Democratic Socialist Republic of Sri Lanka

FY2016 Ex-Post Evaluation of Japanese ODA Loan Project

"Provincial Road Improvement Project & Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province)"

External Evaluator: Keishi Miyazaki, OPMAC Corporation

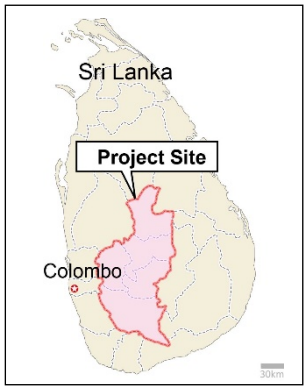
0. Summary

The objectives of this project are to enhance transport efficiency and accessibility to socio-economic services in Central Province and Sabaragamuwa Province in Sri Lanka by rehabilitating and upgrading the remarkably deteriorated provincial and rural roads[1] and bridges, and to strengthen their road maintenance system, thereby contributing to local economic development. The relevance is high, as the objectives were consistent with Sri Lanka's development policies and development needs as well as with Japanese aid policies. The operation and effect indicators of this project such as increased daily average traffic volume, reduced vehicle operating cost and reduced travel time have largely attained their target values, and the project had qualitative effects such as improvements in accessibility to socio-economic services. There was also a positive impact on the activation of local economies. No negative impact on the natural environment was observed, and no land acquisition or resident resettlement was executed. Therefore, the effectiveness and impacts of this project are high. The efficiency of this project is fair, as both the project cost and project period exceeded the plan. Meanwhile, a minor problem has been observed in the institutional and financial aspects of the operation and maintenance system, therefore the sustainability of the project's effect is evaluated to be fair.

In light of the above, this project is evaluated to be satisfactory.

[1] The road network in Sri Lanka is classified into Class A to Class E roads according to the road function. "Class A" roads are inter-provincial roads connecting major cities and ports, "Class B" roads are roads connecting major urban areas, "Class C" roads are major feeder roads connecting residential areas and markets, "Class D" roads are minor feeder roads connecting residential areas and markets, "Class E" roads are rural access roads to particular locations, and "Other roads" are plantation, forest and irrigation roads.

1. Project Description



Project Location

Provincial Road improved by the project
in Nuwara Eliya, Central Province
(Ketabulawa Thispane Road)

1.1 Background

In Sri Lanka, road transportation accounted for approximately 90% of the country's land transportation (passenger and cargo), and thus the road sector played a very important role in social and economic activities. On the other hand, the construction of new roads between urban areas and other main cities had been delayed, and in provincial/rural areas, there were many arterial roads between the main cities and road networks in the rural areas that had needed rehabilitation or widening. For this reason, the transportation efficiency of existing roads has remained low.

The central government was responsible for national roads, and the provincial government was responsible for provincial/rural roads in Sri Lanka. Although the government of Sri Lanka increased its investment in the road sector in the 1990s, provincial/rural roads suffered significant deterioration compared to national roads which caused problems in land transportation in rural areas. This was because provincial governments had greater budget restrictions and the departments in charge of the road sector lacked skills. Problems such as deterioration of the road surface were aggravated for approximately 550km in Central Province and 700km in Sabaragamuwa Province, and the rehabilitation was urgently necessary.

1.2 Project Outline

The objectives of this project are to enhance transport efficiency and accessibility to socio-economic services in Central Province and Sabaragamuwa Province in Sri Lanka by rehabilitating and upgrading the remarkably deteriorated provincial/rural roads and bridges and to strengthen their road maintenance system, thereby contributing to local economic development[2].

[2] This ex-post evaluation evaluates two related projects as one package project, and re-examines the explanation of the project objective by considering assumed steps for achieving the project objectives based on the logical sequence of "Input-Output-Outcome". The explanation was modified as shown in 1.2 Project Outline.

Project Name	Rural Road Improvement Project	Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province)
L/A No.	SL-P76	SL-P96
Loan Approved Amount/ Disbursed Amount	5,811 million yen / 5,787 million yen	9,156 million yen / 9,143 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	March 2003 / March 2003	March 2010 / March 2010
Terms and Conditions	Interest Rate: 2.20% Repayment Period: 30 years (Grace Period:10 years) Conditions for Procurement: General Untied	Interest Rate: 1.40% (Main Contract) Interest Rate: 0.01% (Consulting Services) Repayment Period: 30 years (Grace Period: 10 years) Conditions for Procurement: General Untied
Borrower / Executing Agency(ies)	Democratic Socialist Republic of Sri Lanka / Ministry of Local Government and Provincial Council	
Project Completion	April 2010	December 2015
Main Contractor(s) (Over 1 billion yen)	—	—
Main Consultant(s) (Over 100 million yen)	Joint Venture: Nippon Koei Co., Ltd (Japan) / Engineering Consultants Ltd. (Sri Lanka) / Halcrow Group Ltd. (U.K.)	Joint Venture: Engineering Consultants Ltd. (Sri Lanka) / MG Consultants (PVT), Ltd. (Sri Lanka)
Feasibility Studies, etc.	United Nations Development Program, “Mid Country Rural Roads Network Feasibility Study for Central and Sabaragamuwa Provinces” (2001).	Asian Development Bank, “Road Project Preparatory Facility”, (2008).
Related Projects	[ODA Loan] • Pro-Poor Rural Development Project (2007) • Provincial/Rural Road Development Project (Eastern Province) (2010) [Asian Development Bank] • Road Sector Development Project (2003-2008)	

2. Outline of the Evaluation Study

2.1 External Evaluator

Keishi Miyazaki (OPMAC Corporation)

2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted as follows:

Duration of the Study: September 2016 – October 2017

Duration of the Field Study: January 5 – February 4, 2017, May 1 – May 13, 2017

3. Results of the Evaluation (Overall Rating: B[3])

3.1 Relevance (Rating: ③[4])

3.1.1 Consistency with the Development Plan of Sri Lanka

At the time of the appraisal for the Rural Road Improvement Project (2003), *the Poverty Reduction Strategy Paper*[5] *(December 2002)*, which was a national development strategy focusing on poverty reduction, listed the transportation sector, along with the communication sector, as important sectors that promoted the participation of the poor in the economic growth process. In particular, it outlined a policy for facilitating an environment that reduced the cost of accessibility to the market for the poor, making it easier to mobilize labor by constructing a highway network, maintaining the existing road network, improving bus and railway services, and improving transportation from rural areas to the cities. *The National Road Policy (1997)* of the Ministry of Highways identified the need for designed road network development in order to contribute to the social and economic development of Sri Lanka. For this purpose, reduced travel time with safety, improved comfort during transportation, and a response to the traffic volume of domestic passengers and cargos for the present and the future were all included. Furthermore, *the National Transportation Policy (2000)* identified the following challenges for the road sector: (i) systematic planning with consideration of the needs of development projects, (ii) coordination of strategies and policies in the transportation sector, (iii) development of the road network between Colombo and other regions, (iv) alleviation of traffic congestion in the Colombo region, (v) the finding of countermeasures against air pollution caused by exhaust gas, and (vi) strengthening of the maintenance system. Improvement of the operation and maintenance skills for the two target provincial roads was included in the scope of the Rural Road Improvement Project, which matched with (vi) above.

At the time of the appraisal for the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) (2010), *the Ten-Year Development Plan (2006-2016)*

[3] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory.

[4] ③: High, ②:Fair, ①:Low.

[5] Connecting to Growth: Sri Lanka's Poverty Reduction Strategy.

(Mahinda Chintana) indicated the need for the development of road networks to sustain regionally balanced economic growth. In particular it identified the improvement of deteriorated provincial and rural roads as an urgent issue. Also, *the National Road Master Plan (2007-2017)* proposed the development of road networks connecting the hubs of economic growth in the country.

At the time of the ex-post evaluation, *the Ten-Year Development Plan (2006-2016)* aimed at doubling the per-capita income. The development of road infrastructure to vitalize economic activities was set as an important agenda. In *the Public Investment Program (2017-2020)* established in February 2017, the road sector accounts for 20% of investment budget, which is the greatest percentage of all investment budget for the three years. The road sector is thus considered as important in Sri Lanka. Currently, there is no particular provincial road development plan in Central Province and in Sabaragamuwa Province. However, according to the provincial governments, the improvement and development of the provincial and rural road networks have the highest priority.

3.1.2 Consistency with the Development Needs of Sri Lanka

At the time of the appraisal for the Rural Road Improvement Project, maintenance of provincial/rural roads had been delayed compared to that of national roads, although the government of Sri Lanka had been increasing investment in the road sector since 1990s. The Asian Development Bank (ADB) began supporting the rehabilitation of provincial/rural roads in the Western Province, the North Western Province, the North Central Province and Uva Province during *the Road Sector Development Project (2003-2008)*. However, in the Central Province and Sabaragamuwa Province, which were not included in the ADB project, deterioration of the road surface was aggravated for distances of approximately 550km and 700km respectively, and the need for rehabilitation was urgent. In order to respond to this need, the Japanese ODA loan, the "Rural Road Improvement Project" aiming at rehabilitating deteriorated each approximately 300km (total approximately 600km) of provincial/rural roads in Central Province and Sabaragamuwa Province was implemented. The "Rural Road Improvement Project" and the above mentioned ADB project had much in common in the following points such as the contents of civil engineering and the skill improvement of the executing agencies, as well as the demarcation of the target provinces. Thus, both agencies were to work together to facilitate the progress of project implementation as well as to improve the project effects.

However, there was a significant budget shortage due to a steep rise in the price of construction materials and equipment which led to an inevitable cutback in the plan. As a result, the project was only able to rehabilitate approximately 140km of provincial/rural roads in the Central Province and 160km of provincial/rural roads in Sabaragamuwa Province. For this

reason, it was necessary to improve approximately 300km of unrehabilitated provincial/rural roads in the two target provinces. A feasibility study[6] of provincial roads throughout Sri Lanka conducted in 2008 had again indicated the urgent need for the rehabilitation of provincial roads in the Central Province and Sabaragamuwa Province for approximately 300km and 250km respectively. This was in consideration of regional balance based on population, poverty rate and traffic volume. From these, the "Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province)" was implemented as a subsequent project after the "Rural Road Improvement Project".

