



Completion Report

Project Number: 39597
Loan Number: 2221-INO(SF)
November 2009

Indonesia: Rural Infrastructure Support Project

CURRENCY EQUIVALENTS

Currency Unit – rupiah (Rp)

		At Appraisal	At Project Completion
		30 September 2005	3 September 2009
Rp1.00	=	\$0.0001	\$0.00010075566
\$1.00	=	Rp10,000	Rp9,925

ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
BAPPENAS	–	Badan Perencanaan Pembangunan Nasional (National Development Planning Agency)
BPS	–	Badan Pusat Statistik (Central Bureau of Statistics)
CIO	–	community implementation organization
CDD	–	community-driven development
DGHS	–	Directorate General of Human Settlements
DPIU	–	district project implementation unit
EIRR	–	economic internal rate of return
IRIP	–	infrastructure rehabilitation and improvement plan
MOF	–	Ministry of Finance
MPW	–	Ministry of Public Works
NSC	–	national steering committee
O&M	–	operation and maintenance
PCMU	–	project coordination and monitoring unit
PCR	–	project completion review
PIU	–	project implementation unit
PKPS-BBM	–	Program Kompensasi Pengurangan Subsidi Bahan Bakar Minyak (Fuel Subsidy Reduction Compensation Program)
PNPM Mandiri	–	Program Nasional Pemberdayaan Masyarakat (National Program for Community Empowerment)
PPIU	–	provincial project implementation unit
SARD	–	Southeast Asia Department
SNPK	–	Strategi Nasional Penanggulangan Kemiskinan (National Poverty Reduction Strategy)
TA	–	technical assistance

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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BASIC DATA

A. Loan Identification

1.	Country	Indonesia
2.	Loan Number	2221-INO(SF)
3.	Project Title	Rural Infrastructure Support Project
4.	Borrower	Republic of Indonesia
5.	Executing Agency	Directorate General of Human Settlements, Ministry of Public Works
6.	Amount of Loan	
	– Original	SDR35,079,000
	– Net Loan Amount	SDR33,958,547
7.	Project Completion Report Number	PCR: INO 1148

B. Loan Data

1.	Appraisal	
	– Date Started	17 October 2005
	– Date Completed	29 October 2005
2.	Loan Negotiations	
	– Date Started	17 November 2005
	– Date Completed	17 November 2005
3.	Date of Board Approval	19 December 2005
4.	Date of Loan Agreement	29 March 2006
5.	Date of Loan Effectiveness	
	– In Loan Agreement	29 June 2006
	– Actual	20 June 2006
	– Number of Extensions	0
6.	Closing Date	
	– In Loan Agreement	31 March 2009
	– Actual	11 August 2009
	– Number of Extensions	0
7.	Terms of Loan	
	Asian Development Fund	
	– Service Charges	1% per year during the grace period and 1.5% per year during the remaining period
	– Maturity	32 years
	– Grace Period	8 years
8.	Disbursements	
	a. Dates	

Loan No.	Initial Disbursement	Final Disbursement	Time Interval
2221-INO(SF)	31 July 2006	11 August 2009	36.4 months

Effective Date	Original Closing Date	Time Interval
20 June 2006	31 March 2009	33.4 months

b. Amount

Loan 2221-INO(SF) (SDR million)

Category	Original Allocation	Last Revised Allocation	Amount Canceled	Amount Disbursed	Undisbursed Balance
01 Civil Works	34.00	34.19	0.53	33.66	0.00
02 Consulting Services	0.12	0.12	0.05	0.06	0.00
03 Community Mobilization	0.35	0.28	0.05	0.24	0.00
04 Audit, Surveys, and Studies	0.49	0.49	0.49	0.00	0.00
05 Unallocated	0.12	0.00	0.00	0.00	0.00
Total	35.08	35.08	1.12	33.96	0.00

Source: Loan Financial Information System.

Loan 2221-INO(SF) (\$ million)

Category	Original Allocation	Last Revised Allocation	Amount Canceled	Amount Disbursed	Undisbursed Balance
01 Civil Works	48.47	51.47	0.84	50.63	0.00
02 Consulting Services	0.16	0.18	0.088	0.10	0.00
03 Community Mobilization	0.50	0.43	0.07	0.36	0.00
04 Audit, Surveys, and Studies	0.70	0.77	0.77	0.00	0.00
05 Unallocated	0.17	0.00	0.00	0.00	0.00
Total	50.00	52.85	1.76	51.10	0.00

Source: Loan Financial Information System.

9. Local Costs (Financed)
- Amount (\$ million) 42.73
 - Percent of Local Costs 83.62
 - Percent of Total Cost 70.06

C. Project Data

1. Project Cost (\$ million)

Cost	Appraisal Estimate	Actual
Foreign Exchange Cost	10.66	9.14
Local Currency Cost	50.15	53.23
Total	60.82	62.37

2. Financing Plan (\$ million)

Cost	Appraisal Estimate	Actual
Asian Development Bank	50.00	51.10
Government	5.97	6.34
Beneficiaries	4.85	4.93
Total	60.82	62.37

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

Component	Appraisal Estimate	Actual
A. Infrastructure Rehabilitation and Improvement	53.88	55.93
B. Implementation, Monitoring, and Coordination Support	5.51	5.29
Subtotal (A + B)	59.39	61.22
C. Taxes and Duties	0.38	0.40
D. Contingencies		
1. Physical	0.15	0.00
2. Price	0.15	0.00
Subtotal D	0.30	0.00
E. Interest During Construction	0.75	0.75
Total	60.82	62.37

Source: Directorate General of Human Settlements and ADB's Loan Financial Information System.

4. Project Schedule

Item	Appraisal Estimate	Actual
Part A: Infrastructure Rehabilitation and Improvement		
1. Community Facilitation and Mobilization		
Start	3Q 2006	3Q 2006
Completion	2Q 2007	1Q 2007
2. Civil Works		
Start	3Q 2006	3Q 2006
Completion	4Q 2007	3Q 2007
Part B: Implementation, Monitoring, and Coordination Support		
1. Implementation and Supervision	2Q 2006	2Q 2007
2. Consulting Services		
International Individual Consultant	3Q 2006	2Q 2007
Domestic Individual Consultants	3Q 2006	4Q 2008
3. Audits, Surveys, and Studies	3Q 2006	1Q 2007

Q = quarter.

5. Project Performance Report Ratings

Implementation Period	Ratings	
	Impact Outcome	Implementation Progress
From 29 March 2006 to 31 December 2006	Satisfactory	Satisfactory
From 1 January 2007 to 31 December 2007	Satisfactory	Highly Satisfactory
From 1 January 2008 to 31 December 2008	Satisfactory	Highly Satisfactory
From 1 January 2009 to 31 March 2009	Satisfactory	Highly Satisfactory

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members
Inception	20–30 March 2006	2	20	a, b
Review 1	12–26 February 2007	3	42	c, d, e
Review 2	30 July–15 August 2007	2	30	c, e
Review 3	12–23 May 2008	3	33	c, e, f
Special Project Administration 1	4–5 December 2008	2	4	c, e
Project Completion Review ^b	6 August–3 September 2009	3	58	f, g, h

^a a = project economist, b = associate project analyst, c = environmental economist, d = portfolio management specialist, e = senior project officer, f = environment specialist, g = senior portfolio management specialist, h = staff consultant.

^b The project completion report was prepared by W. Kubitzki (senior portfolio management specialist) and P. Wardani (senior project officer).

I. PROJECT DESCRIPTION

1. On 19 December 2005, the Asian Development Bank (ADB) approved a loan of SDR35.08 million (\$50.00 million) from its Special Funds resources, the Asian Development Fund (ADF), to the Government of Indonesia. The loan was to finance 82% of the total project cost of \$60.82 million for the Rural Infrastructure Support Project.

2. The project objective was to improve the welfare of rural communities, and the immediate objective was to improve access to basic rural infrastructure for the poor and near poor in rural areas. The project formed part of the rural infrastructure component of the government's 2005–2006 Fuel Subsidy Reduction Compensation Program (PKPS-BBM) and aimed to rehabilitate and improve rural infrastructure in 1,840 poor and/or isolated villages in less-developed districts in the provinces of East Java, East Nusa Tenggara, South Sulawesi, and South East Sulawesi.¹ The project focused on less-developed districts with prevalent poverty, sufficient implementation capacity, and adequate numbers of eligible villages.

3. The project included two components: (i) infrastructure rehabilitation and improvement and (ii) implementation, monitoring, and coordination support. The project followed a community-driven development approach and was expected to benefit 2 million people in 400,000 households. The project provided rural communities with social and technical facilitation and financial resources to meet their priority infrastructure needs. It adopted simple implementation arrangements, under which rural communities, facilitated by district public works services and assisted by village organizers, selected and designed the priority infrastructure. Each participating village received a block grant of about \$25,000 to upgrade infrastructure. The project's framework and outputs are in Appendix 1.

4. The project was executed by the Directorate General of Human Settlements (DGHS) of the Ministry of Public Works (MPW).

5. The loan became effective on 20 June 2006 and closed on 31 March 2009. The final loan amount was SDR33.96 million (\$51.10 million). The government's contribution amounted to \$6.34 million equivalent, and beneficiaries contributed \$4.93 million equivalent. SDR1.12 million (\$1.76 million) was canceled at project completion.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

6. Project design and formulation was considered highly relevant by the government and consistent with government and ADB policies to reduce poverty in rural areas by (i) addressing development issues related to limited and deteriorating basic infrastructure and (ii) using community-driven development (CDD) in project implementation.

7. The project was consistent with the government's poverty reduction priority, which is reflected in its Medium-Term Development Plan, 2004–2009. The plan incorporates key elements of the National Poverty Reduction Strategy (SNPK) and highlights the importance of achieving the Millennium Development Goals. The SNPK identified 10 major causes of poverty in the country, most of them related to lack of access to various forms of capital and

¹ The project covered 8 districts and 521 villages in East Java, 14 districts and 445 villages in South Sulawesi, 8 districts and 298 villages in South East Sulawesi, and 15 districts and 581 villages in East Nusa Tenggara.

infrastructure: (i) lack of access to affordable quality food, (ii) lack of access to quality health services, (iii) lack of access to quality education services, (iv) limited employment and business opportunities, (v) lack of access to housing and sanitation services, (vi) lack of access to clean water, (vii) weak land rights, (viii) a deteriorating environment and lack of access to natural resources, (ix) violent conflict, and (x) lack of community participation. The project's impact to improve the welfare of participating rural communities and its outcome to improve access to basic infrastructure services for the poor and near poor in rural areas are both highly relevant to addressing the underlying causes of poverty as identified in the SNPK.

8. At appraisal, the government adopted a policy of reorienting public expenditures from subsidizing general consumption to targeted interventions for the poor. The project formed part of the rural infrastructure component of the government's 2005–2006 PKPS-BBM, which was estimated to cost \$698 million. The PKPS-BBM was designed to improve basic infrastructure and access to quality health and education services, clean water, and sanitation. The PKPS-BBM built upon lessons from the Kecamatan Development Program² and ADB's Community and Local Government Support Program,³ which provided block grants directly to communities to upgrade basic infrastructure including village roads, irrigation schemes, and water supply and sanitation.

