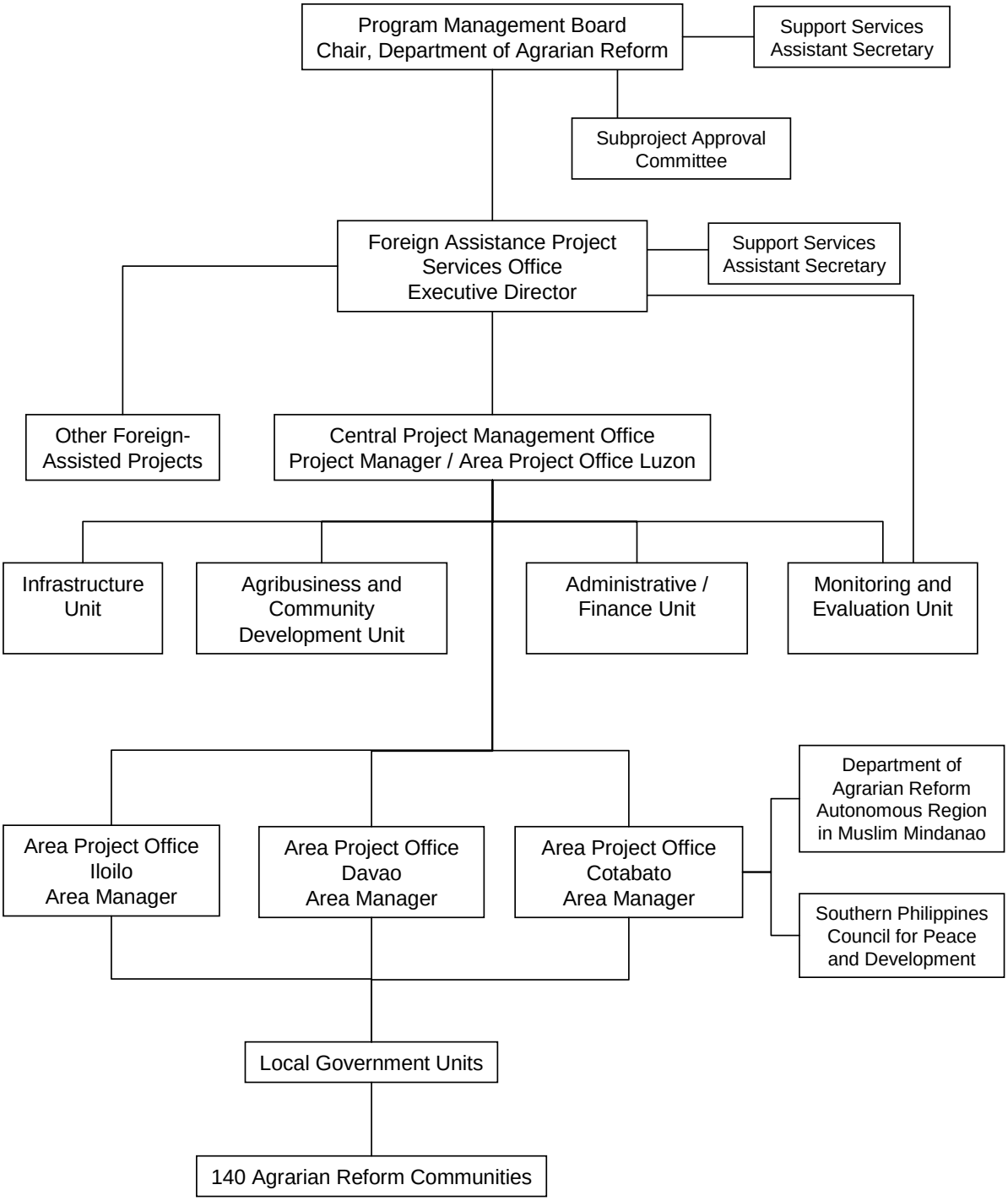
ORGANIZATIONAL STRUCTURE

Figure A11.1: Financial Management Structure



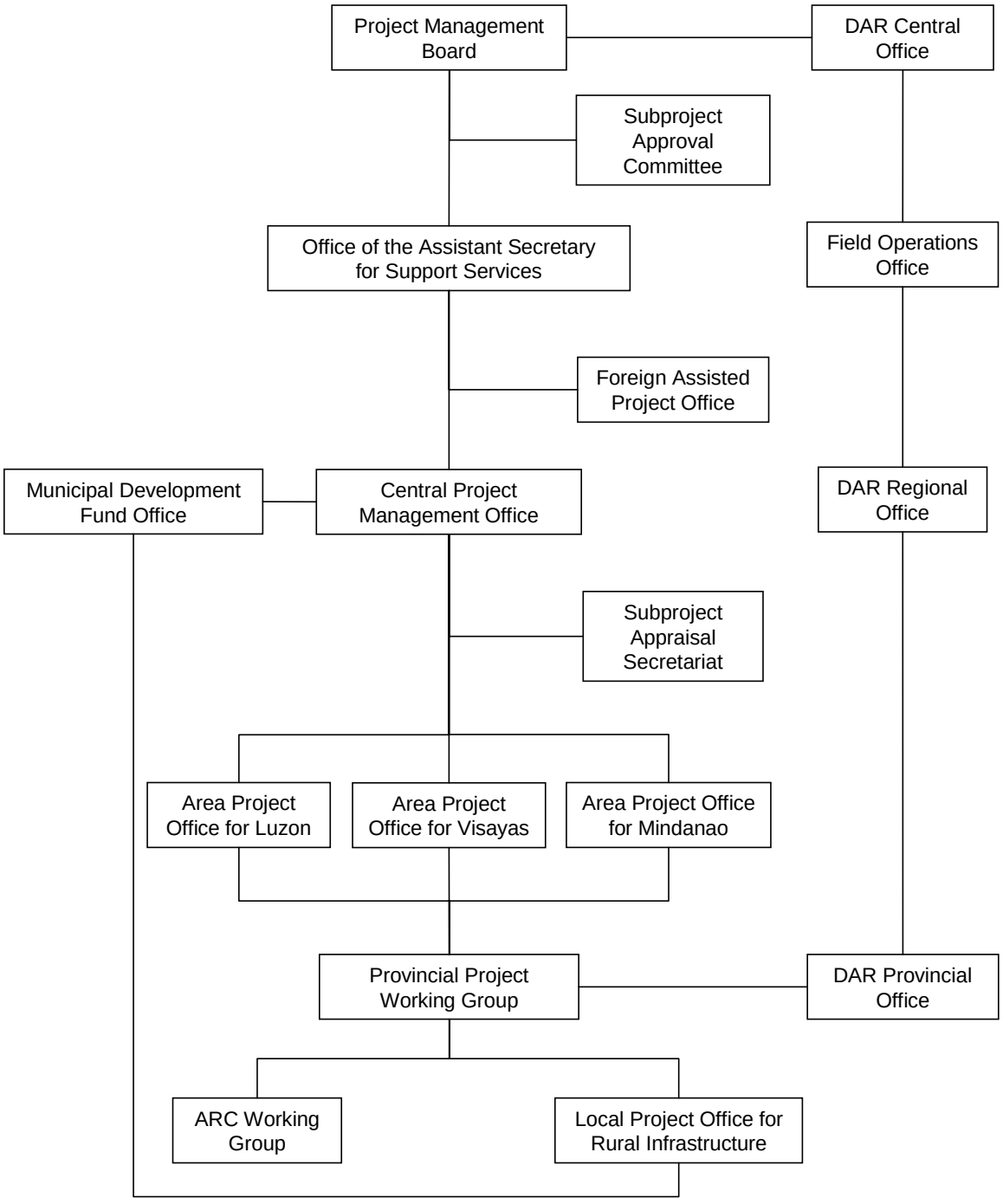
APO = area project office, ARC = agrarian reform community, ARMM = Autonomous Region of Muslim Mindanao, CPMO = Central project Management Office , DARPO = Department of Agrarian Reform Provincial Office, DARRO = ,Department of Agrarian Reform Regional Office FAPsO = Foreign-Assisted Projects Office, LGU = local government unit, MDFO = Municipal Development Fund Office, PPWG = Provincial Project Working Group.
Source: Government of the Philippines.

Figure A11.2: Project Management Structure (appraisal)



Source: Government of the Philippines.

Figure A11.3: Project Management Structure (actual)



ARC = agrarian reform community, DAR = Department of Agrarian Reform.
Source: Government of the Philippines.