The total length of the road network within the two target provinces at the time of the ex-post evaluation was 10,056km in the Central Province (1,747km of national roads and 8,309km of provincial/rural roads) and 15,826km in Sabaragamuwa Province (1,220km of national roads and 14,606km of provincial/rural roads). The percentage of provincial/rural roads in each province was extremely high, accounting for 83% and 92% of the overall roads (Table 1). However, there were quite a few provincial or rural roads that were in need of continuous rehabilitation due to deterioration of the pavement. According to the Sabaragamuwa Provincial Road Development Department (PRDD), 54% of its provincial roads (approximately 1,500km) were in need for rehabilitation. Also, most of the rural roads in the two target provinces remained unpaved. The ongoing ADB project the "*Integrated Road Investment Program*[7]*" (2014-)* is in the process of improving national, provincial and rural roads in five provinces, including the Central Province and Sabaragamuwa Province. The ADB project includes the provincial/rural roads in great need for rehabilitation in the Central Province and Sabaragamuwa Province which could not be accommodated in the two target projects.

Table 1: National, Provincial and Rural Roads in Central and Sabaragamuwa Provinces

Unit: km

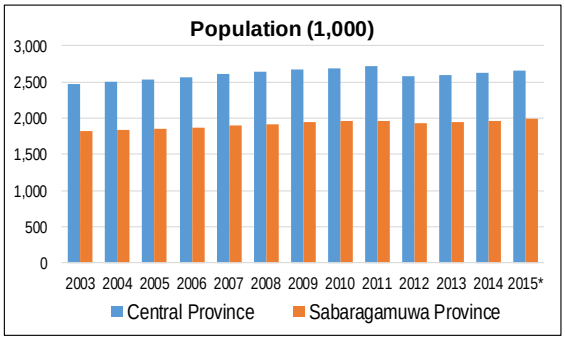
	National Roads			Provincial Roads			Rural Roads	Total
	Class A	Class B	Sub total	Class C	Class D	Sub total	Class E Other roads	
Central Province	409	1,338	1,747	1,666	578	2,244	6,065	10,056
Sabaragamuwa Province	416	804	1,220	1,247	1,544	2,791	11,815	15,826

Source: Central Bank of Sri Lanka, Department of Census and Statistics Sri Lanka
Note: The above figures are based on the data of 2016.

[6] Road Project Preparatory Facility (RPPF) supported by ADB. However, the RPPF does not include the target roads of the Rural Road Improvement Project (SL-P76).
[7] Integrated Road Investment Program. The ADP project plans to rehabilitate 300km of national roads in Central Province, Sabaragamuwa Province, North Central Province, North Western Province and Kalutara District (Western Province) as well as 3,100km of provincial/rural roads.

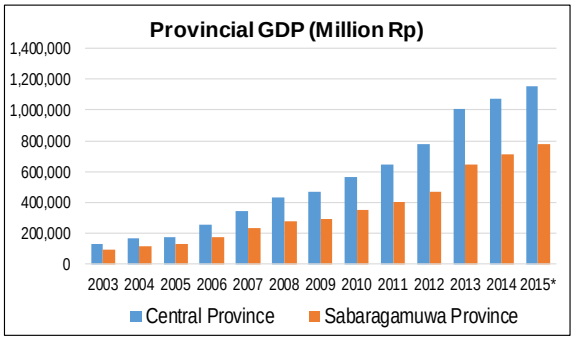
While the population of the two target provinces did not show a significant change in the 12 years between 2003 and 2015, their economies continued to expand with their provincial GDP showing the high growth rate of 19% annually on average during the same period. In addition, the number of registered vehicles increased 4 times from approximately 91,000 to 365,000 in the Central Province and 5.3 times from 58,000 to 310,000 in Sabaragamuwa Province during the same period (Figure 1, Figure 2, and Figure 3). Because railroad infrastructure is underdeveloped in Sri Lanka, roads are the main means of transportation and there is expected to be further demands for expansion of road traffic and transportation due to the development of local economies and an increase in the number of registered vehicles. Therefore, there is a high need for the continuous rehabilitation and improvement of the provincial/rural road network, including provincial and rural roads, in the two target provinces.

Figure 1: Population of the Two Target Provinces



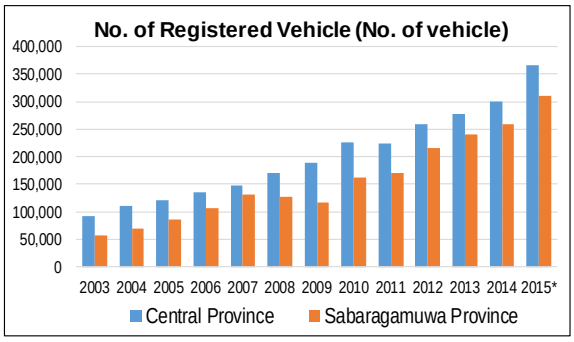
Source: Central Bank of Sri Lanka
Note: Data in 2015 are estimates.

Figure 2: Provincial GDP of the Two Target Provinces



Source: Central Bank of Sri Lanka
Note: Data in 2015 are estimates.

Figure 3: Number of Registered Vehicles in the Two Target Provinces



Source: Central Bank of Sri Lanka
Note: Data in 2015 are estimates.

3.1.3 Consistency with Japan's ODA Policy

At the time of the appraisal for the Rural Road Improvement Project, *the Country Assistance Program for Sri Lanka (April 2004)* had not yet been prepared. However, the priority areas of Japan's ODA policy to Sri Lanka at that time focused on the two main pillars of "support for the establishment and restoration of peace" and a "support plan with a vision for mid and long-term development". The latter included "institutional reform and support for the development of an economic foundation"[8]. Furthermore, *JICA's Country Assistance Strategy for Sri Lanka (2002)* included its policy to support the improvement of skills of the executing agencies in planning and maintenance for the development of the provincial/rural road network which was one of the factors that had caused delay in rural development.

At the time of the appraisal for the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province), *the Country Assistance Program for Sri Lanka (April 2004)* showed the same priority areas as it had at the time of the appraisal for the Rural Road Improvement Project. *JICA's Country Assistance Strategy for Sri Lanka (2008)* mentioned the need to "develop infrastructure for mid and long-term economic growth which contributes to the elimination of regional disparities". The aim of this project was to improve the significantly deteriorated surface of provincial/rural roads, and to develop the basic economic infrastructure for daily life. Therefore, it is consistent with the priority areas of Japan's ODA policy to Sri Lanka, *the Country Assistance Program for Sri Lanka (April 2004)* and with *JICA's Country Assistance Strategy for Sri Lanka (2002 and 2008)* at the time of the appraisal of two target projects.

In light of the above, this project has been highly relevant with Sri Lankan development plan, development needs, as well as Japan's ODA policy. Therefore, its relevance is high.

3.2 Efficiency (Rating: ②)

3.2.1 Project Outputs

A comparison between the Plan and Actual of the project output summary for the two target projects is shown in Table 2.

[8] Source: *Japan's ODA Data by Country (2004)*, Ministry of Foreign Affairs

Table 2: Project Output (Plan/Actual)

Item	Plan	Actual
[Rural Road Improvement Project (SL-P76)]		
(1) Rehabilitation and upgrading of roads	• Central Province: 308km • Sabaragamuwa Province: 304km • Total: 612km	• Central Province: 143.2km • Sabaragamuwa Province: 159.4km • Total: 302.6km
(2) Rehabilitation and upgrading of bridges	• Central Province: 28 • Sabaragamuwa Province: 12 • Total: 40	• Central Province: 5 • Sabaragamuwa Province: 12 • Total: 17
(3) Renovation of office buildings	• Renovation and expansion of PRDA/PRDD head office and district offices	• Same as planned
(4) Procurement of equipment	• Equipment for mobile emergency road maintenance teams • Operation and maintenance equipment • Equipment for provincial training centers and laboratories	• Same as planned
(5) Rectification of flood damages (Additional scope)	—	• Rectification of target roads which were damaged by floods after project completion
(6) Consulting services	• Review of feasibility study, assistance in bidding, supervision of civil works, and environmental monitoring • Capacity building • Collaboration with Community-based Organizations (CBO) (rehabilitation of rural access roads, etc.) • Work volume: 1,637.0M/M	• Same as planned • Same as planned • Same as planned • 2,016.6M/M
[Provincial/Rural Roads Development Projects (Central Province & Sabaragamuwa Province) (SL-P96))		
(1) Rehabilitation and upgrading of roads	• Central Province: 170km • Sabaragamuwa Province: 180km • Total: 350km	• Central Province: 163.5km • Sabaragamuwa Province: 137.5km • Total: 301km
(2) Rehabilitation and upgrading of bridges	• Central Province: 46 • Sabaragamuwa Province: 75 • Total: 121	Total: 104
(3) Procurement of equipment	• Equipment for road pavement, and operation and maintenance	• Same as planned
(4) Rectification of flood damages (Additional scope)	—	• Rectification of target roads which were damaged by floods after project completion
(5) Consulting services	• Review of feasibility study, assistance in procurement, supervision of civil works, and environmental monitoring • Technical transfer for operation and maintenance of roads • Rehabilitation of 25 rural roads (CBO roads) connecting to provincial roads • Work volume: 1,738M/M	• Same as planned • Same as planned • Same as planned • 2,531.3M/M

Source: JICA internal documents, Ministry of Local Government and Provincial Council.
Note: Information on the breakdown of 104 bridges actually rehabilitated and upgraded by the project could not be obtained from the executing agency.