9. The project design followed a CDD approach to empower communities to prioritize, design, and implement infrastructure development according to their needs. CDD approaches were introduced in Indonesia in 1998. Previously, development in Indonesia was largely driven by appointed officials and the central government. Processes tended to exclude the poor from setting development priorities and provided limited accountability for the performance of responsible authorities. Thus, many poverty-reduction programs proved unstable and unsustainable. The CDD approach adopted by the project provided communities with the opportunity to be involved in designing investment projects and contributed to community ownership. Funds were transferred directly to community-managed bank accounts. The community also managed project implementation and civil works.

10. The provinces selected for the project were in eastern provinces of the country, where poverty is relatively prevalent and progress toward achieving the Millennium Development Goals lags behind the national average. The selection of project villages was based on a list of less-developed villages and districts prepared by the State Ministry of Less-Developed Regions. The list covered 32,000 villages and 155 districts all over Indonesia. DGHS focused on less-developed districts in the four project provinces and selected less-developed and poor villages that had not received assistance from the PKPS-BBM before. The final list of districts and villages was approved by the Minister of Public Works with Decree No. 241.A/KPTS/M/2006 of 9 June 2006. However, feedback received during the project completion review (PCR) mission suggested that the selection mechanism and/or criteria were not clear to provincial and district administrations or to community members. To ensure transparency and build a sense of commitment and ownership at all levels, it might have been useful to involve local governments in the selection process. A list of project districts and an overview of socioeconomic indicators in the project areas are in Appendix 2.

² The World Bank-funded Kecamatan Development Program started in 1998 and was the first CDD project in Indonesia. A total of \$1.4 billion in loan, grant, and government funds have been disbursed in three phases. From 1998 to 2004, the program supported improved infrastructure development in 28,000 villages, providing block grants of \$24,000 per village on average.

³ ADB. 1999. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Indonesia for the Community and Local Government Support Sector Development Program*. Manila.

B. Project Outputs

11. The project included two outputs: (i) infrastructure rehabilitation and improvement and (ii) implementation, monitoring, and coordination support. Under the infrastructure output the project provided rural communities with social and technical facilitation and financial resources to meet their priority infrastructure needs. The second output aimed to establish efficient and effective arrangements to facilitate and monitor project implementation.

1. Part A: Infrastructure Rehabilitation and Improvement

12. The project adopted a CDD approach to upgrade basic infrastructure in the villages. It promoted a process to mobilize the capacity of community members to prioritize their development needs, jointly design investment proposals, and manage funds and civil works. To support participatory planning and project implementation, teams of community facilitators and consultants were deployed in all project districts to help communities and district administrations (i) survey villages to identify priority needs and opportunities, (ii) evaluate community implementation capacity, (iii) establish community implementation organizations (CIOs)⁴ and open community bank accounts, (iv) formulate village development plans, (v) select investment projects, (vi) implement civil works financed by block grants, (vii) provide technical guidance on carrying out civil works and support managing procurement and administering block grants, and (viii) formulate operation and maintenance (O&M) plans to ensure the sustainability of the completed community investments.

13. Each participating village received a grant of Rp250 million for rehabilitating and improving basic infrastructure. Upon approval of an infrastructure rehabilitation and improvement plan, the district treasury office transferred 40% of the block grant directly into the community's bank account as an advance payment. The remaining funds were disbursed, subject to certification of progress by district public works services staff, to the community in two installments, 40% of the grant at the 36% completion point and 20% at the 72% completion point.

14. At appraisal, it was agreed that selected village infrastructure projects for financing under the project should meet the following criteria: (i) The entire representative committee should endorse the village plan. (ii) It should provide proportionate benefits and employment opportunities to women and minority groups. (iii) Improved village infrastructure should facilitate improving the livelihoods of the poor or near poor. (iv) Investments should be utilized immediately by the poor or near poor. (v) Projects should rehabilitate and improve existing village infrastructure. (vi) The project should demonstrate economic viability and financial sustainability. (vii) It should not require land acquisition or resettlement. (viii) It should do no environmental, social, or economic harm. (ix) The construction period should not exceed 3 months. (x) Alternative designs should be evaluated to establish the cost effectiveness of the proposed design. (xi) The project should use local labor and materials and, to the extent possible, employ technology that is simple or otherwise appropriate to local conditions. (xii) A village walk-through should demonstrate the nature, location, and impacts of the project on at least half of the community. (xiii) The CIO should prepare an O&M plan and conclude a written agreement with district public services to maintain the works. While most of these conditions were fulfilled, the PCR mission found that (i) many villages did not conduct economic analyses to access the viability of investment projects and (ii) the effective maintenance arrangements

⁴ All CIOs had at least four members—head, treasurer, secretary, and technical facilitator—and included at least one woman.

that should have been incorporated into the investment proposals and monitored by district administrations were lacking in some villages.

15. The project rehabilitated and improved some 4,000 kilometers (km) of rural roads, 351 bridges, 25 boat landings, more than 128 km of irrigation and drainage canals, 365 irrigation systems, 180 water standpipes, 510 domestic water reservoirs, 440 shallow wells, 120 deep wells, 650 km of pipelines, and 340 communal sanitation facilities. Some 85% of the allocation was used for roads and bridges, 11% for domestic water supply, 2% for irrigation and drainage, and 1% for sanitation. Infrastructure was upgraded in 521 villages in East Java, 581 villages in East Nusa Tenggara, 445 villages in South Sulawesi, and 293 villages in South East Sulawesi. The distribution of types of infrastructure improvement in the four provinces is in Appendix 3.

16. In all villages, communities provided voluntary contributions by transporting materials from the main street to project sites, sourcing locally available materials, clearing land, and providing food and refreshments during meetings and construction works. Community contributions are estimated to constitute up to 8% of the total project cost. However, this figure may undervalue their contributions, as they often were not recorded. During construction, community members were employed as workers. About Rp40 million per village, or 16% of the total grant, went to wages for village workers. On average, community members received Rp20,000 per day for construction work, providing additional income and motivation for participation in civil works. However, field visits and monitoring reports revealed that the standard of infrastructure constructed under the project varied.⁵ It is estimated that about 25% of the infrastructure built under the project shows some flaw 3 years after completion because of (i) poor technical advice provided during design and/or implementation and/or (ii) lack of appropriate maintenance.

17. At appraisal, it was envisaged that roughly half of the villages would be covered in 2006 and the remaining villages by the end of 2007. However, at the project start, DGHS decided to implement civil works in all project villages in one batch from 2006 to mid-2007. Community mobilization thus took place in July–September 2006, all CIOs were established during the first 3 months, and ADB approved contracts for communities with approved plans in October 2006. Civil works started in September 2006 and were completed by July 2007. While community participation in implementing civil works was generally good in all villages, fast-tracking community mobilization in the beginning limited community participation in many activities. Field visits and evaluation reports revealed that community participation in prioritizing investment needs and designing project proposals was insufficient in many villages. It is uncertain whether all community groups were adequately represented in decision making. Feedback from field visits revealed that, in some villages, the village head or district administration appeared to be the actual decision maker. In other villages it was observed that accounting records were not shared with community members. A considerable number of communities did not receive the necessary guidance for undertaking sound assessments of problems and opportunities for village development. The potential of the project to empower communities and build capacity for community planning and development was not fully realized, particularly in poorly educated villages.

⁵ In a few cases, road foundations have inadequate large stones, are not compressed sufficiently, or are not laid properly, causing the road surface to be uneven and wash away with heavy rain. In domestic water supply systems, poor pipe fittings caused severe leaks at crucial junctions. Inappropriate combinations of cement, sand, and gravel in mixing concrete caused some irrigation structures to leak and rapidly degrade.

2. Part B: Implementation, Monitoring, and Coordination Support

18. Under this output, the project supported arrangements to facilitate and monitor the project implementation. Major activities included (i) establishing project management and coordination mechanisms, (ii) capacity building in districts and subdistricts, (iii) providing technical assistance to districts and subdistricts toward facilitating infrastructure works, (iv) establishing effective monitoring and reporting mechanisms, (v) screening for social and environmental safeguards, and (vi) conducting independent financial audits of project and CIO accounts and finances. In general, DGHS established effective and efficient project management units at all levels. Rapid implementation was possible as DGHS undertook considerable work during pre-implementation, including (i) completing all necessary implementation arrangements nationally, provincially, and in districts and subdistricts; (ii) training district and subdistrict staff on implementation procedures; (iii) preparing and disseminating implementation guidelines; (iv) completing the selection of villages in all districts; and (v) recruiting facilitators and local consultants financed by government funds. The establishment of all CIOs was completed, with the support of district administrations and facilitators, during the first 3 months, and block grants to CIOs were disbursed in a timely way.

19. The 2006 audit report noted a lack of capacity in some communities to handle financial reporting.⁶ The PCR mission observed that, in some villages, accounting records had not been shared with community members, and information on investment plans, budgets, procurement, and contracts had not been disseminated.

C. Project Costs

20. At appraisal, the project cost was estimated at \$60.82 million, comprising \$10.66 million in foreign currency and \$50.15 million in local currency. ADB was to finance \$9.18 million of the foreign exchange cost and \$40.82 million of the local currency cost, while the government financed \$1.48 million of the foreign exchange cost and \$4.49 million of the local currency cost and beneficiaries contributed \$4.85 to the local currency cost. The actual project cost at loan closing was \$62.37 million, comprising \$9.14 million in foreign exchange cost and \$53.23 million in local currency cost. ADB financed \$8.39 million of the foreign exchange cost and \$42.70 million of the local currency cost, while the government covered the remaining \$0.75 million of the foreign exchange cost, covering interest during construction, and \$5.59 million of the local currency cost. Beneficiaries contributed \$4.93 million to the local currency cost (Appendix 4).

21. One reallocation of loan proceeds was made in August 2007 at the request of the government to cover a shortage of funds under the civil works loan category caused by significant appreciation of the Indonesian rupiah, from Rp10,000 per \$1 at appraisal to an average of Rp9,080 per \$1 during implementation in 2007. SDR119,000, or \$182,000 equivalent, from unallocated loan funds was reallocated to the civil works to cover the shortage.

D. Disbursements

22. A total of SDR33.96 million (\$51.10 million) was disbursed under the loan. An imprest account of \$10.00 million helped expedite disbursements. At the closing of the loan account on 11 August 2009, an unutilized balance of SDR1.12 million (\$1.76 million) was cancelled. The balance was unutilized because of (i) appreciation of the SDR against the dollar from 2006 to

⁶ Financial and Development Supervisory Board (Badan Pengawasan Keuangan dan Pembangunan) 2006 audit report.

2008 and (ii) surplus allocation for audits, surveys, and studies. The amount of \$0.77 million allocated for audit, surveys, and studies at appraisal was unutilized. Instead of using loan proceeds, DGHS used government funds to conduct audits and surveys. The utilization of loan funds is shown in Appendix 5.

E. Project Schedule

23. The project was approved in December 2005, declared effective on 30 June 2006, and closed on 11 August 2009. Project activities started as planned. At appraisal, it was envisaged that roughly half of the villages would be covered in 2006 and the remaining villages by the end of 2007. Implementation was planned to last 33 months. However, at project start, DGHS decided to implement civil works in all project villages in one batch from 2006 to mid-2007. Thus, 91% of the project activities were completed in 2006, with the remaining civil works finished in 2007.

24. Rapid implementation was possible because considerable work undertaken during pre-implementation focused on ensuring that (i) implementation arrangements were fully in place; (ii) comprehensive implementation, financial, and technical guidelines and manuals were prepared and disseminated; (iii) the selection of villages was completed in all districts; and (iv) all facilitators were recruited. By the time Parliament approved the budget in June 2005 and released the funds in July 2005, the program was in a high state of readiness. Implementation arrangements were in place, and national, provincial, district, and subdistrict staff had been trained on implementing procedures. All socialization program work, CIO formation, and disbursement of advance payments to CIOs were completed in the first 3 months. Implemented in 18 months, the project finished more than a year ahead of the original schedule. Appendix 6 compares the original schedule with actual implementation.