COMPLIANCE WITH SPECIFIC PROJECT COVENANTS

Covenant	Reference in Loan Agreement	Timing	Status of Compliance
A. Implementation Arrangements			
1. Borrower shall make arrangements satisfactory to ADB for insurance of Project facilities.	Section 4.05	As soon as possible	Complied with
2. Borrower shall maintain separate accounts for the Project, have such accounts audited annually and furnish to ADB not later than nine months after the end of each related fiscal year, certified copies of such audited accounts and financial statements and report of auditors relating thereto including the auditor's opinion on the use of the Loan proceeds and compliance with the covenants of this Loan Agreement.	Section 4.6(b)	September of each year	Complied with. In December 2004, delayed by 6 days
3. Borrower shall furnish ADB quarterly reports indicating among other things, progress made and problems encountered during the quarter under review, steps taken or proposed to be taken and the proposed program of activities.	Section 4.07(b)	January, April, July, October of each year	Complied with
4. After physical completion of the Project, but not later than 3 months, Borrower shall prepare and submit to ADB a Project Completion Report.	Section 4.07(c)	3 months after project completion	Complied with
5. Borrower shall establish at Bangko Sentral ng Pilipinas, immediately after Effective Date, one imprest account for that portion of the Loan proceeds to be channeled by BLGF through MDFO for disbursements related to Part A and another imprest account for the remaining portion of the Loan proceeds to be channeled through DAR for other Project expenditures.	Schedule 3, para. 8(a)	As soon as loan is declared effective	Complied with
<u>Project Management Board (PMB)</u> 6. The PMB established by DAR shall be responsible for inter-agency coordination and to provide policy direction and overall management guidance in Project implementation. The PMB shall be chaired by a representative from DAR and shall include representative from DOF, NEDA, DBM, DA, NIA and LBP. Within 3 months of Effective Date, the PBM shall include representative from each of DILG, DER, SZOPAD, selected NGOs and Provincial/Municipal Leagues of LGUs.	Schedule 6, para. 2	As soon as loan is declared effective	Complied with
<u>Central Project Management Office (CPMO)</u> 7. The CPMO shall be responsible for day-to-day operations of the Project.	Schedule 6, para. 3	As soon as loan is declared effective	Complied with

Covenant	Reference in Loan Agreement	Timing	Status of Compliance
Area Project Offices 8. Prior to withdrawal from the Loan Account, APOs shall have been established at Iloilo and Davao and Area managers shall have been selected and engaged. The CPMO will undertake the functions and responsibilities for an APO for all Project-related activities in Luzon.	Schedule 6, para. 4	Prior to withdrawal from loan account	Complied with
Project Management at Provincial and ARC Level 9. DAR shall implement Project activities in collaboration with the DAR Provincial Offices concerned. At the ARC level, development facilitators, supervised by the municipal agrarian reform officer concerned, will implement Project activities assisted by community development workers.	Schedule 6, para. 6	During implementation	Complied with
Operations Manual 10. DAR and Implementing Agencies shall carry out the Project in accordance with the terms of the Operations Manual approved by the Bank. The Bank shall be furnished for prior review and approval any proposed amendment or revision to the Operations Manual.	Schedule 6, para. 7	During implementation	Complied with. The operations manual is reviewed and updated regularly.
ARC and LGU Selection Manual 11. As part of the selection of ARCs and LGUs to be included in the Project, the following minimum conditions shall be satisfied: (i) over 75 percent of the relevant ARC land shall have been distributed and titled; (ii) the LGUs concerned shall have adequate financial and organizational capability and commitment to participate in the Project as determined through appraisal of subprojects; (iii) each LGU concerned shall have executed a MOA which confirms the commitment of such LGU to (a) provide the necessary contribution; (b) provide necessary O&M for the subproject facilities; and (c) mobilize agricultural extension and other social services in the ARC.	Schedule 6, para. 8	During implementation	Complied with
Subprojects 12. The following requirements will be met in the development of subprojects: (i) As part of the appraisal of subprojects, the financial and technical capability of the LGUs will be assessed to ensure that adequate resources are available for proper maintenance of access infrastructure, CIS, and potable water supply systems;	Schedule 6, para. 9	During implementation	Complied with