When the Rural Roads Improvement Project was first planned in 2003, it was supposed to improve the significantly deteriorated road surface of 612km provincial and rural roads (308km in the Central Province, and 304km in Sabaragamuwa Province). However, there was a steep rise in the cost of road improvement caused by the following three factors: (i) a steep rise in the cost of construction materials, (ii) increase in fuel costs caused by a steep rise in oil prices, and (iii) a steep rise in domestic labor costs. For these reasons, the total extension of the target roads had to be reduced from the planned 612km to 302.6km. In addition, the rehabilitation of bridges was reduced from the planned 40 locations to 17 locations. The improvement of the remaining 309.4km provincial/rural roads in the two target provinces (164.8km in the Central Province, and 144.6km in Sabaragamuwa Province) was taken over and implemented by the subsequent Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province). However, 81.2km of 144.6km of roads in Sabaragamuwa Province was in urgent need of rehabilitation and this was therefore implemented with the Sri Lankan government's own funds and was thus excluded from the scope of the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province). Instead, the Sabaragamuwa provincial government requested that 92.3km of road which was in great need of rehabilitation be included in the project target based on the results of the feasibility study of provincial roads nationwide (2008) mentioned earlier. Thus, this became eligible for the project.

In the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province), the planned rehabilitation of roads was 350km (170km in the Central Province, and 180km in Sabaragamuwa Province) while the actual distance was 301km (163.5km in the Central Province and 137.5km in Sabaragamuwa Province). The planned rehabilitation of bridges was 121 locations while the actual number was 104. The reason for the actual road rehabilitation being shorter by 49km was that the project target length had to be reduced from 350km to 301km due to the increase in construction costs between 2010 and 2012. This was caused by the restoration of public safety after the end of the civil war in 2009, and the construction and restoration boom that came as a result.

Considering the above, a total of 623.1km, was identified as the planned output for the road rehabilitation component of the overall two target projects. This was made up of the planned value of 612km target road extension of the Rural Road Improvement Project, plus the difference of 11.1km (= 92.3km - 81.2km) generated by the replacement of the target roads in Sabaragamuwa Province at the time of the project planning for Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province). Meanwhile, the actual output for the Rural Road Improvement Project was 302.6km and the actual output for the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) was 301km. Therefore, the actual output of the road rehabilitation component for the overall

two target projects became 603.6km (96.9% against the plan). At the time of the ex-post evaluation, the above two projects were evaluated in an integrated manner, and from that point of view, the road rehabilitation component was implemented almost as planned. The overall 603.6km of the improved roads from the two target projects were all provincial roads.

For the Rural Road Improvement Project, although the rehabilitation of 302.6km provincial roads was completed in December 2009, some provincial roads in the two target provinces were damaged by floods caused by severe rainstorms occurring at the end of 2010 and the beginning of 2011 and were in need of rehabilitation. The project therefore repaired the damaged parts (sand sealing, repair of potholes, etc.) as an additional scope utilizing the residual funds of the loan, targeting 186.4km provincial road. The Road Development Authorities of the two target provinces were directly in charge of supervising this additional scope. Similarly, the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) implemented the rehabilitation of some provincial roads in the Central Province that had been damaged by floods following the improvement of the roads. These additional scopes were in response to the flood damage to completed roads, and were measures that were relevant in sustaining the project effects.

In addition to the improvement of roads and bridges, the two projects implemented the renovation and expansion of the Provincial Road Development Authority headquarters and regional offices, as well as the purchase of materials and equipment including equipment for mobile emergency road maintenance teams, operation and maintenance equipment and equipment for provincial training centers and experimental materials, as planned.

Consulting services were also implemented as planned. For the capacity building component in particular, strengthening of the capacity of the implementing agencies was conducted, including technology transfer for road operation and maintenance for the Road Development Authorities in the two target provinces. To be more precise, the project introduced the Road Maintenance Management System (RMMS[9]) to the Road Development Authorities in the two target provinces through with the development and customization of RMMS, the creation of an RMMS user's manual, the creation of provincial road maps, the collection of provincial road inventory data, and the implementation of training. For the capacity building component, a training program was implemented for 1,141 staff members in total for the two projects (65 in oversea training and 1,076 in domestic training). Furthermore, for the consulting services, the activities of Community-Based Organizations (CBO) within the target regions were given support, work was carried out together for the synergetic effects of the projects. To be precise, support was given for improvement work on the access roads (equivalent of class E roads) that connect the rural areas and sub-artery roads, and for the

[9] RMMS is a system which prioritizes maintenance from the view point of economic efficiency, based on road surface data and traffic volume.

construction of community halls, as suggested by the CBO of the target regions[10]. The Provincial Road Development Authorities provided technical guidance and support in payment for the necessary materials and equipment. As the result, 23 rural access roads (CBO roads) in the Central Province and 10 rural access roads in Sabaragamuwa Province were improved.

Implementation Scheme of the Project

The executing agency of this project was the Ministry of Local Government and Provincial Council (MLGPC). It was responsible for advice for and supervision of local government policies and project implementation, the distribution of subsidies from central to local governments, and coordination between central and local governments. The Development Department of MLGPC handling development projects in the rural areas was responsible for this project. Meanwhile, each Provincial Road Development Authority/Department in the Central Province and Sabaragamuwa Province was in charge of the tenders for the rehabilitation, for construction supervision and the maintenance of the provincial/rural roads and bridges in the two target provinces. A Project Management Unit (PMU[11]) was set up in the Development Department of MLGPC, and under their supervision, Project Implementation Units (PIU) were set up in each of the two target provinces. The PMU was responsible for the coordination between organizations and provinces, project planning, project management, financial management and the procurement procedure in hiring construction-supervising consultants. The PIU were responsible for project management at the provincial level, procurement for civil engineering work and project monitoring. A National Project Steering Committee (NPSC) was set up at the central level, and a Provincial Project Steering Committee (PPSC) was set up at the provincial level for the purpose of project monitoring.

According to interviews with MLGPC, the Central Province and Sabaragamuwa Province, demarcation of the responsibilities and roles of PMU and PIU was clear, the NPSC and PPSC met monthly or quarterly to discuss project monitoring and issues, and all necessary coordination was conducted smoothly under this implementation scheme. Thus, this implementation scheme has functioned effectively.

[10] For the tie-up projects with CBO, applications were submitted by the CBO, and the target projects were refined through proposal evaluation. For the financial sources of the target projects, the NGO collaboration fund which was funded by the grant money allocated from a part of consulting service costs was utilized.

[11] The PMU consists of senior members such as the project director appointed by the deputy secretary of the Ministry of Local Government and Provincial Council, procurement experts, engineers, accountants, internal auditors, and secretaries, as well as supporting staff.

Provincial Roads Rehabilitated and Equipment Procured by the Project

Provincial Road in Kandy District, Central Province
(Hanthana Udawela Road)

Provincial Road in Matale District, Central Province
(Kaduwela Wehigala Leliambe Road)

Provincial Road in Ratnapura District, Sabaragamuwa Province
(Mahagalahena Silidunkanda Hettikanda Road)

Testing Equipment in Laboratory
(PRDA, Central Province)

Maintenance Equipment
(PRDA, Central Province)

Head Office of PRDA, Central Province renovated by the Project

3.2.2 Project Inputs

3.2.2.1 Project Cost

For the Rural Road Improvement Project, the actual project cost was 8,636 million yen against the planned cost of 7,748 million yen (Table 3). For the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province), the actual project cost was 10,410 million yen against the planned cost of 11,171 million yen (Table 4).

The main reason for the cost overrun in the Rural Road Improvement Project was a sharp increase in the civil engineering cost caused by (i) a steep rise in the price of construction materials (mostly asphalt and cement aggregate), (ii) an increase in fuel price caused by a steep rise in oil prices, and (iii) a steep rise in labor costs.

For this reason, the total road extension was reduced by half of what was originally planned. Meanwhile, the rectification of flood damage was implemented as an additional scope using 347 million yen which consists of residual fund of the loan (mostly from unused budget for consulting services) and an additional share by the government of Sri Lanka. For the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province), the restoration boom after the end of the civil war in 2009 resulted in increased construction costs, and therefore the total road extension was cut back by 49km in order to adjust the actual project cost within the planned cost.

Table 3: Project Cost for Rural Road Improvement Project (Plan/Actual)

Item	Plan (2003)			Actual (2011)
	Foreign Currency (Million Yen)	Local Currency (Million Yen)	Total (Million Yen)	Total (Million Yen)
Civil Works	1,394	3,510	4,904	5,898
Rectification of flood damage (Additional scope)	—	—	—	533
Contingency	139	351	490	0
Consulting services	702	233	935	911
Administration costs	0	127	127	0
Tax and duties	0	949	949	1,069
Interest during construction	343	0	343	225
Total	2,578	5,170	7,748	8,636

Source: The internal documents of JICA and the Ministry of Local Government and Provincial Council.
Note: The exchange rate used for the planned project cost is 1 rupee = 1.29 yen (as of November 2002). The exchange rate used for the actual project cost is 1 rupee = 0.979 yen (average between 2003-2011).

Table 4: Project Cost for Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) (Plan/Actual)

Item	Plan (2010)			Actual (2015)
	Foreign Currency (Million Yen)	Local Currency (Million Yen)	Total (Million Yen)	Total (Million Yen)
Civil works and procurement of equipment	0	6,310	6,310	9,270
Consulting services	147	526	673	673
Price escalation	0	1,798	1,798	0
Contingency	0	405	405	0
Land acquisition	0	0	0	0
Administration costs	0	459	459	210
Tax and duties	0	1,129	1,129	0
Commitment charge	44	0	44	30
Interest during construction	352	0	352	227
Total	543	10,627	11,171	10,410

Source: The internal documents of JICA and the Ministry of Local Government and Provincial Council.
Note 1: The exchange rate used for the planned project cost is 1 rupee = 0.786 yen (as of December 2009). The exchange rate used for the actual project cost is 1 rupee = 0.764 yen (average between 2010-2015).
Note 2: As the figures are rounded by million unit, some of the total numbers do not match the total value in the above table.

At the time of the ex-post evaluation, the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) was regarded as a subsequent project to attain the original project scope planned by the Rural Road Improvement Project (improvement of approximately 600km provincial/rural roads in the two target provinces). An additional loan was therefore granted for the unimplemented part of the preceding project. For this reason, it was considered that the necessary investments had been made in order to complete the original project scope although there had been a split into two projects. Therefore, in the evaluation of the sub-rating of the project cost, these two projects were integrated as one. The comparison of the planned project cost and the actual project cost

was made after adjustment of the planned project cost for each project, based on the achievement rate of the actual output (actual road extension) against the planned output (planned road extension) for each project[12]. As its result, the revised actual total project cost was 18,513 million yen (138% against the plan), which exceeded the revised planned project budget of 13,404 million yen (Table 5).