F. Implementation Arrangements

25. MPW executed the project through DGHS. The PKPS-BBM National Coordination Team and national steering committee (NSC) for rural infrastructure provided policy guidelines and directives during project implementation. The National Coordination Team was chaired jointly by BAPPENAS, the Ministry for Economic Affairs, and the Ministry for People's Welfare. The NSC consisted of senior officials from the Ministry of Public Works, Ministry of Finance, Ministry of Home Affairs, Ministry of Labor and Transmigration, and Ministry of Agriculture, as well as the heads of the National Planning and Programming Agency, State Ministry of Less-Developed Regions, National Statistics Agency, and the National Audit Agency. Governors established multi-agency steering committees in provinces, as did district heads in districts. These regional steering committees had coordination and monitoring functions similar to those of their national counterparts.

26. All project implementation arrangements were established prior to loan effectiveness. A project coordination and monitoring unit (PCMU) was set up in DGHS and headed by an experienced project manager, who was assisted by a team of qualified local consultants. The major tasks of the PCMU were to (i) implement the project under DGHS, (ii) formulate and distribute project implementation guidelines, (iii) engage international and national consultants, (iv) monitor project implementation and ensure compliance of loan covenants, (v) regularly report to DGHS and ADB, (vi) undertake financial management including withdrawal applications, and (vii) evaluate project implementation. PCMU prepared comprehensive project guidelines describing (i) the roles and responsibilities of all stakeholders; (ii) the mechanisms and procedures for selecting infrastructure subprojects, preparing village implementation plans,

land acquisition and resettlement frameworks, gender action plans, and the channeling of funds; (iii) controlling, reporting, monitoring, and evaluation procedures, as well as grievance management; and (iv) O&M requirements for the improved infrastructure. Guidelines were submitted to all participating provinces and districts. However, discussions during the PCR mission revealed that the roles and responsibilities for project coordination, reporting, and monitoring were not clearly assigned among national, provincial, and district project implementation units. In particular, responsibility for reviewing the performance of facilitators and the technical quality of civil works could have been stronger.

27. Project implementing units were established nationally, in provinces (PPIUs), and in district (DPIUs). Provincial and district administrations assigned sufficient staff to facilitate project activities. The PIUs were responsible for budget implementation as planned by the PCMU.

28. Each participating village established a CIO, which was either an existing formal or informal village organization or a new project organization. Representatives of the CIO were elected or reconfirmed by the community and included a head, treasurer, secretary, and technical facilitator. The CIO was legalized by the village head and registered with the subdistrict head, which was a prerequisite for opening a bank account. The CIO was responsible for (i) identifying social and infrastructure constraints in the village, (ii) preparing a village proposal, (iii) implementing the approved village proposal, (iv) opening a bank account and making a contract for works with the DPIU, (v) monitoring construction works and reporting progress to the DPIU, (vi) preparing invoices and cash management, (vii) holding weekly meetings with the community and providing copies of daily records on information boards to report physical and financial progress, and (viii) maintaining a system to hear and respond to complaints.

29. A management team for construction, operation, and maintenance comprising community and village organization representatives (excluding the village head) was to be set up in each village. The team would supervise infrastructure construction and management, including O&M. It was not apparent to the PCR mission that this team was formed in all project villages.

30. To assist project implementation, 1,392 facilitators were deployed to provide technical assistance and build the capacity of villagers. Community facilitators were organized in teams covering up to five villages, with each team consisting of two facilitators, one focusing on community empowerment and the other providing technical guidance on the civil works. The tasks of the facilitators included (i) familiarization with project scope; (ii) a village survey to identify problems, needs, and opportunities; (iii) evaluation of community implementation capacity; (iv) helping communities select priority investments and develop community project proposals; (v) facilitating communities' formulation of village development plans; (vi) facilitating communities' implementation of the selected investments with block grant support and technical guidance; and (vii) facilitating communities' formulation of O&M plans to ensure the sustainability of the completed civil works.

31. To support the PCMU, PPIUs, and DPIUs during implementation, 19 teams of domestic consultants⁷ provided technical and management advice in project planning, civil works design and procurement package preparation; construction supervision; contract management; financial management and accounting; reporting; and facilitator supervision and guidance.

⁷ The teams were engaged in 1 national, 4 provincial, and 14 district consulting packages.

DGHS engaged national project management consultants, and PPIUs engaged provincial and district management consultants and facilitators. DGHS trained all the regional consultants and facilitators. The PCMU and PPIUs supervised and monitored the performance of the regional consultants and facilitators. The government financed these teams of domestic consultants.

G. Conditions and Covenants

32. Two of the loan covenants have been partly complied with, and the remaining 37 covenants have been fully complied with. Partial compliance reflects the absence of O&M plans in about one third of villages and the failure to post financial information in public in all villages. The PCR mission noted significant achievement in facilitating women's participation and that the targets set at appraisal had been achieved in the vast majority of villages. The list of loan covenants and their compliance status are in Appendix 7.

H. Consultant and Facilitator Recruitment and Procurement

33. The project engaged domestic consultants for 750 person-months (against 694 person-months estimated at appraisal) using government funds, as well as an international financial management specialist for 4 person-months (against 8 person-months estimated at appraisal) using loan proceeds. The project also engaged facilitators for 5,000 person-months⁸ using government funds. All domestic consultants and facilitators were mobilized in June 2006. The international financial management specialist was hired as individual consultant from April to July 2007. At the request of DGHS, the loan financed eight additional domestic consultants recruited on individual bases for 1.14 person-months each in November–December 2008 to help the government prepare the second phase of the project under the umbrella of the national program for community empowerment (PNPM Mandiri), which the government launched in April 2007. These consultants were specialists in project management, environment, social development, gender, finance, and training (two specialists).

34. Civil works financed under the village grants were contracted out to CIOs in compliance with ADB Procurement Guidelines (2007, as amended from time to time). The CIOs were instrumental in procuring materials and arranging equipment rental. Most of the participating villages followed the regulation on purchasing goods and services by choosing from among at least three competing suppliers the one offering the lowest price. In a few instances, the CIOs obtained only one quotation, arguing that they adhered to standard prices issued by DGHS or that there was only one supplier available nearby.

I. Performance of Consultants, Facilitators, Contractors, and Suppliers

35. In general, the performance of consultants, facilitators, and suppliers was satisfactory. However, the low technical standard of infrastructure upgraded under the project and the lack of attention to maintaining more complex infrastructure investments indicate that consultant' and technical facilitators' guidance and technical supervision was less satisfactory throughout project implementation. Many of the facilitators were young and inexperienced recent graduates from university. Community feedback indicates that a strengthened process for selecting, and additional training for community facilitators, would have been advantageous. A mechanism by which district administrations and consultants regularly reviewed the quality of facilitators' work and subsequently provided additional guidance would have been helpful.

⁸ Based upon two facilitators serving five villages, each facilitator being employed for an average of 5 person-months.

J. Performance of the Borrower and the Executing Agency

36. The Borrower and DGHS demonstrated strong commitment to successfully implementing the project. The provision of counterpart funds was timely and in the amounts required by the project. Rapid progress was possible as considerable work was completed before implementation. Decrees and other legal instruments necessary to launch the project were endorsed in all participating provinces and districts on time. The Minister of Public Works appointed by decree the national, provincial and district project managers, and the provincial governors and heads of local governments established management teams (*Tim Pengarah*, PPIUs and KPIUs).. Village heads authorized CIOs to open bank accounts and confirmed the appointment of the chairman, secretary, treasurer, and ordinary members of CIO executive committees. Consultants and facilitators were appointed by the PIUs to support CIOs in planning physical components, budgeting and procurement, maintaining and operating village bank accounts, controlling inventory in villages, and recording work progress and expenditures.

37. To carry out the civil works, the district project manager (*satker*) entered into a contract with the CIO. The contract specified the scope of the work, materials to be purchased, and payments to be made directly to the CIO by the national treasury. The district *satker* then authorized a series of payments to the CIO based on the provisions of the contract, each payment conditional on CIO performance. Implementation arrangements were carefully designed and successfully operated.

K. Performance of the Asian Development Bank

38. ADB's performance was satisfactory. During project implementation, ADB fielded five missions, one at inception, two to review project progress, and two for special project administration. In addition, DGHS was supported by project staff from the ADB Resident Mission when required. ADB did not undertake any feasibility study for this project but relied instead on government proposals for district selection and the implementation mechanism. The project did not undertake a baseline study, which hampered detailed evaluation of how completely the intended project targets were achieved. The PCR mission found that the accelerated implementation of civil works compromised the quality and sustainability of some infrastructure upgrades. More supervision could have been useful to ensure that (i) necessary baseline data were collected to compare the situation before and after the project, as specified in the project framework; (ii) more time and emphasis had been given to community empowerment; and (iii) additional training had been provided to community facilitators.

III. EVALUATION OF PERFORMANCE

A. Relevance

39. At appraisal and completion, the government and ADB considered the project highly relevant and consistent with their policies and priorities to reduce poverty in poor rural areas by using a CDD approach to improve limited and deteriorating basic infrastructure. The project formed part of the rural infrastructure component of the government's PKPS-BBM, which was a key component of its poverty-reduction program at the time. At completion, the project contributed to improving the welfare of 2 million people in 1,840 poor communities by improving basic infrastructure in villages and access to local markets and social services.

40. CDD projects have evolved to become the foremost instrument for poverty reduction, local capacity building, and improving service delivery in Indonesia. Based on the success of CDD initiatives to reduce poverty in rural areas, the government launched in September 2006 the PNPM Mandiri, which aims to reduce poverty by promoting community participation in planning and managing investment projects to improve basic services and infrastructure. ADB's 2006-2009 country strategy and program concludes that Indonesia's key challenge continues to be reducing poverty and the vulnerability of large sections of the population. Lessons from the project and ADB's growing experience in supporting CDD provided valuable guidance to help the government scale up and effectively implement the PNPM Mandiri.⁹

41. Encouraged by the success of the project, the government asked ADB to provide additional assistance to improve basic rural infrastructure under the PNPM Mandiri program using CDD. In September 2008, the Rural Infrastructure Support to PNPM Mandiri Project (RIS PNPM Loan 2449-INO[SF])¹⁰ was approved for \$50.0 million to rehabilitate and improve rural infrastructure in 1,724 villages using the CDD approach. The second phase of the project, with \$84.2 million to provide assistance to 215 subdistricts, the Rural Infrastructure Support to PNPM Mandiri Project II (RIS PNPM II Loan 2575-INO)¹¹ was approved in November 2009.

B. Effectiveness in Achieving Outcome

42. The project was effective in achieving all physical outputs, which contributed to reaching the project outcome of improving the access of poor and near poor in the rural areas to basic infrastructure and services. The project has significantly improved access for the poor to nearby markets for selling their farm produce, improved the supply of water for domestic use, provided better sanitation, enhanced irrigation facilities, and provided permanent boat landings. Infrastructure improvements have provided to poor communities easier access to public health facilities and quality education services. A survey conducted by DGHS indicates that trade volume per farm household rose by 34% after the project. This is equivalent to a benefit of \$68/household/year. Another survey of 200 villages undertaken by DGHS at project completion found that 82% of the surveyed villages had improved accessibility to health and education facilities. Other reported benefits are improved community access to safe drinking water and electricity (85%), credit (70%), and markets (85%), as well as improved income and job opportunities (83%). In all project villages, community members fully participated in implementing civil works and were employed as workers during construction.