Covenant	Reference in Loan Agreement	Timing	Status of Compliance
(ii) For each subproject, DAR and the LGU concerned will enter into a subproject agreement (and, as applicable, a financing agreement);			
(iii) In the event the LGU concerned obtains financing from MDF to fund its share of the investment cost of the relevant subproject, the LGU will enter into a financing agreement with MDF and as necessary the provincial government concerned;			
(iv) In the event the LGU fails to operate and maintain the subproject concerned after its completion or to provide necessary budget allocations for the required O&M, the amount of the grant originally provided by the Borrower to the LGU will be converted into a subloan on terms and conditions for repayment set by the MDF board and agreed by the Bank;			
(v) DAR will develop in consultation with the LGUs and other agencies concerned, criteria for assessment of subproject O&M and procedures for dispute settlement in such connection; this will be submitted for prior review and approval by the Bank within three months of the date of loan effectivity. DAR will develop in consultation with the LGUs and other agencies concerned, criteria for assessment of subproject O&M and procedures for dispute settlement in such connection; this will be submitted for prior review and approval by the Bank within three months of the date of loan effectivity;		Within 3 months of loan effectiveness	Complied with
(vi) DAR will obtain the concurrence of the Bank for approval of any subproject that costs more than $400,000 equivalent, and will submit the feasibility studies of the first five subprojects finalized after completion of the Project appraisal to the Bank for prior review and approval;			
(vii) Each LGU, with support from the province concerned, will undertake, in accordance with comprehensive participatory methodologies detailed in the Operations Manual, adequate planning, design and construction activities in completion of the subproject within its jurisdiction;			
(viii) LGUs concerned will engage ARC cooperatives in the Project area as priority providers of labor for subprojects, provided that the cooperative members agree to contribute not less than 10			

Covenant	Reference in Loan Agreement	Timing	Status of Compliance
percent of the respective amounts received as payment from the LGUs for their labor toward the equity or capital of their respective cooperatives.			
IAs and BWSAs			
12. IAs and BAWASAs shall be established and made fully operational in order to manage O&M or CIS and potable water supply improvements respectively and to recover O&M and, as applicable, investment costs through beneficiary contributions in kind or in cash.	Schedule 6, para. 10	During implementation	Complied with. A total of 61 *barangay* water and sanitation associations (BAWASAs) and 22 implementing agencies (IAs) have been organized. Conduct of O&M trainings for BAWASAs and IAs completed.
Land, Subdivision Survey Verification, and Issuance of Title Documents			
13. All land and rights in land (including easements) required for implementation of the Project shall be promptly acquired or otherwise made available to ensure timely Project implementation. Any such acquisition shall be in accordance with the Bank's *Policy on Involuntary Resettlement* and *Policy on Indigenous Peoples*.	Schedule 6, para.11	During implementation	Being complied with. Almost 101% of the target of 100,000 hectares (ha) has been surveyed but only 7,918 ha have been titled and distributed to farmer beneficiaries. The inventory of farmer beneficiaries who received land titles is completed and being turned over to the Department of Agrarian Reform (DAR) Foreign-Assisted Project Office (FAPSO).
14. With respect to Part B of the Project, (a) only locations within the Project area that are free of property title or related disputes shall be selected for participation in such land subdivision surveys under the Project; (b) verification of land subdivision surveys will occur not later than the expiry of three months from the date each relevant land subdivision survey is completed under the Project; (c) all necessary documents of title shall be issued to the respective owners of the land included in such land subdivision surveys under the Project not later than the expiry of two months after the relevant land subdivision survey has been verified.	Schedule 6 para. 11I(ii)	During implementation	To be complied with. Due to administrative lags, the 2-month period for the issuance of titles is considered too short and cannot be met. A title working group has been established to review the procedure and propose changes, if necessary.
15. Land registration authorities concerned take all necessary or appropriate measures to facilitate the timely carrying out of Part B of the Project.	Schedule 6, para. 11 (iii)	During implementation	Being complied with