Table 5: Revised Project Cost of Two Target Projects

Project Name	Revised Planned Project Cost	Revised Actual Project Cost
Rural Road Improvement Project	3,797 million yen (=7,748 million yen x 49%)	8,103.5 million yen (Excluding cost for rectification of flood damage)
Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province)	9,607 million yen (=11,171 million yen x 86%)	10,409.6 million yen
Total	13,404 million yen	18,513.1 million yen

Source: Prepared by the evaluator.
Note 1: The achievement rate of the outputs of the Rural Road Improvement Project was 49% as the actual total road length was 302.6km against the planned total road length of 612km.
Note 2: The achievement rate of the outputs of the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) was 86% as the actual total road length was 301km against the planned total road length of 350km.
Note 3: The cost for the restoration from flood damage spent in the Rural Road Improvement Project was excluded from the revised actual project cost as it did not have any direct relationship with the achievement of the planned outputs.

3.2.2.2 Project Period

For the Rural Road Improvement Project, the actual project period was 86 months (from March 2003 to April 2010) against the planned project period of 67 months (from March 2003 to September 2008) (equivalent to 128% of the original plan) (Table 6). For the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province), the planned project period was 47 months (from March 2010 to January 2014) against the actual project period of 70 months (from March 2010 to December 2015) (equivalent to 149% of the original plan) (Table 7).

[12] The total road extension was used as the baseline for the planned and actual outputs when obtaining the project's sub-rating for the project's cost, and the bridges were not taken into consideration as they were relatively small in scale and their proportion within the project cost was small.

Table 6: Project Period of Rural Road Improvement Project (Plan/Actual)

Item	Plan	Actual	Actual (Revised)
1. Signing of L/A	Mar. 2003	Mar. 2003	Mar. 2003
2. Procurement of consultants	Apr. 2003 – Mar. 2004	Mar. 2003 – Feb. 2005	Mar. 2003 – Feb. 2005
3. Consulting services	Apr. 2003 – Sep. 2008	Mar. 2005 - Dec. 2009	Mar. 2005 – Dec. 2009
4. Procurement of main contracts	July 2004 – Sep. 2006	Phase 1: End in Apr. 2006 Phase 2-1: End in Sep. 2007	Phase 1: End in Apr. 2006 Phase 2-1: Sep. 2007
5. Civil works	Apr. 2005 – Sep. 2008	End in Dec. 2009	End in Dec. 2009
(Rectification of flood damage)	―	Mar. 2011 – May 2011	
6. Project completion	Sep. 2008	May 2011 (Note 1)	Apr. 2010 (Note2)
7. Total project period	Mar. 2003 – Sep. 2008 (67 months)	Mar. 2003 – May 2011 (98 months)	Mar. 2003 – Apr. 2010 (86 months)

Source: The internal documents of JICA and Ministry of Local Government and Provincial Council.
Note 1: The project completion of the actual project period is deemed to be the expiry data of loan agreement.
Note 2: The project completion of the revised actual project period is the time when all civil works were once completed. The period spent for the rectification of flood damage which took place after that is not included in the revised actual project period.

Table 7: Project Period of the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) (Plan/Actual)

Item	Plan	Actual	
		Central Province	Sabaragamuwa Province
1. Signing of L/A	Mar. 2010	Mar. 2010	
2. Procurement of consultants	Jan. 2010 – Sep. 2010	Jan. 2010 – Oct. 2011	
3. Consulting services	Oct. 2010 – Jan. 2014	Nov. 2011 – Oct. 2015	
4. Procurement of main contracts			
Phase I	Apr. 2010 – Sep. 2010	Oct. 2010 – Mar. 2011	Dec. 2010 – May 2011
Phase II-1	Jan. 2011 – June 2011	Oct. 2011 – Nov. 2012	Oct. 2011 – Mar. 2012
Phase II-2	July 2011 – Dec. 2011	July 2012 – Dec. 2012	Oct. 2011 – Mar. 2012
Phase III	Jan. 2012 – June 2012	Jan. 2015 – Apr. 2015	Oct. 2011 – Mar. 2012
5. Civil works			
Phase I	Oct. 2010 – Apr. 2012	Aug. 2011 – Feb. 2015	Oct. 2011 – Feb. 2015
Phase II-1	July 2011 – Jan. 2013	Apr. 2012 – Apr. 2015	Sep. 2012 – Feb. 2015
Phase II-2	Jan. 2012 – July 2013	Dec. 2012 – July 2015	Nov. 2012 – Oct. 2015
Phase III	July 2012 – Jan. 2014	―	Dec. 2013 – Dec. 2015
(Rectification of flood damage)	―	Apr. 2015 – July 2015	―
6. Defect liability period	Jan. 2014 – Jan. 2015	End in July 2016	End in Jan. 2017
7. Project completion (Note)	Jan. 2014	Dec. 2015	
8. Total project period	Mar. 2010 – Jan. 2014 (47 months)	Mar. 2010 – Dec. 2015 (70 months)	

Source: The internal documents of JICA and the Ministry of Local Government and Provincial Council.
Note: The project completion of the actual project period is the completion of all civil works.

This ex-post evaluation examined the sub-rating of the project period as a single project by weighting the average of the two different results comparing the planned and actual project periods of the two target projects with the actual/planned output ratio, i.e. 50% for the Rural Road Improvement Project and 50% for the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province). As the result, the actual project period of the two target projects overall was 139% of the planned period, which exceeded the plan.

3.2.3 Results of the Calculations for Internal Rates of Return (Reference only)

The Economic Internal Rate of Return (EIRR) was 27.2% for the Rural Road Improvement Project, and 21.6% for the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) at the appraisal. For the EIRR of each project, 10 sample roads (5 roads from the Central Province, 5 roads from Sabaragamuwa Province) were selected from the target roads, their individual EIRR was calculated, and then their average was taken as the EIRR of each project. The preconditions for calculating the EIRR are shown in Table 8. The Financial Internal Rates of Return (FIRR) were not calculated at the appraisal.

Table 8: Economic Internal Rate of Return (EIRR) of the Target Projects at Project Appraisal

Item	Rural Road Improvement Project	Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province)
L/A No.	SL-P76	SL-P96
Financial Internal Rate of Return (FIRR)	FIRR is not calculated as toll collection will not be adopted for the target roads	FIRR is not calculated as toll collection will not be adopted for the target roads
Economic Internal Rate of Return (EIRR)	27.2% (Average of 10 sample roads)	21.6% (Average of 10 sample roads)
Cost	Project cost and operation and maintenance cost	Project cost and operation and maintenance cost
Benefit	Reduction of vehicle operating cost and travel time.	Reduction of vehicle operating cost and travel time.
Project life	20 years	20 years

Source: The internal documents of JICA.

A recalculation of the EIRR for the two target projects was attempted at the time of the ex-post evaluation. However, for the Rural Road Improvement Project, there was no detailed information for the EIRR calculation at the appraisal, which made recalculation difficult. For the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province), the original calculation sheets used to calculate the EIRR for the 7 sample roads out of 10 sample roads were obtained and the EIRR was recalculated based on this information. Although there were 7 sample roads for which EIRR recalculation attempts were made (4 roads in Central Province and 3 roads in Sabaragamuwa Province), 2 sample roads in Sabaragamuwa Province were excluded from the project as improvement of these 2 roads had been conducted as a matter of urgency by the Sri Lankan government with its own funds. Therefore, recalculation of the EIRR was limited to only 5 out of the 10 sample roads (4 roads in the Central Province and 1 line in Sabaragamuwa Province). For the recalculation of the EIRR, correction was made based on performance of traffic volume and project cost, while the same preconditions used at the appraisal were applied to other items. The results of the recalculation are shown in Table 9. Out of the 5 sample roads with results of their EIRR recalculation 3 have exceeded the EIRR value at appraisal. The main reason for this is that the actual traffic volume after project completion increased more than estimated at the time of the

appraisal. On the other hand, for Madawala Lewella Road, the actual traffic volume after completion did not reach its target value (its actual traffic volume in 2016 was approximately 73% of the target value), and therefore its EIRR recalculation value was 10% lower than the EIRR value at the appraisal. The actual traffic volume of Sumanatissa Mawatha Road slightly exceeded the planned volume and therefore the EIRR recalculation value was slightly lower than its planned value due to increase in the project cost.

Table 9: Results of the recalculation of EIRR for the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province)

Road Code	Road Name	Length (km)	EIRR (%)		Remarks
			Appraisal	Ex-post Evaluation	
[Central Province]					
AD7KD	Madawala Lewella Raod	4.8	42.4	31.4	
CP/KD/037	Sumanatissa Mawatha Road	5.8	21.3	19.9	
AD8NE	Bogahawatta Maldeniya Hedunawa Road	17.5	16.5	N.A.	The original data at project appraisal is not available.
CP/NE/089	Hanguranketa Adikarigama Road	8.4	20.0	25.8	
CP/MT/134	Tenna Ovilikanda Dodandeniya Road	9.6	22.7	23.3	
[Sabaragamuwa Province]					
SB/KG/146	Panawala Maniyangamuwa Raod	10.2	24.2	N.A.	The original data at project appraisal is not available.
AD9RP	Pallebedda Bulutota Road	22.4	15.7	N.A.	The original data at project appraisal is not available.
SB/RP/065	Kotamulla Karawita Road	10.5	20.6	N.A.	Excluded from the project scope
SB/RP/005	Getahetta Karadana Madala Road	21.0	16.6	N.A.	Excluded from the project scope
SB/KG/101	Utuwnkanda Ussapitiya Road	6.8	16.0	21.9	
Average of 10 Sample Roads			21.6	N.A.	

Source: The internal documents of JICA, PRDA, Central Province and PRDD, Sabaragamuwa Province.

In light of the above, both the project cost and project period exceeded the plan, therefore, efficiency of this project is fair.