43. Project implementation was accomplished 1 year ahead of the original schedule. At appraisal, it was envisaged that roughly half of the villages would be covered in 2006, and those remaining by the end of 2007. However, at project start, DGHS decided to implement civil works in all project villages in one batch. Civil works started in October 2006 and were completed in April 2007. Rapid implementation was made possible by DGHS's having undertaken considerable work before implementation that focused on ensuring that (i) national, provincial, and subdistrict implementation arrangements were fully in place and staff were trained on implementation procedures; (ii) implementation, financial, and technical guidelines and manuals were prepared and disseminated; (iii) the selection of villages in all districts was completed; and

⁹ The Government is committed to expanding the PNPM Mandiri to all 6,408 subdistricts by the end of 2009. The project was part of this strategic poverty-reduction plan. Its objective and CDD approach aligned with the government's strategy to adopt a nationwide CDD for poverty reduction in rural areas.

¹⁰ ADB. 2008. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Indonesia for the Rural Infrastructure Support to the PNPM Mandiri Project*. Manila.

¹¹ ADB. 2009. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Indonesia for the Rural Infrastructure Support to the PNPM Mandiri Project II*. Manila.

(v) facilitators were recruited for some 5,000 person-months and local consultants for 750 person-months. CIO establishment was completed in the first 3 months, which further sped project implementation. Block grants to CIOs for financing civil works were disbursed in a timely way, further contributing to rapid project implementation.

44. Although the rapid implementation appears impressive, fast-tracking community mobilization limited community participation in many activities. Achieving adequate community participation in poverty mapping, prioritizing investment needs, and designing of project proposals was challenging in many villages. More emphasis could have been placed on ensuring full community participation in planning and decision making. Discussions with villagers suggested that community facilitation was weak because of facilitators' inexperience and the lack of support from consultants and district administrations. The potential of the project to strengthen community empowerment and build capacity for community planning and development was not fully realized, particularly in poorly educated villages.

C. Efficiency in Achieving Outcome and Outputs

45. In general, the project was rated efficient in achieving outcomes and outputs cost-effectively. Surveys confirmed that infrastructure built using CDD cost about 40% less than similar works built using contractors. The infrastructure upgrades carried out under the project did not require high expertise and could be performed by untrained rural labor.

46. Efficient implementation arrangements, including a competent PCMU in DGSH and committed PPIUs and DPIUs in all participating provinces and districts, contributed to successful project implementation. In general, staff at all PMUs were dedicated and managed their technical project responsibilities well. Considering the rapid implementation and limited time for community participation in designing village investment proposals, it would have been helpful for DPIUs to provide more support to communities and facilitators. Further, it appeared that responsibilities for monitoring the (i) technical quality of investment proposals and civil works, (ii) performance of consultants and facilitators, and (iii) community participation process were not clearly assigned among PPIUs and DPIUs. Their monitoring consisted primarily of collecting quantitative information related to civil works and the attendance of consultants and facilitators. The PCR mission observed the need to establish a consistent process for (i) screening the technical design of investment proposals, (ii) monitoring O&M arrangements, (iii) reviewing the performance of the facilitators and consultants, and (iv) ensuring full community participation at all levels in the decision-making process.

47. In some cases, the technical implementation of civil works was below standard. Inappropriate proportions of cement, sand, and gravel in mixing concrete caused some irrigation structures to leak and rapidly degrade. In other cases, road foundations either had inadequate large stones, were not compressed sufficiently, or were not laid properly, causing the road surface to be uneven and wash away in heavy rain. In domestic water supply systems, poor pipe fittings caused severe leaks at crucial junctions. All these cases reflect district administrations' weakness in technical supervision and consultants' and facilitators' poor technical skills.

48. The appraisal report did not analyze economic internal rate of return (EIRR) on these subprojects, quoting instead a World Bank study that the EIRR for similar road improvements would be in the range of 33%–47%. Preliminary analysis indicates that a relatively small investment of \$25,000/village created benefits of \$6,500/village/year, or \$32.50/household/year,

by improving income through increased trade volumes, savings in traveling time, and lower maintenance costs for vehicles, etc. Detailed analysis is in Appendix 8.

49. While the project contributed to increasing the trade volume in most villages, preliminary analysis carried out at PCR found no major increase in farm productivity after road improvements. Only in selected villages in East Java is there some indication that farmers growing sugarcane, rice, tobacco, and onions were able to improve their farm productivity by some 10%–20%. However, even with this small increase in farm income, farmers remain below the poverty line. This highlights the need for additional strategies to create other income-generating opportunities and enhance farm benefits by improving extension services and introducing new technologies in project villages to take advantage of better road access.

D. Preliminary Assessment of Sustainability

50. Indications are that investments made under the project are relevant to the communities and that the project is most likely sustainable. Although most of the infrastructure upgraded under the project is simple and easy to maintain, the main risk to sustainability is the lack of adequate attention to sustaining technically more complex infrastructure investments. In addition, district administrations' better guidance and technical supervision of the design of civil works would have improved the sustainability of village infrastructure. PCR field visits made it apparent that the damage suffered in some areas from lack of maintenance (e.g., leaking water supply facilities and deteriorating roads) can be reversed if district administrations make greater efforts to conduct socialization campaigns to encourage villagers to participate regularly in community maintenance.

E. Impact

51. The project has successfully contributed to improving the welfare of participating communities and achieved the outcome of improving the access of the poor and near poor in the rural areas to basic infrastructure and services, as set out at appraisal. More than 2 million rural poor living in 1,840 rural villages benefited from this project. The project has contributed to creating significant positive economic, social, environmental, and institutional impacts, including (i) improvements in road access that allow vehicles to carry farm produce to market; (ii) better water supply, irrigation, and communication facilities; (iii) the improved supply of basic goods; and (iv) improved access to quality health, sanitation, and education services. Participation in civil works created short-term employment for community members. Although community empowerment in some villages suffered from the fast-tracking of activities, active community participation in preparing investment plans and constructing infrastructure contributed to strengthening local capacity for community planning and development and good governance.

52. The project has promoted good governance through (i) transparent, consistent, and cost-effective planning and implementation using common procedures, guidelines, and institutional arrangements and (ii) well-defined procedures and mechanisms for transferring investment funds to CIO-managed bank accounts.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

53. Overall, the project is rated *successful*. Basic infrastructure for 1,840 rural villages was successfully upgraded, improving the welfare and standard of living of some 2 million people by

improving roads, bridges, irrigation and drainage canals, irrigation systems, and systems for safe water supply and sanitation. Community members fully participated in carrying out civil works, but the potential of the project to empower communities and build capacity for community planning and development was not fully realized in poorly educated villages.

B. Lessons

54. Major lessons drawn from the project include the following:

- (i) **Community Mobilization.** Qualified and experienced community facilitators and sufficient time for community empowerment are important to build a sound and common understanding of project principles and ensure that community members are sufficiently involved in prioritizing their needs, developing investment proposal, and making decisions. The four provinces are at different stages of development, with households in East Java having the highest standard of living and education, followed by South Sulawesi, South East Sulawesi, and East Nusa Tenggara. Less-developed communities need a longer period of socialization and capacity building to fully understand their options in selecting investment proposals that will maximize benefits. These communities need more time and assistance from facilitators or local government administrations to develop and implement village development plans. It would thus have been useful if the project had been implemented in stages, providing more time for community mobilization in less-developed districts.
- (ii) **Failure to Incorporate Lessons into New Projects.** The appraisal report mentioned several lessons from earlier projects, but they were not incorporated into this project. These lessons include the following: (i) A fixed grant size may not be appropriate for all villages, as village size and existing infrastructure greatly differ among provinces and districts. (ii) Longer implementation with geographic phasing of activities within districts helps provide sufficient preparation and avoid the bunching of approvals for village infrastructure plans. (iii) Longer implementation provides opportunities for periodic stocktaking and improving project design.
- (iii) **Maintenance of Infrastructure.** Greater focus should be placed on maintenance arrangements, which should be incorporated into village investment proposals and monitored by district administrations. For an investment of Rp250 million and an estimated maintenance cost of 5% annually, this would require Rp10 million/year, or Rp50,000/household/year, assuming a village average of 200 households. This collection of a maintenance fee is feasible, as this practice is widespread in domestic water-supply subprojects.
- (iv) **Measurable Objectives.** A sound baseline survey to establish key benchmarks—including average household income, access to water supply and proper sanitation, traffic volume on existing roads, and other socioeconomic indicators—allows better qualifying and quantifying of project accomplishments. At PCR, a similar survey should be carried out to assess the project impact.
- (v) **Governance.** Greater attention should be placed on ensuring the transparent dissemination of investment plans, budgets, tenders, contracts, and financial records to help prevent fraud and corruption. Administrative and procurement

procedures should be clearly explained to communities so that they will be capable of monitoring project progress. Public accountability mechanisms were not put in place in all project villages, which creates the risk of leakage and elite capture of project benefits.

- (vi) **Work Quality.** The quality of basic infrastructure construction needs constant monitoring. Low quality of technical design of infrastructure work and lack of maintenance arrangements were observed in many villages. Additional assistance from district administrations and technical consultants and facilitators is required, especially when unskilled village labor participates in construction, to ensure a suitable standard of quality.
- (vii) **Consultants and Facilitators.** Greater attention should be placed on recruiting qualified and experienced consultants and facilitators to ensure that they have the appropriate skills and motivation to undertake the tasks assigned to them.
- (viii) **Monitoring Procedures.** With decentralization, the national government no longer exercises administrative control over regional governments. Likewise, provincial governments do not have administrative control over district governments. Consequently, project implementation units are under the administrative supervision of the local governments. However, for national projects, appropriate monitoring arrangements should be in place to exercise administrative and technical supervision over PPIUs and DPIUs. Accountability relationships were, however, unclear. Thus, performance evaluation, incentives, and sanctions remain as sensitive issues that could affect smooth project implementation.
- (ix) **Income generation.** Improved basic infrastructure does not in itself immediately translate into poverty reduction, given the narrow base of most village economies.

C. Recommendations

55. Lessons and experiences gained from the project have been incorporated into the design of two ensuing ADB-financed loan projects providing rural infrastructure support to PNPM Mandiri (RIS PNPM)¹² and (RIS PNPM II).¹³

- (i) **Improved Targeting of Poor Villages.** The mechanism to select project villages should ensure that the poorest communities benefit from project interventions.
- (ii) **Sufficient Time for Community Mobilization.** CDD is demonstratively more effective in basic infrastructure development than other approaches. Evidence indicates that CDD is likely to offer better cost recovery and maintenance of completed infrastructure because of community members' strong sense of ownership. CDD provides better accountability, as transparency in decision making and procurement and the increased use of audits demonstrably reduce corruption and leakage. Thus, projects should allow sufficient time to support and

¹² Footnote 10.

¹³ Footnote 11.

strengthen community participation; empowerment; and capacity to prioritize, design, implement, manage, and monitor project investments.