Covenant	Reference in Loan Agreement	Timing	Status of Compliance
Counterpart Contributions	Schedule 6, para. 12 (i)	During implementation	Complied with
16. Each LGU shall maintain the infrastructure provided under Part A of the Project, including providing specific budget allocations for O&M costs, and, in the event such LGU fails to do so, the portion provided by the Borrower to such LGU as a grant to finance the relevant infrastructure provided under the Project shall be converted into a subloan from the Borrower to such LGU on terms and conditions of repayment as set down by the MDF Policy Governing Board and agreed by the Bank.			
17. Each LGU selected to participate in the Project shall provide its LGU Investment to finance the costs of the Subproject within its jurisdiction in accordance with the terms and conditions of the cost-sharing arrangements detailed in the Subproject of Financing Agreement concerned shall maintain the infrastructure provided under Part A of the Project, including providing specific budget allocations for O&M costs, and, in the even such LGU fails to do so, the portion provided by the Borrower to such LGU as a grant to finance the relevant infrastructure provided under the Project shall be converted into a subloan from the Borrower to such LGU on terms and conditions of repayment as set down by the MDF Policy Governing Board and agreed by the Bank.	Schedule 6, para. 12 (i)	During implementation	Complied with
18. There shall be (a) timely and regular release of adequate budgetary allocations for all counterpart funds required for Project implementation; (b) timely selection of the required number of ARCs for Project participation in accordance with criteria agreed with the Bank.	Schedule 6, para 12(ii)	During implementation	Complied with. Department of Budget and Management has implemented some significant policy changes in the budget-allocation mechanism for foreign-assisted projects. This year, because of austerity measures, the project was allocated a total budget of P556.2 million, only P508 million of which has been approved.
19. Each LGU selected to participate in the Project shall provide its LGU Investment to finance the costs of the Subproject within its jurisdiction in accordance with the terms and conditions of the cost-sharing arrangements detailed in the Subproject or Financing Agreement concerned.	Schedule 6, para 12 (iii)	During implementation	Being complied with

Covenant	Reference in Loan Agreement	Timing	Status of Compliance
Environment			
20. For Subprojects involving road and irrigation infrastructure under Parts A.1 and A.2: (a) IEEs shall be prepared as part of the detailed design and feasibility of each Subproject, in accordance with applicable environmental laws and regulations and relevant Bank guidelines; (b) prior approval of the Bank shall be required for any IEE prepared under (a) for any Subproject in an environmentally sensitive area or which costs in excess of $400,000 equivalent; and (c) each Subproject shall be designed on the basis of environmental standards acceptable to the Bank.	Schedule 6 para. 13	Prior to approval of each subproject	Being complied with
Monitoring and Evaluation 21. Within three months after effective date, DAR shall: (i) reorganize the M&E division within FAPSO which shall be headed by a Division Chief who shall report directly to the Executive Director of FAPSO, and with staff, resources and operational procedures satisfactory to the Bank; and (ii) design and establish a M&E System for ARC development in accordance with the terms of an M&E Manual acceptable to the Bank.	Schedule 6, para. 14	October 1999	Complied with. The Monitoring and Evaluation (M&E) Division within FAPSO was established in July 2000. A M&E manual has been prepared by the M&E systems of all foreign-assisted projects. The project is working closely with FAPSO on the system in the DAR to monitor and evaluate at the ARC level.
Impact Assessment on Agrarian Reform 22. DAR shall (a) within three months from the Effective Date, develop a comprehensive methodology for impact assessment of agrarian reform, with particular focus on ARCs, in collaboration with an appropriate domestic institute and to submit such methodology to the Bank for prior review and comments; and (b) arrange to carry out annual impact assessments in accordance with the comprehensive methodology for impact assessment development under (a) in a manner acceptable to the Bank.	Schedule 6, para. 15	October 1999	Complied with. The initial impact assessment was completed. Annual impact assessments are being carried out.
Mid-Term Review 22. A Mid-Term Review shall be carried out with participation of senior officials from DAR, DOF and NEDA jointly with the Bank, not later than the expiry of the 36 months from Effective Date.	Schedule 6, para. 16	Not later than July 2001	Complied with but delayed. The midterm review was carried out in May 2003.
Beneficiary Participation 23. Project beneficiaries, particularly women, shall have equal opportunity to participate in the Project and are adequately represented in training and other Project activities.	Schedule 6, para. 17	During implementation	Complied with. There are varying levels of beneficiary involvement in the project.