3.3 Effectiveness[13] (Rating:③)

3.3.1 Quantitative Effects (Operation and Effect Indicators)

(1) Daily Average Traffic Volume

For the daily average traffic volume, 10 sample roads (5 roads in each province) were selected for the two target projects at the appraisal and target values were set for two years after project completion

The actual daily average traffic volume for each sample road at the time of the ex-post evaluation is shown in Table 10 and Table 11.

[13] Effectiveness is to be evaluated together with consideration of Impact.

Table 10: Daily Average Traffic of the Rural Road Improvement Project (10 Sample Roads)

Unit: Number of vehicles/12 hours

Road Code	Road Name	Baseline	Target	Actual					
		2000	2010	2011	2012	2013	2015	2016	2017
			2 years after project comple-tion	Project comple-tion year	1 year after project comple-tion	2 years after project comple-tion (Target year)	4 years after project comple-tion	5 years after project comple-tion	6 years after project comple-tion
[Central Province]									
CP/KD/325	Nawayalatenna Jambugahapitiya (4.2km)	1,462	2,164	1,510	1,600	1,635	1,708	1,802	N.A.
CP/KD/344	Teldeniya Corbests Gap (14.0km)	733	1,086	1,860	2,015	2,420	2,984	3,050	N.A.
CP/MT/042	Beligamuwa Nilagama Dewahuwa (17.1km)	418	619	726	865	988	1,123	1,324	N.A.
CP/MT/060	Dambuila Kandalama Kumbukkadanwela (9.2km)	438	648	548	570	632	696	750	N.A.
CP/NE/048	Barthford Valley Road (10.6km)	834	1,235	1,010	1,339	1,670	1,812	2,086	N.A.
[Sabaragamuwa Province]									
SP/KG/078	Andiramada Narambedde Imbutgassdeniya (8.8km)	331	490	N.A.	N.A.	N.A.	N.A.	N.A.	3,089
SB/KG/027	Morontota Arandara	451	667						
SP/KG/035	Yatagoda Beligala Batuwatta (11.9km)	531	786	N.A.	N.A.	N.A.	N.A.	N.A.	807
SP/RP/032	Kahawatta Haupe Manandola (7.4km)	1,336	1,977	N.A.	N.A.	N.A.	N.A.	N.A.	3,797
SP/RP/052	Kaltota Right Bank Roads (15.9km)	236	349	N.A.	N.A.	N.A.	N.A.	N.A.	531

Source: The internal documents of JICA, PRDA, Central Province and PRDD, Sabaragamuwa Province.
Note: Morontota-Arandara section in Sabaragamuwa Province was excluded from the project target roads.

Table 11: Daily Average Traffic Volume of the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) (10 Sample Roads)

Unit: Number of vehicles/12 hours

Road Code	Road Name	Baseline	Target	Actual		
		2009	2016	2015	2016	2017
			2 years after project completion	Project completion year	1 year after project completion	2 years after project completion (Target year)
[Central Province]						
AD7KD	Madawala Lewella Raod (4.8km)	2,961	6,009	4,157	4,394	N.A.
CP/KD/037	Sumanatissa Mawatha Road (5.8km)	784	1,591	1,502	1,796	N.A.
AD8NE	Bogahawatta Maldeniya Hedunawa Road (17.5km)	374	833	436	492	N.A.
CP/NE/089	Hanguranketa Adikarigama Road (8.4km)	828	1,681	1,895	2,117	N.A.
CP/MT/134	Tenna Ovilikanda Dodandeniya Road (9.6km)	1,557	3,165	2,924	3,337	N.A.
[Sabaragamuwa Province]						
SB/KG/146	Panawala Maniyangamuwa Raod (10.2km)	1,438	2,922	N.A.	N.A.	2,610
AD9RP	Pallebedda Bulutota Road (22.4km)	581	1,292	N.A.	N.A.	1,512
SB/RP/065	Kotamulla Karawita Road (10.5km)	1,026	2,084			
SB/RP/005	Getahetta Karadana Madala Road (21.0km)	661	1,469			
SB/KG/101	Utuwnkanda Ussapitiya Road (6.8km)	716	1,526	N.A.	N.A.	2,518

Source: The internal documents of JICA, PRDA, Central Province and PRDD, Sabaragamuwa Province.
Note: Kotamulla Karawita Road and Getahetta Karadana Madala Road in Sabaragamuwa Province were excluded from the project target roads.

As for the Rural Road Improvement Project, the actual traffic volume (2 years after project completion) in 4 of the 5 sample roads in Central Province (Teldeniya Corbests Gap section, Beligamuwa Nilagama Dewahuwa section, Dambuila Kandalama Kumbukkadanwela section, and Barthford Valley Road) attained 223%, 160%, 98%, and 135% against the target values, therefore met the targets[14]. According to the Central Provincial Road Development Authority, this increase in traffic volume is mostly due to an increase in tourist traffic thanks to the development of tourism. As for the Nawayalatenna Jambugahapitiya section which did not attain its target value, the actual traffic volume remains at 76% of the target value due to the diversion of traffic volume to the bypass road leading to Jambugahapitiya. One of the 5 sample roads in Sabaragamuwa Province (Morontota Arandara section) was rehabilitated by the Sri Lankan government with their own funds and thus was excluded from the project scope. For the rest of the four sample roads (Andiramada Narambedde Imbutgassdeniya section, Yatagoda Beligala Batuwatta section, Kahawatta Haupe Manandola section, and Kaltota Right Bank Roads), data from 2 years after the project completion (2013), which was the target year could not be obtained, and therefore actual data of 6 years after the project completion was available and used. This demonstrated achievement rates of 630%, 103%, 192% and 152%, respectively, and the all four sample roads achieved their respective targets. In particular, the Andiramada Narambedde Imbutgassdeniya section had an increase in traffic volume of 6.3 times more than its target value. According to the Sabaragamuwa Provincial Road Development Department, the above mentioned 4 roads showed an increase in traffic volume after the implementation of the project due to an increased number of migrants in the surrounding areas, development of neighboring road networks such as link roads and bypass roads, and usage as shortcuts to tourist spots.

Meanwhile, for the 5 sample roads in the Central Province section of the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province), the actual data from two years after project completion (2017, which was the target year) could not be obtained, so a comparison was made with the available actual data of the 5 roads from a year after project completion (2016), which revealed that the achievement rate of the 3 roads (Sumanatissa Mawatha Road, Hanguranketa Adikarigama Road and Tenna Ovilikanda Dodandeniya Road) against their target values (2 years after project completion) were 113%, 126%, and 105%, respectively. According to the Central Provincial Road Development Authority, these roads demonstrate an increase in traffic volume due to their use as bypass roads or the development of the surrounding areas. Failure to achieve the target on the other 2 roads (Madawala Lewella Road, Bogahawatta Maldeniya Hedunawa Road), could be because some of the traffic volume went to the other roads. Two of the 5 sample roads in

[14] At the ex-post evaluation, it is considered as “achieved” when the achievement rate is over 80% against the target value.

Sabaragamuwa Province (Kotamulla Karawita Road, Getahetta Karadana Madala Road) were rehabilitated by the Sri Lankan government using its own funds and therefore they were excluded from the project. The achievement rates of the remaining 3 sample roads (Panawala Maniyangamuwa Road, Pallebedda Bulutota Road, Utuwnkanda Ussapitiya Road) were 89%, 117% and 165% respectively, thus meeting the target goals. These 3 roads had increases in traffic volume for the same reasons as in the Rural Road Improvement Project.

(2) Reduced Vehicles Operating Cost (VOC) and Reduced Travel Time

Regarding the effects of reduced vehicle operating cost and reduced travel time, 10 sample roads (5 roads from each province) were selected for the two target projects at appraisal, and the target values were set for 2 years after project completion. At the time of the ex-post evaluation, calculation was attempted to demonstrate the effects of reduced vehicle operating cost and reduced travel time for both of the two target projects. However, only the effects for the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) could be calculated due to the reasons described in *3.2.3 Internal Rates of Return (Reference only)*. As shown in Table 12 and Table 13, it was revealed that 4 out of the 5 sample roads that were calculable (Sumanatissa Mawatha Road, Tenna Ovilikanda Dodandeniya Road, Utuwnkanda Ussapitiya Road, Madawala Lewella Road[15]) achieved the target values for reduced vehicle operating cost and reduced travel time, while the remaining 1 road (Hanguranketa Adikarigama Road) almost achieved the target value (93% for reduced vehicle operating cost and 75% for reduced travel time). This one road did not meet the target value for the daily average traffic volume[16].

[15] For Madawala Lewella Road, the target achievement rate for reduced vehicle operating cost was 82%, and for reduced travel time was 92%. Because both were more than 80% of the achievement rate, they are regarded as having met the goal.

[16] The effects of reduced vehicle operating cost and reduced travel time increase in proportion to the increase in traffic volume. Therefore, if the traffic volume does not reach its planned value/predicted value, the effects of reduced vehicle operating cost and reduced travel time also fall below the predicted values.

Table 12: Reduced Vehicle Operating Cost for the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) (10 Sample Roads)

Unit: Million rupees/year

Road Code	Road Name	Length (km)	Target 2016	Actual 2017	Remarks
			2 years after project completion	2 years after project completion	
[Central Province]					
AD7KD	Madawala Lewella Road	4.8	40.08	32.74	
CP/KD/037	Sumanatissa Mawatha Road	5.8	17.59	22.25	
AD8NE	Bogahawatta Maldeniya Hedunawa Road	17.5	51.92	N.A.	The original data at project appraisal is not available.
CP/NE/089	Hanguranketa Adikarigama Road	8.4	34.23	31.77	
CP/MT/134	Tenna Ovilikanda Dodandeniya Road	9.6	32.60	38.15	
[Sabaragamuwa Province]					
SB/KG/146	Panawala Maniyangamuwa Road	10.2	38.62	N.A.	The original data at project appraisal is not available.
AD9RP	Pallebedda Bulutota Road	22.4	46.85	N.A.	The original data at project appraisal is not available.
SB/RP/065	Kotamulla Karawita Road	10.5	32.15	N.A.	Excluded from the project scope
SB/RP/005	Getahetta Karadana Madala Road	21.0	46.89	N.A.	Excluded from the project scope
SB/KG/101	Utuwnkanda Ussapitiya Road	6.8	14.19	24.65	
Average of 10 Sample Roads			36.68	N.A.	