- (iii) **Community facilitators.** Experienced and qualified facilitators are key to ensuring community empowerment. Priority should be placed on appointing facilitators from the same project districts, and they should be given proper support from consultants and district administrators. A strengthened process for selecting, training, and guiding community facilitation is needed, including detailed training programs, regular meetings of community facilitators from different districts to share experiences and lessons, and the increased involvement of local administrations to monitor the performance of facilitators and provide advice to support their work in villages.
- (iv) **Monitoring Arrangements.** In the decentralized context of Indonesia, the roles, responsibilities, and reporting structures of project management units at the center and in provinces and districts need to be clearly specified, particularly in relation to ensuring adequate community mobilization; systematic evaluation of facilitator and consultant performance; the appropriateness of technical designs; and the establishment of O&M arrangements, community contributions, transparent accountability procedures, and good governance.
- (v) **Maintenance Arrangements.** While community participation in implementing civil works was very encouraging in all participating villages, more emphasis needs to be placed on establishing adequate maintenance mechanisms to ensure the sustainability of infrastructure investments. More supervision and guidance is required from district administrations, consultants, facilitators, and PIUs to ensure that communities understand the importance of systematic maintenance, receive technical advice on maintenance issues, estimate maintenance costs, and establish appropriate mechanisms to finance and regularly conduct maintenance. Community and district government responsibilities for maintaining roads need to be clearly defined.

PROJECT FRAMEWORK AND OUTPUTS

Design Summary	Performance Targets/Indicators	Assumptions and Risks	Accomplishments
<p>Impact</p> <p>The welfare of participating communities is improved.</p>	<p>By month 60,</p> <p>at least 50% of beneficiaries are satisfied with improved services, and</p> <p>there is a 20% improvement over the baseline in achieving Millennium Development Goals on eradicating poverty and hunger and providing safe water</p>	<p>Assumption</p> <ul style="list-style-type: none"> • National and regional government policies continue to support community-driven development. <p>Risk</p> <ul style="list-style-type: none"> • Natural or financial disasters impact the project area. 	<ul style="list-style-type: none"> • Poverty reduction through community participation in planning and managing development and delivering basic services and infrastructure continued by the National Program for Community Empowerment (PNPM Mandiri) launched by the government in September 2006. • About 2.1 million people directly benefitted from improved village infrastructure. • The welfare of 423,200 households in 1,840 villages in 45 project districts improved.
<p>Outcome</p> <p>The access of poor and near poor in rural areas to basic infrastructure and services is improved.</p>	<p>By month 60,</p> <p>20% reduction in transportation costs for communities opting to rehabilitate and improve rural roads,</p> <p>20% reduction in time spent collecting water in project households in communities opting to rehabilitate and improve sanitation systems,</p> <p>20% of direct beneficiary households have access to improved sanitation facilities in communities opting to rehabilitate and improve sanitation systems, and</p> <p>10% increase in production of direct beneficiaries in communities opting to rehabilitate and improve village irrigation schemes.</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Communities are committed to the project. • Interventions are sustained and maintained post-project. 	<ul style="list-style-type: none"> • Improved village roads facilitated sending farm produce to markets, saved time and costs with faster transportation, provided easier access to schools and public services, and lowered maintenance cost for vehicles using the roads. • Improved water supply systems saved time collecting water. • Improvement of irrigation systems increased crop yields by providing more irrigation water and increased the value of irrigated agricultural land.

Design Summary	Performance Targets/Indicators	Assumptions and Risks	Accomplishments
<p>Outputs</p> <p>A. Infrastructure Rehabilitation and Improvement</p> <p>A.1 Improved capacity of communities to plan, implement, and maintain rural infrastructure</p> <p>A.2 Improved governance in provision of rural infrastructure</p> <p>A.3 Provision of priority infrastructure to the communities</p> <p>A.4 Generation of employment for communities</p>	<p>At least 50% of the 1,800 communities acquire the capacity to prepare plans for implementing community-driven projects by month 30.</p> <p>Women's participation in the training program will be at least 33%.</p> <p>At least 20% of the representatives in village implementation organizations and 33% of village organizers are women.</p> <p>At least 50% of the people in 1,800 communities actively participated in the rural infrastructure rehabilitation and improvements by month 30.</p> <p>Communities maintain records and make the information needed for the project performance management system available on a timely basis.</p> <p>Priority infrastructure needs in 1,800 villages are met by month 30.</p> <p>160,000 person-months of immediate employment generated by month 30.</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Village facilitators are adequately trained and motivated enough to provide desired support to communities. • Communities have surplus labor and adequate resources to undertake civil works and maintain rehabilitated and improved structures. <p>Risks</p> <ul style="list-style-type: none"> • Prioritization and planning are hijacked by a few influential community members. • District public works services fail to participate constructively in project implementation. 	<ul style="list-style-type: none"> • Through socialization and at least three community meetings facilitated by facilitators and district staff, all communities became capable of assessing infrastructure needs and formulating their village development plans. The communities implemented and completed only activities that were identified in these plans. • The project achieved a 30% rate of female participation in training activities. Women's participation in the village organizations did not meet the target of 20% in all villages. • More than 50% of the village population participated in infrastructure rehabilitation and improvement. • The communities prepared village development plans, prioritized infrastructure needs, and received village grants for prioritized infrastructure. • 4,000 kilometers of rural roads, 351 bridges, 25 jetties, 365 village irrigation systems, 180 water standpipes, 510 domestic water reservoirs, 440 shallow wells, 120 deep wells, 650 km of pipelines, and 340 communal sanitation facilities were constructed and/or rehabilitated.

Design Summary	Performance Targets/Indicators	Assumptions and Risks	Accomplishments
			<ul style="list-style-type: none"> • 166,000 person-months of employment generated by month 30
<p>B. Implementation, Monitoring, and Coordination Support</p> <p>B.1 Improved local government capacity for facilitating, supporting, and monitoring community-driven development</p>	<p>In designing future projects and programs, the district public works services will take into account community feedback.</p>	<p>Assumption</p> <ul style="list-style-type: none"> • District governments are committed to community-driven development. 	<p>Local government capacity improved through the establishment and DGHS's training of (i) provincial and district steering committees chaired by the head of the regional planning and development agency, to monitor and coordinate project activities, and (ii) public works services' project implementation units. These units and regional management consultants and facilitators facilitated, supported, and monitored the project.</p>

DGHS = Directorate General of Human Settlements.

LIST OF PROJECT DISTRICTS AND SOCIOECONOMIC CHARACTERISTICS OF PROJECT DISTRICTS BY PROVINCE

Table A2.1: List of Project Districts

Province	District	Number of Subdistricts	Number of Villages
A. East Java	1. Pacitan	11	55
	2. Trenggalek	14	56
	3. Bondowoso	20	82
	4. Situbondo	15	49
	5. Madiun	15	45
	6. Bangkalan	18	93
	7. Sampang	14	91
	8. Pamekasan	12	50
Subtotal	8	119	521
B. East Nusa Tenggara	1. Sumba Barat	17	39
	2. Sumba Timur	13	38
	3. Kupang	18	40
	4. Timor Timur Selatan	20	38
	5. Timor Timur Utara	9	36
	6. Belu	11	38
	7. Alor	9	36
	8. Lembata	8	38
	9. Flores Timur	13	36
	10. Sikka	10	37
	11. Ngada	15	40
	12. Manggarai	14	42
	13. Rote Ndao	11	47
	14. Manggarai Barat	6	38
Subtotal	14	180	581
C. Southeast Sulawesi	1. Buton	18	50
	2. Muna	27	60
	3. Konawe	24	46
	4. Kolaka	12	45
	5. Konawe Selatan	11	41
	6. Bombana	26	20
	7. Wakatobi	7	11
	8. Kolaka Utara	6	20
Subtotal	8	131	293
D. South Sulawesi	1. Selayar	10	37
	2. Bulukumba	9	31
	3. Bantaeng	6	27
	4. Janeponto	10	31
	5. Takalar	6	33
	6. Sinjai	7	28
	7. Pangkep	11	30
	8. Barru	6	19
	9. Pinrang	9	27
	10. Enrekang	8	37
	11. Luwu	13	43
	12. Tana Toraja	26	33
	13. Luwu Utara	7	39
	14. Luwu Timur	11	30
Subtotal	14	141	445
Total	45	571	1,840

Source: Directorate General of Human Settlements.

Table A2.2: Socioeconomic Characteristics of Project Districts by Province

Socioeconomic Measures	East Java	East Nusa Tenggara	Southeast Sulawesi	South Sulawesi	National
% poor	28.3	29.0	24.4	18.6	16.6
% malnourished children under 5 years	22.9	38.4	22.5	30.7	27.5
Under-5 mortality rate per 1,000	52.0	73.0	92.0	72.0	46.0
% households with access to clean water	83.5	58.8	71.0	71.2	75.0
Years of schooling in labor force	7.1	6.7	7.8	7.4	7.2
% rural unemployment	48.4	58.1	57.5	46.5	43.5
% seeking work	10.6	6.6	11.0	16.1	12.8

Source: Badan Pusat Statistik. 2004. *Survei Sosial Ekonomi Nasional* (National Socio-Economic Survey – Annual). Jakarta

DISTRIBUTION OF COMPLETED INFRASTRUCTURE BY PROVINCE AND DISTRIBUTION OF TYPES OF INFRASTRUCTURE COMPLETED BY PROVINCE

Table A3.1: Distribution of Completed Infrastructure by Province

No.	Type of Infrastructure	Unit	East Java	East Nusa Tenggara	South Sulawesi	Southeast Sulawesi	Total
A.	Road	meter	1,131,429	1,409,717	831,124	476,471	3,848,742
1.	Gravel Roads	meter	445	558,338	372,450	115,344	1,046,578
2.	Concrete Roads	meter	57,310	190,753	49,953	30,112	328,128
3.	Macadam	meter	136,722	34,403	25,755	125	197,006
4.	Telford	meter	169,414	524,553	173,461		867,428
5.	Road Upgrading	meter	17,549	94,643	156,961	283,831	552,984
6.	Road Pavement	meter	57,529		24,413	40,924	128,863
7.	Penetration Layering	meter	685,305	7,028	1,546		693,877
8.	Paving Block	meter	7,156		26,586	135	33,877
9.	Viaduct	meter	1,259	910	2,837	685	5,691
10.	Retaining Wall	meter	47,801	10,839	20,417	3,632	82,688
11.	Drainage	meter	19,172	91,131	51,487	26,660	188,451
B.	Bridge	number	94	25	97	130	349
1.	Concrete Bridge	number	89	18	32	63	204
2.	Small Steel Bridge	number	3	5		12	20
3.	Wooden Bridge	number		2	56	36	94
4.	Semi-Permanent Bridge	number				18	18
5.	Suspension Bridge	number	2		9	1	12
6.	Small Bridge	number	3				3
C.	Boat Stand	number	5			20	25
1.	Boat Landing/Jetty	number	5			20	25
D.	Irrigation						
1.	Irrigation System	number			365		365
2.	Intake Dam	number		3	34	2	39
3.	Canal	number			7		
4.	Irrigation Channel	meter	13,669	2,714	110,152	1,880	128,414
E.	Water Supply						
1.	Public Faucet	number		31		30	61
2.	Water Standpipe	number	3	88	87		179
3.	Drinking Water Reservoir	number	11	59	231	211	512
4.	Pipeline	meter	20,747	250,206	292,500	93,418	656,870
5.	Spring Protection	number		7	6	8	21
6.	Rain Patches	number		96		84	180
7.	Water Pumping Station	number		1	5	12	18
8.	Deep Well	number			93	26	119
9.	Hand Pump Well	number			4		4
10.	Shallow Well	number	12	96	51	282	441
11.	Branch Capturing	number	1	35	3		39
F.	Sanitation	number	14	13	204	111	342
1.	Communal Sanitation Facility	number	14	13	204	111	342

Source: Directorate General of Human Settlements.