Covenant	Reference in Loan Agreement	Timing	Status of Compliance
Credit			
24. LBP shall enter into a MOA pursuant to which LBP will make credit available from its existing resources and programs for cooperatives and other eligible enterprises established by ARBs in the Project area. A review of the credit policies applicable to government financial institutions and banks with a view to allowing such institutions to lend for significantly longer periods for projects involving agricultural crops that have extended gestation periods, including active consideration for lengthening of permissible loan grace periods in such connection to not less than seven years for tree crops.	Schedule 6, para. 18	During implementation	Being complied with. The credit component requires special attention to ensure effective implementation. The implementation of the component has recently started. The project started tracking credit assistance extended by the Land Bank of the Philippines (LBP) to agrarian reform beneficiary (ARB) organizations in project ARCs. There has been little emphasis placed on this subcomponent to date.
Donor Coordination			
25. DAR will provide effective donor coordination, including implementation of uniform policies with respect to donor participation in execution of the Borrower's ARC development strategy.	Schedule 6, para. 19	During implementation	Partly complied with. Policies and procedures implemented under the project have differed significantly from other ARC development programs by, for instance, paying honoraria, mainstreaming with the DAR structure, and introducing new accounting procedures. Coordination with other programs such as Technical Support to Agrarian Reform and Rural Development of the Food and Agriculture Organization and Support to Agrarian Reform and Indigenous Communities of the United Nations Development Programme has been hampered by the absence of guidelines to link work programs with the project.

APO = area project office, ARB = agrarian reform beneficiary, ARC = agrarian reform community, BAWASA = *barangay* water and sanitation association, BLGF = Bureau of Local Government Finance , CIS = communal irrigation system, CPMO = Central Project Management Office, DA = Department of Agriculture, DAR = Department of Agrarian Reform, DBM = Department of Budget and Management, DENR = Department of Energy and Natural Resources, DILG = Department of Interior and Local Government, DOF = Department of Finance, FAPsO = Foreign-Assisted Projects Office, IA = implementing agency, IEE = initial environmental examination , LBP = Land Bank of the Philippines, LGU = local government unit, M&E = monitoring and evaluation, MOA = Memorandum of Agreement, MDFO = Municipal Development Fund Office, NEDA = National Economic and Development Authority, NGO = nongovernment organization, NIA = National Irrigation Administration, O&M = operation and maintenance, PMB = Project Management Board, SZOPAD = Special Zone for Peace and Development.
Sources: ADB and Government of the Philippines.

PLANNED AND ACTUAL CONSULTING SERVICES

1. Long-term domestic consultants and seconded staff, and short-term consultants, for project management are listed in Table A13.

Table A13: Domestic Consultants, Seconded Staff, and Short-Term consultants

	No. contracted		No. seconded		Person-months		
	Appraisal	Actual	Appraisal	Actual	Appraisal	Revised	Actual
CPMO							
Office of Manager							
Manager	1	3			78.00	103.06	103.06
Secretary/Computer Operator			1	0			
Executive Assistant			1	0			
MIS Specialist	0	2			78.00	52.13	52.13
Infrastructure Unit							
Senior Rural Infrastructure Engineer	1	2			78.00	96.50	96.50
Rural Infrastructure Engineer	3	8			234.00	295.50	295.50
Assistant engineer			2	0			
Project Evaluation Unit							
Chief Economist	1	1			78.00	101.50	101.50
Economist/Financial Analyst	3	3			156.00	168.51	168.51
Project Evaluation Assistant			2	0			
Secretary/Computer Operator			1	0			
Agribusiness Unit							
Agribusiness Specialist	1	2			78.00	79.68	79.68
Agricultural Researcher			1	0			
Secretary/Computer Operator			1	0			
Community Development Unit							
Community & Institutional Development Specialist	1	3			78.00	94.37	94.37
Community Development Assistant			1	0			
Monitoring & Evaluation Unit							
Monitoring & Evaluation Staff	1						
Monitoring & Evaluation Specialist			1	0			
Secretary/Computer Operator							
Administration and Finance Unit							
Chief Administrator for Finance	1	2			78.00	93.50	93.50
Administrative officer	1	1					
Accountant	1	4					
Budget Officer			1	0			
Driver			6	0			
Training Specialist	0	1				78.00	39.66
Municipal Development Fund Accountant	0	7				234.00	258.59