Source: The internal documents of JICA, PRDA, Central Province and PRDD, Sabaragamuwa Province.

Table 13: Reduced Travel Time for the Provincial/Rural Road Development Project (Central Province and Sabaragamuwa Province) (10 Sample Roads)

Unit: Million rupees/year

Road Code	Road Name	Length (km)	Target 2016	Actual 2017	Remarks
			2 years after project completion	2 years after project completion	
[Central Province]					
AD7KD	Madawala Lewella Raod	4.8	4.22	3.82	
CP/KD/037	Sumanatissa Mawatha Road	5.8	2.53	3.59	
AD8NE	Bogahawatta Maldeniya Hedunawa Road	17.5	17.40	N.A.	The original data at project appraisal is not available.
CP/NE/089	Hanguranketa Adikarigama Road	8.4	11.45	8.57	
CP/MT/134	Tenna Ovilikanda Dodandeniya Road	9.6	5.48	7.07	
[Sabaragamuwa Province]					
SB/KG/146	Panawala Maniyangamuwa Raod	10.2	7.78	N.A.	The original data at project appraisal is not available.
AD9RP	Pallebedda Bulutota Road	22.4	12.72	N.A.	The original data at project appraisal is not available.
SB/RP/065	Kotamulla Karawita Road	10.5	5.14	N.A.	Excluded from the project scope
SB/RP/005	Getahetta Karadana Madala Road	21.0	6.78	N.A.	Excluded from the project scope
SB/KG/101	Utuwnkanda Ussapitiya Road	6.8	2.19	4.29	
Average of 10 Sample Roads			7.57	N.A.	

Source: The internal documents of JICA, PRDA, Central Province and PRDD, Sabaragamuwa Province.

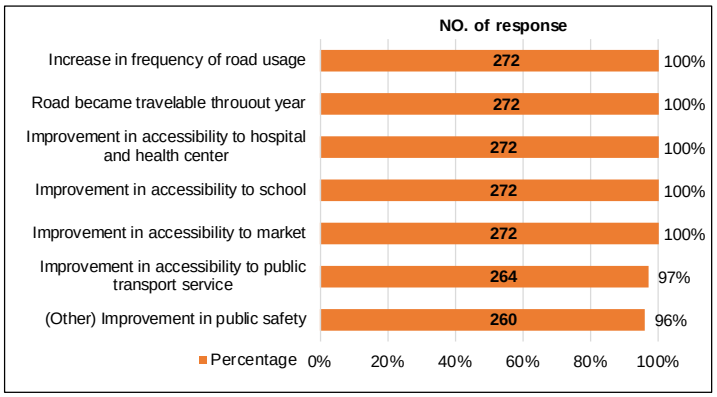
3.3.2 Qualitative Effects (Other Effects)

(1) Improved Accessibility to Socio-Economic Services

At the time of the ex-post evaluation, Focus Group Discussions (FGD) with 272 residents (168 males, 103 females) living along the project target roads were conducted in order to identify the effects and impacts of the project[17]. As for the improved accessibility to socio-economic services, most of the residents participating in the FGD identified some effects such as (i) increased frequency of road usage, (ii) better road accessibility throughout the year, (iii) better accessibility to the hospitals and health centers, (iv) better accessibility to schools, (v) better accessibility to markets, and (vi) better accessibility to public transportation services.

Furthermore, improved public safety was also noted as the police started patrolling around villages after road improvement (Figure 4). In addition to the above, some positive changes such as reduced travel time, increased traffic volume and reduced vehicle maintenance costs were identified as results of the improvement and widening of pavements. Increased asset value was also noted, caused by the appreciation in land price along the roads due to improved traffic accessibility.

Figure 4: Improvement in Accessibility to Socio-Economic Services



Source: The result of FGD.

3.4 Impacts

3.4.1 Intended Impacts

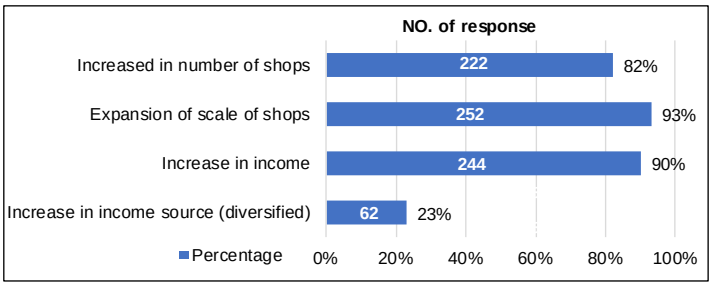
(1) Vitalization of the Local Economy

Most of the residents living along the road sides who participated in FGD acknowledged a vitalization of local economies. This was experienced in such ways as an (i) increased number of or expansion in the scale of shops in the neighborhood and (ii) increased income (Figure 5). After road improvement, commercial vehicles and middlemen/brokers distributing merchandise began to come into the villages. As there are many tourist facilities such as Kandy,

[17] FGD were conducted on a total of 23 occasions (11 in the Central Province and 12 in Sabaragamuwa Province), and there were 272 participating residents who lived along the road sites (168 males and 103 females). When conducting FGD, the facilitator went to each research site without a prior announcement, seeking participants in the FGD from residents living around the research sites together with those who agreed with the purpose of the research. The occupations of FGD participants varied from farmers to the self-employed, store owners, businessmen, housewives, and students, their age group including young people and seniors. The Central Province and Sabaragamuwa Provinces are dominated by Sinhalese, and therefore the participants were all Sinhalese except in one location.

home of the last dynasty, world heritage sites such as Sigiriya Rock and Buddhist temples, the Central Province is one of the foremost tourist sites in Sri Lanka with many tourists throughout the year. Local residents in the Central Province who participated in the FGD pointed out that there were more tourists after improvement, as the target roads lead to many tourist sites. It is assumed that increased commodity distribution and traffic volume resulting from road improvement has led to the vitalization of commercial activities in the villages and towns.

Figure 5: Vitalization of Local Economy



Source: The result of FGD.

According to the Central as well as the Sabaragamuwa Provincial Road Development Authorities/Departments, development, especially housing development is facilitated around the target roads after the implementation of this project. Therefore, it is considered that this project has had positive impacts on the vitalization of local economies.

3.4.2 Other Positive and Negative Impacts

(1) Impacts on the Natural Environment

This project was given a Category B based on the *"JBIC Guidelines for the Confirmation of Environmental and Social Considerations" (1999)* for its sector, regional and project characteristics. As the target sub-project was the improvement of existing facilities, an Environmental Impact Assessment (EIA) was not compulsory according to the Environmental Law of Sri Lanka (1980), and an EIA was not conducted. However, a voluntary Initial Environmental Examination (IEE) was conducted by the implementing agencies. The disposal of debris and waste generated during road construction were properly dealt with, while environmental experts (consultants) gave guidance to contractors for disposal at designated disposal sites. In addition, the environmental experts (consultants) regularly patrolled the project sites during project implementation in order to monitor the construction works and provide guidance and instruction to contractors according to the environmental management plans. No negative impacts were identified on the natural environment during project implementation according to the interviews with the implementing agencies and reviews of related documents such as project progress reports.

No regular environmental monitoring of the target provincial roads and rural access roads has been conducted by the Provincial Road Development Authorities/Departments since project completion. Each province provides the opportunity for a monthly meeting in which the Road Development Authority (RDA), the Divisional Secretary, local governments and the

police discuss various issues including issues on the roads. If any environmental problem were to arise, it would be reported through the above-mentioned monthly meeting, and necessary measures would be taken as needed. No negative impact on the natural environment caused by this project was identified from the results of FGD (99% of FGD participants responded that there was no negative impact).

Therefore, no negative impact on the natural environment is observed.

(2) Land Acquisition and Resettlement

There was no land acquisition or resettlement for this project.

(3) Others

In August and September 2012, during project implementation, two fatal accidents in which contractors' field workers died during construction were reported in Sabaragamuwa. It was also reported that there was no damage to the public. In order to respond to the accidents, necessary countermeasures such as safety education and safety guidance to contractors and field workers were taken by the safety experts (consultants).

From the above, it can be seen that the operation and effect indicators such as the daily average traffic volume, the reduction of vehicle operating cost and the reduction of travel time have almost achieved their target values. Meanwhile, qualitative effects such as improved accessibility to socio-economic services were observed. Furthermore, there was a positive impact on the vitalization of local economies. There was no negative impact on the natural environment, and no land acquisition or resettlement for this project. Necessary safety measures were taken when accidents occurred during project implementation.

In light of the above, expected effects of this project have been mostly realized as planned. Therefore, the effectiveness and impacts of this project are high.

3.5 Sustainability (Rating: ②)

3.5.1 Institutional Aspects of Operation and Maintenance

<Provincial Roads>

The Provincial Road Development Authority (PRDA) of the Central Province and the Provincial Road Development Department (PRDD) of Sabaragamuwa Province are responsible for the operation and maintenance (O&M) of the provincial roads (Class C and Class D roads). The staff allocation of each PRDA/PRDD is shown in Table 14. The PRDA/PRDD of the two target provinces consider that their staff allocation and staff numbers are appropriate and that there are no problems. Daily and periodic maintenance of the

provincial roads are conducted directly in the two target provinces, and some of the maintenance work is outsourced to private companies and CBO as needed. The PRDA/ PRDD of the two target provinces were given information and documents regarding the project by the PMU.

Therefore, no major issues have been observed in terms of the institutional aspects of operation and maintenance in the PRDA/PRDD of the two target provinces.

Table 14: Number of Staff in the PRDA/PRDD of Two Target Provinces

Province	Department	Total length of provincial roads (km)	Number of staff (Note)
Central Province	PRDA	2,244	235
Sabaragamuwa Province	PRDD	2,791	239

Source: PRDA, Central Province and PRDD, Sabaragamuwa Province.
Note: The above number of staff does not include temporary workers employed for road construction and maintenance works.