Table A3.2: Distribution of Types of Infrastructure Completed by Province

Type of Infrastructure	East Java	East Nusa Tenggara	South Sulawesi	Southeast Sulawesi	Total
Number of Villages	521	581	445	293	1,840
Roads and Bridges	508	392	411	156	1,467
Irrigation and Drainage	31	104	24	11	170
Domestic Water Supply	13	118	81	60	272
Sanitation	10	44	2	13	69
Boat Landing	3	3	9	25	40

Source: Directorate General of Human Settlements.

SUMMARY OF PROJECT COSTS
(\$ million)

Component	Project Cost					
	Appraisal Estimate			Actual		
	Foreign	Local	Total	Foreign	Local	Total
A. Infrastructure Rehabilitation and Improvement						
1. Community Facilitation and Mobilization		0.50	0.50		0.36	0.36
2. Civil Works	8.81	44.57	53.38	8.36	47.21	55.57
Subtotal A	8.81	45.07	53.88	8.36	47.57	55.93
B. Implementation, Monitoring, and Coordination Support						
1. Implementation and Supervision		2.17	2.17		1.09	1.09
2. Consulting Services	0.89	1.74	2.63	0.03	4.17	4.20
3. Audits, Surveys, and Studies	0.17	0.54	0.71			
Subtotal B	1.06	4.45	5.51	0.03	5.26	5.29
C. Taxes and Duties		0.38	0.38		0.40	0.40
D. Contingencies						
1. Physical	0.03	0.12	0.15			
2. Price	0.01	0.14	0.15			
E. Interest During Construction	0.75		0.75	0.75		0.75
Total Cost	10.66	50.16	60.82	9.14	53.23	62.37

Sources: Directorate General of Human Settlements and Asian Development Bank Loan Financial Information System.

UTILIZATION OF LOAN FUNDS

Annual Disbursement

LOAN 2221-INO(SF): Special Drawing Rights

Year	Actual Disbursement	Actual Cumulative	% of Actual Disbursement
2006	12,446,404	12,446,404	37
2007	20,536,962	32,983,366	60
2008	712,932	33,696,298	2
2009	262,249	33,958,547	1
Total	33,958,547	33,958,547	100

Source: Asian Development Bank Loan and Financial Information System.

LOAN 2221-INO(SF): \$

Year	Actual Disbursement	Actual Cumulative	% of Actual Disbursement
2006	18,493,143	18,493,143	36
2007	31,060,304	49,553,447	61
2008	1,152,187	50,705,634	2
2009	391,053	51,096,687	1
Total	51,096,687	51,096,687	100

Source: Asian Development Bank Loan Financial Information System.

PROJECT IMPLEMENTATION SCHEDULE

Activity/Component	Year Quarter	2005				2006				2007				2008				2009				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
A. Preparation																						
a. Budget preparation				■	■																	
b. Establish project offices					■	■	■															
c. Mobilize management consultants						■	■	■	■													
d. Mobilize district consultants						■	■	■	■													
B. Socialization and Mobilization																						
a. Train facilitators and subdistrict teams							■	■	■		■	■										
b. Promotion campaign and socialization							■	■	■													
C. Planning and design																						
a. Mobilize community implementation organizations							■	■	■	■	■	■	■									
b. Identify infrastructure needs							■	■	■	■	■	■	■									
c. Prepare infrastructure rehabilitation and improvement plan							■	■	■	■	■	■	■									
d. Contract between community implementation organizations and Project							■	■	■	■	■	■	■									
D. Implementation																						
a. Undertake civil works							■	■	■	■	■	■	■									
b. Construction supervision							■	■	■	■	■	■	■									
c. Quality control							■	■	■	■	■	■	■									
E. Operation and maintenance (O&M)																						
a. O&M plan preparation											■	■	■									
b. O&M training											■	■	■									
c. Implementation of O&M											■	■	■	■	■	■	■	■	■	■	■	■
F. Monitoring and Evaluation																						
a. Assess financial management systems							■	■														
b. Monitoring							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
c. Assessment of impact										■	■			■	■							
d. Project completion review																	■	■	■	■		■

■ Original
 □ Actual

Source: Directorate General of Human Settlements.

**STATUS OF COMPLIANCE WITH LOAN COVENANTS
(As of September 2009)**

No.		Loan Covenant	Responsibility	Status of Compliance
Use of Proceeds of the Loan				
1.	Article III, Section 3.01	The proceeds of the Loan to be applied to the financing of expenditures on the Project in accordance with the provision of this Loan Agreement.	MOF DGHS	Complied with
2.	Section 3.02	The goods and services and other items of expenditure to be financed out of the proceeds of the Loan and the allocation of amounts of the Loan among different categories of such goods and services and other items of expenditure shall be in accordance with provision of Schedule 3 to this Loan Agreement.	MOF DGHS	Complied with
3.	Section 3.03	All goods and services financed out of the proceeds of the Loan shall be procured in accordance with provision of Schedule 4 and 5 of this Loan Agreement.	MOF DGHS	Complied with
4.	Section 3.04	Withdrawals from the Loan Account in respect of goods and services shall be made only on account of expenditures relating to: goods produced in and supplied from and services supplied from member countries of ADB; and which meet such other eligibility requirements.	MOF DGHS	Complied with
Particular Covenants				
5.	Article IV, Section 4.02	Borrower shall (i) maintain separate accounts for the Project; (ii) have such accounts and related financial statements audited annually by independent auditors; (iii) furnish to ADB not later than six (6) months after the end of each related fiscal year, certified copies of such audited accounts and financial statements and the report of the auditors relating thereto (including auditors' opinion on the use of the Loan proceeds and compliance with the financial covenants as well as on the use of the procedures for imprest account/statement of expenditures), all in the English language.	DGHS	Complied with

No.		Loan Covenant	Responsibility	Status of Compliance
Project Implementation and Coordination; Financial Matters (Schedule 6)				
Project Executing Agency				
6.	Para 1	DGHS shall be the Executing Agency for the Project		Complied with
Project Implementation and Coordination				
7.	Central Level Para 2	The existing PKPS-BBM National Coordination Team and the National Rural Infrastructure PKPS-BBM Steering Committee (NSC) shall provide policy directives, guidance, monitoring and managerial oversight for the implementation of the Project. NSC shall periodically (no less than two times each year) report to the PKPS-BBM National Coordination Team on Project progress. The PKPS-BBM National Coordination Team and the NSC shall each meet as necessary but not less than two times each year.	DGHS	Complied with. NSC and national coordination teams established
8.	Para. 3	The PCMU, established within DGHS, shall work closely with the PKPS-BBM multi-agency provincial and district project coordination teams.	DGHS	Complied with. PCMU established
9.	Provincial Level Para. 4	<p>The governor of each Participating Province shall appoint a multi-agency provincial Steering Committee chaired by the provincial BAPPEDA with the provincial Public Works Agency as secretary, and members. The Provincial Steering Committee shall meet as necessary but not less than two times each year.</p> <p>A PPIU shall be established in each Participating Province and shall be responsible for: (i) providing secretariat assistance to the Provincial Steering Committee; (ii) training of district level stakeholders; (iii) village selection screening and making recommendations to the PCMU; (v) annual work activity and budgetary planning and programming; (v) screening of IRIP proposals for environmental and social safeguards; (vi) managing the complaints procedures; and (vii) coordination of district level activities, monitoring and reporting.</p>	<p>Provincial governments</p> <p>Provincial governments</p>	<p>Complied with. Provincial steering committees established in February 2006.</p> <p>Complied with. PPIUs established in February 2006</p>

No.		Loan Covenant	Responsibility	Status of Compliance
10.	District Level Para. 6	<p>The district head (Bupati) of each Participating District shall appoint a multi-agency district Steering Committee chaired by the head of the district BAPPEDA and with the district Public Works Agency as secretary, and members.</p> <p>Community and non-government stakeholders shall form a minimum 25 per cent of the membership.</p> <p>The District Steering Committee shall meet as necessary and not less than two times each year.</p>	District Bupati	<p>Complied with. District steering committees established in February 2006</p> <p>The members include one person from a local NGO and one person from a local university, such that two out of six members (33%) are nongovernment stakeholders.</p>
11.	Para. 7	A DPIU shall be established in each Participating District.	District Bupati	Complied with. DPIUs established in February 2006
12.	Para. 8	Sub-district teams shall be responsible for: (i) disseminating information regarding the Project to villages that may wish to participate in the Project; (ii) assisting with selection or formation of CIOs and community representatives; (iii) approving CIOs; (iv) explaining Project implementation guidelines to Participating Villages; and (v) monitoring construction reporting by the Participating Villages.	District and subdistrict groups	Complied with. (i) to (v) done. Reporting on construction by participating villages was done weekly and monthly to DPIU.
13.	Village Level Para. 9	Each Participating Village shall establish a CIO which shall have a Representative Committee which includes a designated head, treasurer, secretary and technical facilitator. The Representative Committee shall have five (5) members, of which at least one (1) shall be female and, if minority groups are present in the village, then one member from the minority group.	District DPIU Village	Complied with. CIOs were established in September 2006 with one or two female members.
14.	Selection of Participating Districts, Participating Villages and Village	Selection of Participating Districts is based on criteria issued by the NSC. Selection criteria shall include, at a minimum, the following: (i) the proposed district has been classified by the Borrower as a "Less Developed	DGHS NSC	Complied with

No.		Loan Covenant	Responsibility	Status of Compliance
	Infrastructure Para. 16	District”, (ii) there is sufficient implementation capacity in the district, and (iii) there are a sufficient number of villages in the district which are potentially eligible to participate in the Project. Final selection of Participating Districts shall be approved by ADB prior to Project activities commencing in that district. Selection of Participating Villages is based on criteria issued by the NSC. Selection criteria shall include, at a minimum, the following: (i) the village has a poverty level higher than the district average; (ii) the village has a lower density of infrastructure than the district average; and (iii) the village has not received support in the preceding two (2) years for rural infrastructure development. A proposed list of Participating Villages shall be submitted to the PCMU and ADB prior to approval of the Participating Villages’ IRIP and prior to commencement of civil works in each of the Participating Villages.		
15.	Para. 17	Selection of Participating Villages shall be subject to the IRIP meeting the following criteria: (i) it is unanimously endorsed by the Representative Committee and provides proportional benefits and employment opportunities to women and minority groups; (ii) the proposed works have a village infrastructure focus leading to improvement of livelihoods for the poor or near poor; (iii) the proposed works have the potential of immediate utilization by the poor or near poor; (iv) only rehabilitation and improvement of existing village level infrastructure will be required; (v) the proposed works demonstrate economic viability and financial sustainability; (vi) no individual or community voluntary land donations, land acquisition or involuntary resettlement as defined in ADB’s <i>Policy on Involuntary Resettlement</i> (1995) will be required; (vii) no negative environmental, social or economic impacts will occur; (viii) the construction period will not exceed three (3) months; (ix) an evaluation of alternative designs and verification of cost effectiveness	DGHS NSC	Partly complied with. O&M plans have not been developed and implemented in all villages.