Area Project Office: Luzon	No. Contracted		No. seconded		Person-months		
Position	**Appraisal**	**Actual**	**Appraisal**	**Actual**	**Appraisal**	**Revised**	**Actual**
Area Project Manager	1	1			78.00	61.50	61.50
Rural infrastructure Engineer	2	4			156.00	140.24	140.24
Economist	1	2			78.00	39.90	39.90
Agribusiness specialist	1	3			78.00	50.47	50.47
Community/Institutional Development Specialist	1	1			78.00	109.00	59.00
Secretary/Computer Operator			1	0			
Driver			1	0			
Junior Accountant	0	4	0	0			50.00
Subtotal	**6**	**11**	**2**	**0**	**468**	**401.11**	**351.11**

APO: Visayas (Iloilo)	No. Contracted		No seconded		Person-months		
Position	**Appraisal**	**Actual**	**Appraisal**	**Actual**	**Appraisal**	**Revised**	**Actual**
Area Project Manager	1	2			78.00	98.16	98.16
Economist/Financial Analyst	2	4			312.00	106.66	106.66
Agribusiness Specialist	1	1			78.00	91.90	91.90
Rural infrastructure Engineer	3	4			234.00	299.06	299.06
Community Development Specialist	1	1			78.00	98.55	98.55
Secretary/Computer Operator			1				
Driver			1				
Junior Accountant		2			78.00	86.98	86.98
Subtotal	8	14	2	0	858	781.31	781.31

APO: Mindanao (Davao)	No. Contracted		No. seconded		Person-months		
Position	**Appraisal**	**Actual**	**Appraisal**	**Actual**	**Appraisal**	**Revised**	**Actual**
Area Project Manager	1	1			78.00	100.00	100.00
Economist/Financial Analyst	2	4			156.00	117.25	117.25
Agribusiness Specialist	2	2			156.00	177.00	177.00
Rural infrastructure Engineer	4	6			312.00	371.50	371.50
Community Development Specialist	1	2			78.00	112.71	112.71
Secretary/Computer Operator			2				
Driver			1				
Junior Accountant		1			78.00	96.00	96.00
Subtotal	10	16	3	0	858	974.46	974.46

APO: ARMM (Cotabato)	No. Contracted		No. seconded		Person-months		
Position	Appraisal	Actual	Appraisal	Actual	Appraisal	Revised	Actual
Area Project Manager	1	2			78.00	12.50	12.50
Economist/Financial Analyst	1	1			78.00	15.90	15.90
Agribusiness Specialist	1	0					
Rural Infrastructure Engineer	1	3			156.00	106.90	106.90
Community Development Specialist	1	2			78.00	40.42	40.42
Secretary/computer operator			2				
Driver			1				
Junior accountant		1			78.00	41.00	41.00
Subtotal	5	9	3	0	468	216.72	216.72
FAPSO M&E	0	4			234.00	167.50	167.50

B. Short-term national consultants

		No. of Contracts		Person-months		
		Plan	Actual	Plan	Revised	Actual
B.1.	CPMO Consultants					
	Organization and Management	1	3	18	31.00	31.00
	Agricultural Extension	1	4	18	15.52	15.52
	Road and Irrigation	1	2	18	192.00	192.00
	Environment Specialist	1	0	3		0.00
	Unallocated	1	0	18		0.00
	Subtotal	5	9	75		238.52
B.2.	Settlement Study Consultants					
	Settlement Planner/Team Leader	1		12		
	Agronomist/Plantation Development Specialist	1		6		
	Community Development	1		6		
	Civil Engineer	1		9		
	Agribusiness/Cooperative Development	1		9		
	Business Joint Venture Specialist	1		3		
	Environment Specialist	1		3		
	Institutional Development Specialist	1		3		
	Economist/Financial Analyst	1		4		
	Unallocated	1		3		
	Subtotal	10	1	58		10.00
B.3.	Engineering Design Consultant			36		243.00
B.4	Impact Assessment & Evaluation Study Lump Sum $30,000/annum		3			13.00
	Total	15	13	169	0	504.52

APO = area project office, ARMM = Autonomous Region of Muslim Mindanao, CPMO = central project management office, FAPSO = Foreign-Assisted Project Office, M&E = monitoring and evaluation, MIS = management information system, No. = number.

Sources: Asian Development Bank and Government of the Philippines.