<Rural Roads>

Local governments[18] are responsible for the O&M of rural access roads at 23 locations in the Central Province and 10 locations in Sabaragamuwa Province where improvements were conducted in coordination with the CBO. The 33 Pradeshiya Sabha[19] (23 in the Central Province and 10 in Sabaragamuwa Province) in the two target provinces are responsible for the O&M of the rural access roads rehabilitated by the project as all are located in rural areas.

Although the two Pradeshiya Sabha interviewed - Ukuwela Pradeshiya Sabha in Kandy District, Central Province and Ratnapura Prareshiya Sabha in Ratnapura District, Sabaragamuwa Province - differ in scale, there are 7-11 staff members and 2-3 technical officers allocated in their technical divisions who are in charge of roads, water and garbage collection. Meanwhile, there are 801km and 422km of rural roads including rural access roads (Class E and other roads) within the jurisdiction of Ukuwela Pradeshiya Sabha and Ratnapura Praredeiya Sabha, respectively, and 80-90% of these are gravel or unsurfaced roads. The gravel or unsurfaced roads are more likely to get damaged by the weather compared to concrete roads, and they require repair works every year after the monsoon season. However, the number of staff, especially workers in the technical divisions of each Pradeshiya Sabha, is

[18] The local government administrative system of Sri Lanka is made up of a parallel system of two different lines: (i) an administrative system under the control of central government based on Districts (the country is divided into 25 districts), and (ii) an administrative system under the Provincial Council and the other local councils as local governments. The local administrative system based on Districts was passed on from the British colonial era, while the Provincial Council system was introduced to solve ethnic problems in 1987. There are 9 Provincial Councils in Sri Lanka and other local councils underneath them serve as local municipalities. The local councils are mainly responsible for the provision of environmental and social services such as public health, sanitation, water supply, garbage disposal, sewage, etc.

[19] The Local Councils are divided into three categories, municipal Councils, Urban Councils and Pradeshiya Sabha when they are located in municipal areas, urban areas and rural areas, respectively. The Local Councils are under the supervision of the Commissioner of Local Government (CLG). The organizational structure of the Local Councils in each municipality is almost the same, and there are about 80 staff in each Municipal Council and 20 staff in each Pradeshiya Sabha.

limited compared to the total road extensions that they manage. Therefore, there is an insufficiency in terms of the institutional aspect for the appropriate maintenance (periodic maintenance) of all the rural roads.

Moreover, the two Pradeshiya Sahba interviewed were not given information and documents regarding the improved rural access roads, such as design drawings, by either the PMU or the provincial government. It is assumed that this was also the case in the other Pradeshiya Sabha where interviews did not take place. However, the maintenance of the rural access roads which were rehabilitated or improved by the project, was limited to sand sealing or the weeding of road shoulders, as PRDA/PRDD would be responsible for larger-scale rehabilitation. Therefore the lack of information such as design drawings would not be a major interference in periodic maintenance.

Therefore, there are some issues observed in terms of the institutional aspects of the two Pradeshiya Sabha interviewed, such as the limited number of staff in the technical divisions of each Pradeshiya Sahaba compared to the total road extension.

3.5.2 Technical Aspects of Operation and Maintenance

<Provincial Roads>

The engineers (chief engineers and executive engineers) at the PRDA/PRDD in the two target provinces have technical degrees in civil engineering or similar fields (bachelor's degrees or higher) and they are “Chartered Engineers” certified by the Institution of Engineers Sri Lanka (IESL). The RMMS was introduced to the PRDA/PRDD of the two target provinces as a part of the consulting services of this project. However, only the Central Provincial Road Development Authority was utilizing the RMMS for the maintenance of provincial roads at the time of the ex-post evaluation. In the Sabaragamuwa Provincial Road Development Department, there were few people who could use the RMMS and activities such as data collection have not continued. Therefore, hardly any maintenance of the provincial roads is implemented based on the RMMS. Advantages of introducing the RMMS include being able to plan road maintenance based on more scientific grounds, to prioritize target roads and to distribute budgets. Also, effective and efficient maintenance work can be conducted within a limited maintenance budget. However, it is possible to conduct maintenance of the provincial roads without the RMMS. Both the Central and Sabaragamuwa Provincial Road Development Authorities/Departments provide training programs for their technical staff on a regular basis (Table 15). In addition to these, the PRDA/PRDD of the two target provinces share and transfer technology and experiences proactively between senior and junior staff members through On the Job Training (OJT) and guidance in practical work. Furthermore, the PRDA/PRDD of the two target provinces conduct maintenance work based on the Standard Specifications for Construction and Maintenance for Roads and Bridges established by RDA, the Ministry of

Higher Education and Highways.

Therefore, there is no issue observed in terms of the technical aspects of the PRDA/PRDD of the two target provinces.

Table 15: Training Programs organized by the PRDA/PRDD of the Two Target Provinces

Training Program	Contents	Target	No. of trainees	Frequency
<Central Province>				
Supervisor Training	Supervisory work	Supervisors	44	3 times/ year
Workshop	Positive thinking	Technical and management staff	164	Once a year
<Sabaragamuwa Province>				
Road Construction Training	Review and update of the latest technology for road construction	Engineers and technical officers	50	Once a year
Road Maintenance Training	Review and update of the latest technology for road maintenance	Engineers and technical officers	50	Once a year

Source: PRDA, Central Province and PRDD, Sabaragamuwa Province.

<Rural Roads>

Generally, there are one or two road managers/engineers and a dozen or more skilled workers allocated in the local governments, and they were similarly allocated in the two Pradeshiya Sabha interviewed. The engineers at the Pradeshiya Sabha hold qualifications which are equivalent to the completion of technical training schools (polytechnics). The Pradeshiya Sabha interviewed own maintenance equipment such as loading shovels, concrete mixer plants and grass cutting machines. The engineers at the Pradeshiya Sabha receive technical training from the provincial government on a regular basis and they get technical support from engineers in the provincial government when necessary. For this reason, it is considered that the staff at the technical divisions of the Pradeshiya Sabha has sufficient knowledge and technical skills required for the maintenance of the concrete surface roads.

Therefore, there is no issue observed in terms of the technical aspects of the two Pradeshiya Sabha interviewed.

3.5.3 Financial Aspects of Operation and Maintenance

<Provincial Roads>

The operation and maintenance budgets of the provincial roads in the two target provinces for the past three years are shown in Table 16. As more than 75% of the maintenance works in the Central Province is conducted directly by the PRDA, the maintenance budget is smaller than that of Sabaragamuwa Province which outsources the daily maintenance of its major provincial roads. The main financial source of the maintenance budget for the provincial roads is the provincial government, and the PRDA/PRDD do not have their own financial sources. Furthermore, there is no distribution from the Road Maintenance Trust Fund for the

maintenance of the provincial roads, as there is for the maintenance budget of the national roads. For this reason, a shortage in the maintenance budget for the provincial roads has been identified as an issue. Each of the PRDA/PRDD of the two target provinces requires a different maintenance budget for the provincial roads as these provincial roads have different lengths and geographical conditions. The road maintenance unit price is higher for the Central Province than for other provinces as most of the provincial roads are located in mountains and hilly areas. According to the Central Provincial Road Development Authority, 1,200 million rupees of maintenance budget is required annually in order to provide daily or periodic maintenance appropriately according to the regulations applied to all provincial roads within the province. Currently, there is a big gap compared with the actual maintenance budget. On the other hand, the Sabaragamuwa Provincial Road Development Department had reported no issue regarding its current maintenance budget.

Therefore, there are issues observed in terms of the financial aspects of the Central Provincial Road Development Authority, as the distribution of the maintenance budget is not sufficient.

Table 16: Maintenance Budgets of the PRDA/PRDD of the Two Target Provinces for Provincial Roads

Unit: Million rupees

	2014		2015		2016	
	Plan	**Actual**	**Plan**	**Actual**	**Plan**	**Actual**
Central Province	400.0	374.0	400.0	302.0	400.0	190.0
Sabaragamuwa Province	1,240.0	1,223.4	1,126.0	1,087.2	1,218.7	858.9

Source: PRDA, Central Province and PRDD, Sabaragamuwa Province.
Note: The maintenance cost does not include the personnel cost of PRDA/PRDD staff.

<Rural Roads>

The financial resources of Pradeshiya Sabha consist of the budget distributed from the provincial government as well as their own tax revenue (such as property tax). The maintenance budget for the rural roads is distributed from this. According to the two Pradeshiya Sabha interviewed, it is difficult to conduct maintenance of the rural roads appropriately with the current number of staff members in the technical divisions, and shortage of labor is an issue. However, it is not possible to outsource the maintenance work and hire additional workers as the current maintenance budget is limited. Furthermore, the maintenance budget of Pradeshiya Sabha is used mostly on the maintenance of gravel and unsurfaced roads, and spending on surfaced roads, including concrete roads, is extremely limited. Therefore, there are issues observed in terms of the financial aspects of the two Pradeshiya Sabha interviewed.

3.5.4 Current Status of Operation and Maintenance

<Provincial Roads>

The contents of the daily maintenance and periodic maintenance conducted by each Provincial Road Development Authority/Department are shown in Table 17. The maintenance is conducted based on the standards of the RDA Ministry of Higher Education and Highways. The PRDA/PRDD are responsible for the final quality control of the maintenance work outsourced to the CBO and the private sector and therefore there is no issue. The roads in the target provinces are kept in good condition.

In Sabaragamuwa Province, some parts of the roads with Double Bituminous Surface Treatment (DBST)[20] that were rehabilitated by the Rural Road Improvement Project were damaged by floods. However, they were later improved by making them into concrete roads using the provincial government budget. The maintenance equipment and testing equipment that was procured for laboratories is still used, and kept in good condition.

Because the maintenance budget distributed by the provincial governments is limited, the budget is allocated for the rehabilitation of deteriorated roads and emergency rehabilitations on a priority basis. The maintenance budget allocated for new or improved roads is extremely small. For this reason, it is difficult to conduct appropriate daily maintenance or periodic maintenance programs for the provincial roads received rehabilitation or improvement and passed only for few years. However, as described earlier, the target provincial roads were kept in a good condition at the time of the ex-post evaluation.