No.		Loan Covenant	Responsibility	Status of Compliance
		has been completed; (x) local labor and materials and simple technology or technology appropriate to village conditions will be utilized; (xi) at least 50 per cent of the village's population have participated in a demonstration of the proposed works' nature, location and impacts; and (xii) the village has agreed to the proposed works' O&M plan which is contained in the contract between the CIO and the DPIU.		
16.	Counterpart Contribution and Obligations Para. 18	All necessary counterpart obligations for Project implementation are provided in a timely manner and, to such end, the Borrower will make timely submissions of annual budgetary appropriation requests and take all other measures necessary or appropriate for prompt disbursement of appropriated funds, if any, to the Participating Provinces, Participating Districts and Participating Villages during each year of Project implementation.	MOF DGHS Provincial governments District governments	Complied with. Budgets for project implementation available since 2005
17.	Use of Earmarked Funds Para. 19	Throughout the period of Project implementation, the proceeds of the Loan, and the corresponding necessary counterpart funds, if any, shall be passed on as grant to Participating Provinces, Participating Districts and Participating Villages by budgetary transfers of funds earmarked for such purpose. The Project shall be denominated a national level Project.	MOF	Complied with
18.	Para 20	The Borrower shall transmit fund directly from Ministry of Finance to its local treasury offices in the Participating District for direct transmission to individual accounts held by CIOs. Funds shall be released to Participating Villages in tranches of 40 per cent, 40 percent and 20 per cent of the approved amount for the respective IRIP based upon verification of actual implementation progress by the relevant DPIU. The first tranche shall be payable upon approval of designs and detailed cost estimates for the proposed rural infrastructure as an advance payment; the second and third tranches shall be payable when the works are completed by 36 per cent and 72 per cent, respectively.	MOF DPIUs District Treasury	Complied with

No.		Loan Covenant	Responsibility	Status of Compliance
Gender				
19.	Para. 21	A minimum of 20 percent of village organizers are women and the female organizers shall receive a wage equal to male village organizers.	PCMU PPIU DPIU	Complied with. They received wages for 6 months.
20.	Para 22	Women shall be appropriately represented on the CIO Representative Committee, and female CIO Representative Committee members shall receive benefits equal to male CIO Representative Committee members.	PCMU PPIU DPIU	Complied with
21.	Para. 23	A minimum of 33 per cent of participants in training programs under the Project are women.	DPIU PPIU PCMU	Complied with. About 27%–30% of participants in training programs for facilitators were women.
Indigenous Peoples				
22.	Para. 24	Measures shall be undertaken to promote full participation of indigenous peoples in Project activities including, inter alia, developing mechanisms to include indigenous peoples in capacity building and training under the Project. The PPMS developed under the Project shall include performance indicators that facilitate the monitoring of participation of indigenous peoples in Project activities.	DPIU PPIU PCMU	Complied with. No indigenous people were in project areas.
Environment				
23.	Para. 25	All Project activities shall be performed in accordance with the ADB's Environment Policy (2002). No IRIPs are approved for inclusion in the Project which have negative environmental impacts, in accordance with para. 17(vii) of this Schedule, or which do not meet ADB's Category "C" requirements in respect to environmental impact rating.	DPIU PPIU PCMU	Complied with
Resettlement				
24.	Para. 26	All Project activities shall be performed in accordance with ADB's Policy on Involuntary Resettlement (1995). No IRIPs are approved for inclusion in the Project which would require individual or community voluntary land donations,	DPIU PPIU PCMU	Complied with. No resettlement was required.

No.		Loan Covenant	Responsibility	Status of Compliance
		land acquisition or involuntary resettlement in accordance with para. 17(vi) of Schedule 6.		
Fiduciary Control, Fraud and Anti-Corruption Plan				
25.	Para. 27	DGHS, in consultation with the Ministry of Finance, ADB, regional governments, non-governmental organizations and other stakeholders, develops a code of conduct, ethics and sanctions to be observed by bidders, suppliers, contractors, consultants and other stakeholders.	DGHS	Complied with. Project implementation guidelines were prepared for project activities.
26.	Para. 28	All Project staff are fully knowledgeable of and comply with the Borrowers and ADB's procedures including for (i) implementation, (ii) procurement, (iii) use of consultants, (iv) disbursement, (v) reporting, (vi) monitoring, and (vii) prevention of fraud and corruption.	DGHS PCMU PPIU DPIU	Complied with
27.	Para. 29	Personnel assigned to professional positions in the PCMU shall remain in their position for the duration of the Project, unless otherwise agreed by ADB.	DGHS	Complied with
28.	Para. 30.	In the event regional governments participating in the Project establish a procurement committee, then each such committee shall include at least one independent observer.	PPIU DPIU	Complied with
29.	Para. 31.	Contracts with CIOs, contractors, suppliers and service providers involved in Project activities include financial liability provisions with regard to corruption, misrepresentations and other unethical conduct. All such contracts contain provisions specifying the right of ADB to audit or participate, together with the Borrower's auditor, in the audit of the accounts of the CIOs, contractors, suppliers and service providers if there are allegations of graft or fraudulent financial practices.	PCMU PPIU DPIU	Complied with
30.	Para. 32	All CIO contracts entered into with the DPIU are made available to the public upon request and also that such contracts, and records of payments made, are publicly posted in the	DPIU	Partly complied with. Financial information was not posted for

No.		Loan Covenant	Responsibility	Status of Compliance
		Participating Villages.		public viewing in all villages. About 20% of villages in South Sulawesi province did not post financial information. In these villages, information was provided through informal village discussions in mosques or churches. Fewer villages in Southeast Sulawesi and East Nusa Tenggara provinces failed to post financial information. All villages in East Java posted financial information. Financial information was posted until the end of 2007.
31.	Para. 33	DGHS shall develop a website for the Project which contains relevant Project information.	DGHS PCMU	Complied with. The website was launched on 8 August 2006. See www.infrastrukturperdesaan.org .
Auditing and Financial Recordkeeping				
32.	Para. 34	Independent auditors shall be selected and engaged in accordance with selection procedures acceptable to ADB.	DGHS	Complied with
33.	Para. 35	All Participating Provinces, all Participating Districts, and national level DGHS, maintain a separate accounting system for Project expenditures in accordance with sound accounting principles.	DGHS PCMU PPIU DPIU	Complied with

No.		Loan Covenant	Responsibility	Status of Compliance
34.	Para. 36	Each Participating Village shall maintain a record of expenditures for all expenses incurred as a result of rural infrastructure construction in a format specified by guidelines prepared under the Project and shall make such records be available to the public in accordance with para. 32 of Schedule 6.	DPIU CIO	Complied with
Reporting				
35.	Para. 37	DGHS, through PCMU, submit to NSC and ADB, within 4 weeks of the end of each calendar quarter period, consolidated progress reports which shall include the ongoing findings of the PPMS, described in para. 39 of Schedule 6.	PCMU	Complied with
36.	Para. 38	DGHS, through PCMU, submit to NSC and ADB, within 6 months of Project completion, a consolidated Project completion report which shall include the overall findings of the PPMS, as described in para. 39 of Schedule 6.	PCMU	Complied with. The government submitted its PCR report in January 2009.
Project Performance Monitoring System (PPMS)				
37.	Para. 39	PPMS shall be managed and implemented effectively shall include the following elements: (i) monitoring of physical and financial progress as well as the efficacy and efficiency of IRIP implementation; (ii) monitoring the level and adequacy of participation of various stakeholders in planning and implementing Project activities in Participating Villages; (iii) collection of gender disaggregated data; (iv) monitoring social, environmental and economic impacts, including the establishment of benchmark information and data, and (v) assessing the impact and utilization of the Project facilities. Data collection for the PPMS shall be performed by the village organizers who shall report such data to the appropriate DPIU.	PCMU PPIU DPIU	Complied with

ADB = Asian Development Bank, CIO = community implementation organization, DGHS = Directorate General of Human Settlements, DPIU = district project implementation unit, IRIP = infrastructure rehabilitation and improvement plan, MOF = Ministry of Finance, NGO = nongovernment organization, NSC = national steering committee, O&M = operation and maintenance, PCMU = project coordination and monitoring unit, PKPS-BBM = Program Kompensasi Pengurangan Subsidi Bahan Bakar Minyak (Fuel Subsidy Reduction Compensation Program), PPIU = provincial project implementation unit.

ECONOMIC ANALYSIS

1. The Rural Infrastructure Support Project supported the development of key rural infrastructure, including its rehabilitation and improvement, in 1,840 poor and/or isolated villages in less-developed districts of the provinces of East Java, East Nusa Tenggara, South East Sulawesi and South Sulawesi. It covered 8 districts and 521 villages in East Java Province, 14 districts and 445 villages in South Sulawesi Province, 8 districts and 298 villages in South East Sulawesi, and 15 districts and 581 villages in East Nusa Tenggara. It improved 4,000 kilometers (km) of rural roads, 351 bridges, 25 boat landings, more than 128 km of irrigation and drainage canals, 365 irrigation systems, 180 water standpipes, 510 domestic water reservoirs, 440 shallow wells, 120 deep wells, 650 km of pipelines, and 340 communal sanitation facilities. Some 85% of the allocation was used for roads and bridges, 11% for domestic water supply, 2% for irrigation and drainage, and 1% for sanitation.

2. The project adopted a community-based approach, and the design and cost of selected interventions were determined during implementation. Quantifiable benefits would arise from village rural investments as increased rural incomes and welfare, but, because beneficiaries determined the investments, the project's actual inputs and outputs could not be predicted up front. The project, therefore, did not lend itself to a traditional economic analysis.

A. Likely Benefits and Impacts of Rural Infrastructure

3. **Rural Infrastructure Benefits.** The more common benefits expected to accrue included (i) savings in vehicle operating costs from improvements to road surfaces; (ii) time savings in water collection; (iii) time and cost savings from faster transportation, including more efficient transportation of goods to market; (iv) increase in the value of land adjacent to new roads; (v) new employment in the transport sector; (vi) increase in crop yield from better irrigation; (vii) improvement in the value of agricultural land serviced by new irrigation works; (viii) savings from damage to buildings and crops with reduced flooding and improved irrigation; and (ix) the creation of new businesses and roads.

4. **Employment Generation.** An estimated 16% of the project cost was used to pay village workers. This amounts to \$9.98 million at the estimated wage rate of \$2.0/day. The project created 4.99 million person-days of employment, or 2,700 person-days per village.

5. **Poverty Reduction Impact.** Infrastructure investments have a significant impact on poverty reduction, but their ability to reduce poverty varies. This is greater where poverty is most widespread and with better poverty targeting of projects. A number of case studies and evaluations have confirmed that infrastructure development reduces rural poverty through many channels, such as improved growth in agricultural production, greater rural nonfarm employment, and migration.¹⁴ There may be time lags between the investment in improved infrastructure and the positive impacts. Evidence from studies shows that rural transport improvements in particular, which are usually the types of intervention most demanded by communities, (i) contribute to decreasing the cost to the poor of personal travel and goods transport; (ii) increase the range of opportunities for wage employment, thereby raising the price of labor in rural areas;

¹⁴ C. Cook. 2004. *The Role of Infrastructure and Infrastructure Services in Poverty Reduction*. Manila. Background paper prepared for the Poverty Reduction Strategy Review; S. Fan. {YEAR.} *Infrastructure Development and Poverty Reduction: Case Studies of India and China*. Presentation by the International Food Policy Research Institute; C. Cook, T. Duncan, S. Jitsuchon, A. Sharma, and W. Gubao. 2005. *Assessing the Impact of Transport and Energy Infrastructure on Poverty Reduction*. Manila. ADB.

and (iii) empower the poor and increase their participation in local organizations, activities outside the rural community, and local political processes and management structures.