Table 17: Contents of the Maintenance Activities for Provincial Roads by the PRDA/PRDD of the Two Target Provinces

Type of Maintenance	Contents
Routine Maintenance	Weeding on road shoulders, cleaning of drains, crack repair and pot hole patching
Periodic Maintenance	Sealing and patching of the road surface, repair of road shoulders, painting of guardrails, repair, color and white washing of road signs, repair of structures damaged by accidents

Source: PRDA, Central Province and PRDD, Sabaragamuwa Province.

<Rural Roads>

The maintenance work on concrete surface roads conducted by Pradeshiya Sabha is mostly surface treatment (sand sealing) of damaged roads, or weeding of road shoulders. However, as described earlier, Pradeshiya Sabha has a very limited maintenance budget for surfaced roads such as concrete roads. Also, the life cycle of concrete roads is approximately 20 years, which is longer and receive less damage than gravel or unsurfaced roads. Therefore, almost no maintenance of concrete roads has been conducted. However, the rural access roads

[20] The Double Bituminous Surface Treatment is a simple two-layered treatment by surface compaction of sprinkle aggregate on bituminous materials. It is usually used for repair or temporary pavement, but is often used for a permanent pavement in developing countries.

maintained by the two Pradeshiya Sabha interviewed were kept in a good condition at the time of the ex-post evaluation.

In light of the above, there are some issues in terms of institutional and financial aspects of the project's operation and maintenance system, such as staff shortage of Pradeshiya Sabha or maintenance budget shortage of the Central Provincial Road Development Authority as well as Pradeshiya Sabha. On the other hand, the provincial roads and rural access roads rehabilitated by this project are kept in good conditions at the time of the ex-post evaluation. Therefore, the sustainability of the project effects is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objectives of this project are to enhance transport efficiency and accessibility to socio-economic services in Central Province and Sabaragamuwa Province in Sri Lanka by rehabilitating and upgrading the remarkably deteriorated provincial and rural roads and bridges, and to strengthen their road maintenance system, thereby contributing to local economic development. The relevance is high, as the objectives were consistent with Sri Lanka’s development policies and development needs as well as with Japanese aid policies. The operation and effect indicators of this project such as increased daily average traffic volume, reduced vehicle operating cost and reduced travel time have largely attained their target values, and the project had qualitative effects such as improvements in accessibility to socio-economic services. There was also a positive impact on the activation of local economies. No negative impact on the natural environment was observed, and no land acquisition or resident resettlement was executed. Therefore, the effectiveness and impacts of this project are high. The efficiency of this project is fair, as both the project cost and project period exceeded the plan. Meanwhile, a minor problem has been observed in the institutional and financial aspects of the operation and maintenance system, therefore the sustainability of the project’s effect is evaluated to be fair.

In light of the above, this project is evaluated to be satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

(1) Recommendations to Sabaragamuwa Provincial Council

This project provided technical support for the introduction and operation of RMMS for the Road Development Authorities/Departments in the Central Province and Sabaragamuwa Province. The Central Province still utilizes this system for the maintenance of the provincial roads. On the other hand, the RMMS is not utilized in Sabaragamuwa Province, as there is insufficient staff to operate and manage the system, as well as a lack of technical capacity. As

the introduction of the RMMS contributes to effective and efficient road maintenance, it is recommended that the RMMS is utilized by cooperating with the Central Provincial Road Development Authority in sharing information on the RMMS, creating interaction among staff and dispatching staff to training programs, in order to improve the maintenance capacity of the Sabaragamuwa Provincial Road Development Department. It is expected that through this, there will be an increase in human resources who can utilize the RMMS in the Sabaragamuwa Provincial Road Development Department.

(2) Recommendations to Pradeshiya Sabha

Each Pradeshiya Sabha is responsible for hundreds of kilometers of rural road maintenance, approximately 80-90% of which are mostly still gravel and unsurfaced roads. The burden is great as these gravel and unsurfaced roads require maintenance after getting damaged during every monsoon season. On the other hand, the institutional setting and maintenance budgets of Pradeshiya Sabha are limited, and there is almost no maintenance work conducted for concrete roads. It is recommended that a review is made of the possibility of introducing a participatory maintenance system where residents living along the roads are asked to weed the road shoulders or clean the sewage systems in order to secure the minimum road maintenance within the limited institutional and financial capacity of Pradeshiya Sabha.

4.2.2 Recommendations to JICA

None

4.3 Lessons Learned

(1) Effective Project Implementation Scheme in Cooperation with the Central and Provincial Governments

There are multiple implementing agencies involved in this project from the central government and provincial governments, including the Ministry of Local Government and Provincial Council (MLGPC) and the Provincial Road Development Authorities/Departments in the Central Province and Sabaragamuwa Province. For this reason, MLGPC served as the representing implementing agency to coordinate the overall project implementation and conduct project management. It established PMU within MLGPC, as well as the PIU within each provincial government. This implementation scheme functioned well and there was smooth coordination between the related agencies. The MLGPC is a line ministry between each provincial government, and MLGPC and each provincial government work closely together in terms of budget distribution and other administrative procedures, thus it is common to see development projects with the implementation scheme described above. It is considered that the good practice of this project will be referenced when there are similar projects in Sri Lanka involving multiple agencies at the

central and provincial government levels in the future.

<End>

Comparison of the Original and Actual Scope of the Project

Rural Road Improvement Project (SL-P76)

Item	Plan	Actual
1. Project Outputs (1) Civil works and equipment procurement (a) Rehabilitation and upgrading of roads	• Central Province: 308km • Sabaragamuwa Province: 304km • Total: 612km	• Central Province:143.2km • Sabaragamuwa Province: 159.4km • Total: 302.6km
(b) Rehabilitation and upgrading of bridges	• Central Province:28 • Sabaragamuwa Province: 12 • Total: 40	• Central Province:5 • Sabaragamuwa Province: 12 • Total: 17
(c) Renovation of office buildings of PRDA/ PRDD	• Renovation and expansion of PRDA/PRDD head office and district offices	Same as Planned
(d) Procurement of equipment	• Equipment for mobile emergency road maintenance teams • Operation and maintenance equipment • Equipment for provincial training centers and materials testing laboratories	Same as Planned
[Additional Scope] (e) Rectification of flood damage	—	Rectification of target roads in the target two provinces which were damaged by floods after project completion (186.4km)
2. Consulting Services (1) Road and bridge improvement component	• Review of feasibility study, assistance of procurement, supervision of civil works, and environmental monitoring.	Same as planned
(2) Capacity building component	• Assistance to reorganize PRDA/ PRDD, to streamline the work procedures and to improve the utilization of equipment procured by the project • Assistance to capacity building on project and procurement management for staff of provincial councils • Strengthening of PRDA/PRDD operation and maintenance capacity	Same as planned • Overseas training: 28 persons • Domestic training: 263 persons
(3) Collaboration with CBO	• Support for CBO activities in the project target area utilizing project funds for consulting services	• Improvement of rural access roads and construction of community halls in 8 locations in the Central Province.
(4) Work volume	• International consultants: 111.2M/M • Local consultants: 1,417.6M/M • Local staff: 144.2M/M • Total: 1,673M/M	• International consultants: 112.9M/M • Local consultants: 1,759.5M/M • Local staff: 144.2M/M • Total: 2,016.6M/M
2. Project Period	March 2003 – September 2008 (67 months)	March 2003 – April 2010 (86 months) * Excluding additional scope (rectification of flood damage)
3. Project Cost Amount Paid in Foreign Currency Amount Paid in Local Currency Total ODA Loan Portion Exchange Rate	2,578 million yen 5,170 million yen (4,008 million rupees) 7,748 million yen 5,811 million yen 1 rupee = 1.29 yen (As of November 2002)	N.A. N.A. 8,636.3 million yen 5,787 million yen 1 rupee = 0.979 yen (Average between 2003 and 2011)
4. Final Disbursement	May 2011	

Provincial/Rural Road Development Project (Central Province & Sabaragamuwa Province)

(SL-P96)

Item	Plan	Actual
1. Project Outputs (1) Civil works and equipment procurement (a) Rehabilitation and upgrading of roads	• Central Province:170km • Sabaragamuwa Province: 180km • Total: 350km	• Central Province:163.5km • Sabaragamuwa Province: 137.5km • Total: 301km
(b) Rehabilitation and upgrading of bridges	• Central Province:46 • Sabaragamuwa Province: 75 • Total: 121	• Total: 104
(c) Procurement of equipment	• Equipment for road pavement, operation and maintenance (Specific procured equipment will be decided by the Project Steering Committee during project implementation)	• Equipment for road pavement (double drums, mobile asphalt plant, plate compactors, asphalt sprayers), bush cutting machines, testing equipment for laboratories
[Additional Scope] (d) Rectification of flood damage	—	Rectification of target roads in the Central Province which were damaged by floods after project completion
2. Consulting services (1) Road and bridge component	• Review of feasibility study, assistance in procurement, supervision of civil works and environmental monitoring.	Same as planned
(2) Technical transfer component	• Technical transfer of operation and maintenance	Same as planned • Overseas training: 37 persons • Domestic training: 813 persons
(3) CBO component	• Improvement of 25 rural roads (CBO roads) connecting to provincial roads	Same as planned • Central Province:15 • Sabaragamuwa Province: 10
(4) Work volume	• Professional A: 40M/M • Professional B: 98M/M • Supporting staff: 1,600M/M • Total: 1,738M/M	• Professional A: 39.7M/M • Professional B: 300.6M/M • Supporting staff: 2,191.0M/M • Total: 2,531.3M/M
2. Project Period	March 2010 – January 2014 (47 months)	March 2010 – December 2015 (70 months)
3. Project Cost Amount Paid in Foreign Currency Amount Paid in Local Currency Total ODA Loan Portion Exchange Rate	 543 million yen 10,627 million yen (13,520 million rupees) 11,171 million yen 9,156 million yen 1 rupee = 0.786 yen (As of December 2009)	 N.A. N.A. 10,409.6 million yen 9,143 million yen 1 rupee = 0.764 yen (Average between 2010 and 2015)
4. Final Disbursement	January 2016 (one month extension from original final disbursement date of December 2015)	