6. **Other Benefits.** In addition to direct and indirect yields from rural infrastructure investments, the project provided benefits through technical assistance to communities and districts in designing and implementing infrastructure, as well as training government staff. These are project activities for which input costs are identifiable, but benefits and outputs cannot be determined with accuracy.

B. Evidence from Case Studies of Three Subprojects

7. Cost and benefit data are obtained from a sample of three subprojects for rural road rehabilitation, installing a new system of domestic water supply, and irrigation improvement. Only the benefit in savings in vehicle operating cost is considered in the analysis of the road project. The main benefit considered in water supply is savings in time spent collecting water. The main benefit from improvement in irrigation is the increase in paddy yields. The results of this analysis are shown in Tables A8.1–A8.6.

8. Using very conservative assumptions, it is observed that the project economic internal rate of return (EIRR) is generally above 30%, if 5% of the initial capital investment is allocated for annual operation and maintenance (O&M) and the project life is 10 years. However if no O&M is allocated, the project life is likely to be 5 years, with the benefits reduced by 20% annually and the EIRR less than 20%. The standard conversion factor for capital investments and benefits is assumed to be 1.0.

1. Road Subproject

9. This subproject is located in the village of Oenesu in Kupang District of East Nusa Tenggara Province. It is a small farming village with some 200 households. The farmers grow crops such as vegetables, rice, and tamarind and rear pigs on their 2 hectare farms. Their average farm income is Rp300,000 per month, and nearly all farmers supplement their income by producing traditional textiles using local dyes and imported cotton, as well as with off-farm work. In 2006, the villagers decided to use their grant to upgrade and improve their road from dirt to asphalt with a width of 3 meters. Of the \$25,000 grant, \$21,000 was used to buy materials and rent equipment, which is considered subproject cost, and \$4,000 was used to pay village workers, which is regarded as a subproject benefit. There are three culverts to allow drainage under the road.

10. The village appointed a community implementation organization of five members to supervise subproject implementation. They obtained three quotations before purchasing the stones, cement, and asphalt. They also obtained three quotations for the rental of heavy equipment such as the heavy pounder and roller. They held several meetings attracting 40 villagers, and all were informed of the prices.

11. The road is of good quality and has been regularly maintained with the assistance of the district administration.

12. Some of the main benefits of the road are improved access to market for farm produce, easier access to school and public services, and lower maintenance costs for vehicles using the road. The last benefit is considered to be the main subproject benefit, and it is assumed that the improved road will reduce the maintenance costs of vehicles by Rp1,000/km/ton. The total

benefit is obtained by estimating the number of vehicles using the road daily multiplied by the weight of the vehicle and then by 365 days per year. This is shown in Table A8.1. Table A8.2 shows that, considering only this benefit, the EIRR is estimated at 39% with an expected subproject life of 10 years. However, if the road is not maintained but allowed to deteriorate, then it is likely to be usable for only 5 years, with the benefits falling by 20% annually and lowering the EIRR to less than 15%.

2. Water Supply Subproject

13. This subproject is located in the village of Gassing in Tanah Toraja District of South Sulawesi Province. It is a village with some 400 households in a hilly area. It used \$15,000 out of its \$25,000 grant for a water-supply system serving 100 households. Of this amount, \$13,000 was for materials, considered the subproject cost, and \$2,000 was for paying village workers, which is regarded as a subproject benefit. The balance of the grant was used to construct a concrete bridge. The main sources of village farm income are selling vegetables and bamboo and rearing pigs. The village is located near to several urban centers, where workers easily find employment.

14. The material was purchased after obtaining three quotations, and all work was done by the villagers themselves, with wages set at Rp15,000 per day. The bulk of the cost was to build a retention dam and provide the main pipes to convey water by gravity flow to several main outlets. Individual households then have to connect their own water hose to these main outlets, and the hose can be moved to provide water to pigs, garden crops, and the household. The hose is bent when not used to stop the water flow. The villagers pay a monthly fee of Rp1,000/household for maintenance.

14. Economic analysis computation assumes that the main benefit of this system is the time saved not collecting water from the nearby stream. This is estimated at Rp1,500/household per day. On this conservative assumption, the EIRR for the subproject is 42%. However, if the subproject is not well maintained, the EIRR will fall to less than 20% (Tables 3 and 4).

3. Irrigation Subproject

15. This subproject is located in the village of Balusu in Barru District of South Sulawesi Province. It is a village with some 100 households located in lowlands. It used the grant for three small subprojects: (i) water supply, (ii) a small bridge, and (iii) a small dam for storing water for irrigating 8 hectares of paddy. Of the \$10,000 allocated for the dam, \$8,000 was for materials, considered the subproject cost, and \$2,000 was payment of village workers, which is regarded as a subproject benefit. This structure was constructed in 2006 but currently leaks. The villages have covered the leaks in the dam with plastic sheeting, but without major repairs it is unlikely that this structure will survive for more than 5 years. It could have been utilized for 10 years with better technical supervision and management during construction. The villagers claim that the additional irrigation water supplied by this storage dam has increase their paddy yield from 4 to 6 tons per hectare.

16. The EIRR for this structure is estimated at 22% or less than half the value if the structure had been constructed to a higher standard.

17. Table A8.7 shows expenditures for different infrastructure investments incurred in the four provinces.

Table A8.1: Estimated Annual Economic Benefit from Project Road

Province : East Nusa Tenggara		District: Kupang		Village: Oenesu	
Length		2.0 km			
Vehicles	Average Daily Traffic	Tons	Daily Tons	Km/tons	
Motorcycle	100	0.1	10.0	20.0	
Car (sedan)	10	0.4	4.0	8.0	
Pickup	15	1.0	15.0	30.0	
Light bus	10	1.5	15.0	30.0	
Light truck (maximum 4 tons)	15	4.0	60.0	120.0	
Hand tractor	20	0.3	6.0	12.0	
Total	170		110.0	220.0	
Savings in vehicle operating cost per km tons (Rp)			1,000		
Total annual vehicle operating cost saving (million Rp)			80		

km = kilometer.

Source: Directorate General of Human Settlements.

Table A8.2: Road Project Economic Cost and Benefit
(million Rp)

Year	1	2	3	4	5	6	7	8	9	10
Capital Cost	210									
Operation & Maintenance		10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
Total Cost	210	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
Benefit										
Labor	40									
Savings in transport cost		80	80	80	80	80	80	80	80	80
Total	40	80	80	80	80	80	80	80	80	80
Net benefit	(170)	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8	69.8
EIRR for 10 year project life (%) ^a	38.93									
EIRR for 5 year project life (%)	14.47									

() = negative, EIRR = economic internal rate of return.

^a Without maintenance, project benefit is assumed to decline by 20% per year.

Source: Directorate General of Human Settlements.

Table A8.3: Estimated Economic Benefit from Domestic Water Supply Project

Province: South Sulawesi	District: Tanah Toraja	Village: Gassing
Number of households	100	
Time savings in collecting water (Rp/day)	1,500	
Benefit per household (Rp/year)	547,500	
Total benefit (million Rp/year)	55	

Rp = rupiah.

Source: Directorate General of Human Settlements.

Table 8A.4: Domestic Water Supply Project Economic Cost and Benefits
(million Rp)

Year	1	2	3	4	5	6	7	8	9	10
Capital Cost	130									
O&M		6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Total Cost	130	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Benefit										
Labor	20									
Benefit/year		55	55	55	55	55	55	55	55	55
Total	20	55	55	55	55	55	55	55	55	55
Net benefit	(110)	48.25	48.25	48.25	48.25	48.25	48.25	48.25	48.25	48.25
EIRR 10 years (%)	41.99									
EIRR 5 years (%)	17.53									

() = negative, EIRR = economic internal rate of return, O&M = operation and maintenance.

Source: Directorate General of Human Settlements.

Table A8.5: Estimated Economic Benefit from Irrigation Improvement Project

Province: South Sulawesi	District: Barru	Village: Balusu
Number of hectares	8	
Yield without project (tons/hectare)	4	
Yield with project (tons/hectare)	6	
Price of paddy (Rp/ton)	2,000,000	
Incremental yield/crop	16	
Total Benefits (million Rp)	32	

Rp = rupiah.

Source: Directorate General of Human Settlements.

Table A8.6: Estimated Economic Cost and Benefits of Irrigation Improvements
(million Rp)

Year	1	2	3	4	5	6	7	8	9	10
Capital Cost	80									
Operation & Maintenance		4	4	4	4	4	4	4	4	4
Total Cost	80	4	4	4	4	4	4	4	4	4
Benefit										
Labor	20									
Benefit/year		32	32	32	32	32	32	32	32	32
Total	20	32	32	32	32	32	32	32	32	32
Net benefit	(60)	28	28	28	28	28	28	28	28	28
EIRR 10 years (%)	45.02									
EIRR 5 years (%)	21.77									

() = negative, EIRR = economic internal rate of return, O&M = operation and maintenance.

Source: Directorate General of Human Settlements.

Table A8.7: Summary of Project Cost by Province**1. East Java**

Type of Infrastructure	Total Cost (million Rp)	% Total Cost	Number of Subprojects
Road and Bridges	123,547	94.0	1,486
Irrigation	3,251	2.5	37
Water and Sanitation	1,509	1.1	28
Others ^a	2,526	1.9	
Village Contribution	556	0.4	
Total	131,388	100.0%	1,551

^a For purchasing materials used for all infrastructure subprojects.

2. East Nusa Tenggara

Type of Infrastructure	Total Cost (million Rp)	% Total Cost	Number of Subprojects
Road and Bridges	126,862	87.3	993
Irrigation	967	0.7	16
Water and Sanitation	17,131	11.8	163
Others ^a	338	0.2	
Village Contribution	49	0.0	
Total	145,347	100.0	1,172

^a For purchasing materials used for all infrastructure subprojects.

3. South Sulawesi

Type of Infrastructure	Total Cost (million Rp)	% Total Cost	Number of Subprojects
Road and Bridges	85,030	76.3	1,115
Irrigation	9,107	8.2	114
Water and Sanitation	17,138	15.4	288
Others ^a	50	0.0	
Village Contribution	75	0.1	
Total	111,400	100.0	1,517

^a For purchasing materials used for all infrastructure subprojects.

4. South East Sulawesi

Type of Infrastructure	Total Cost (million Rp)	% Total Cost	Number of Subprojects
Road and Bridges	57,206	77.6	604
Irrigation	2,305	3.1	24
Water and Sanitation	13,296	18.0	203
Others ^a	657	0.9	
Village Contribution	214	0.3	
Total	73,678	100.0	831

^a For purchasing materials used for all infrastructure subprojects.

Table A8.8: Cost of Total Project by Investment

Type of Infrastructure	Total Cost (million Rp)	% Total Cost	Number of Subprojects
Road and Bridges	392,645	85.0	4,198
Irrigation	15,630	3.4	191
Water and Sanitation	49,074	10.6	682
Others ^a	3,571	0.8	
Village Contribution	893	0.2	
Total	461,813	100.0	5,071

^a For purchasing materials used for all infrastructure subprojects.

Table A8.9: Cost of Total Project by Province

Province	Total Cost (million Rp)	% Total Cost	Number of Subprojects
East Java	131,388	28.5	521
East Nusa Tenggara	145,347	31.5	581
South Sulawesi	111,400	24.1	445
South East Sulawesi	73,678	16.0	293
Total	461,813	100.0	1,840

Source: Directorate General of Human Settlements.