Sri Lanka

Ex-Post Evaluation of Japanese ODA Loan
"Pro-Poor Rural Development Project"

External Evaluator: Hisae Takahashi
Ernst &Young Sustainability Co., Ltd.

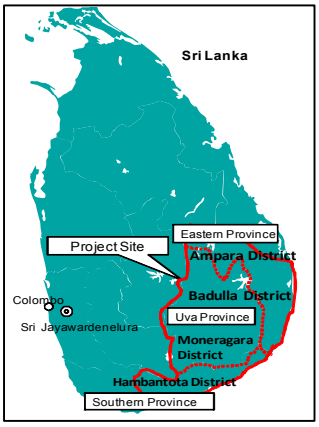
0. Summary

This project aims at reducing rural poverty and mitigating regional inequality by enhancing the accessibility to economic and social services through the improvement of roads in rural areas of Sri Lanka.

The project is consistent with Sri Lanka's development policy as well as Japan's aid policy. Also given the growing development needs, relevance of the project is high. The primary indicators of operating effectiveness have met the planned target values, producing valuable effects in a practical manner. It is therefore concluded that the target Impacts of the project were also largely achieved. Effectiveness of the project is also rated as high because the project cost was as planned and the project period was extended only due to an increase of outputs. Although there were no significant issues related to technical capacity for operation and maintenance management conditions, there were concerns in terms of institutional aspects such as understaffing and financial aspects such as under-budgeting, which hinders the continuation of appropriate maintenance and management. Therefore, sustainability is rated as fair.

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

1. Project Description



Project Locations

Rural Road in Badulla District

1.1 Background

Poverty reduction has been one of the key issues in Sri Lanka for a long time. Various policy programs have been implemented for alleviating poverty, which have led to reducing the average

nationwide poverty rate. However, the gap between urban and rural areas has widened and a measure to resolve this situation was urgently needed. 2002 statistics on the poverty rate in Sri Lanka show a national average of 23% (decreased by 3% from 1990), 8% in urban areas (decreased by 8% from 1990), 25% in rural areas (decreased by 4% from 1990) and 30% in plantation areas (increased by 9% from 1990). In contrast to urban areas where the poverty rate was improved to less than 10%, it remained high in both rural and plantation areas.[1] Furthermore, in addition to the effects of the tsunami disaster in February 2004, destroyed social infrastructure during the civil conflict has impeded national development.

Moreover, there is a conspicuous gap in social infrastructure between urban and rural areas, which is one factor causing widening income disparities. As for the road sector, while Western Province has a relatively higher income level resulting in a road density of about 1.6 km/km^2, Southern and Uva Provinces have high poverty rates with road densities of 0.5 km/km^2 and of 0.2 km/km^2 respectively. From this aspect, improving road infrastructure and accessibility to economic and social services is imperative for poverty reduction in rural areas through the improvement of income and living standards.

1.2 Project Outline

The objective of this project is to improve the accessibility to economic and social service by improving road (Central road and Rural road) [2] in Sri Lanka's rural area of Badulla district and Moneragala district in Uva province, Hambanthota district in Southern province and Ampara district in Eastern province, thereby contributing to the poverty reduction in rural area and the mitigation of regional inequality.

Loan Approved Amount/ Disbursed Amount	4,085 million yen / 4,049 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	March, 2007 / March, 2007
Terms and Conditions	Interest Rate: 1.5% Repayment Period: 30 years (Grace Period: 10 years) Conditions for Procurement: Tied aid
Borrower / Executing Agency	The government of the Democratic Socialist Republic of Sri Lanka/National Planning Department, Ministry of Finance & Planning
Final Disbursement Date	March, 2010
Main Contractor (Over 1 billion yen)	N/A

[1] "Urban area", "Plantation area," and "Rural area" are statistical classifications used in official documents such as "Poverty Assessment" published by World Bank. "Plantation area" indicates plantations for tea, rubber, and coconut where more than 10 live-in laborers work on land of more than 20 acres. "Rural area" is categorized as residential quarters which belong to neither "Urban area" nor "Plantation area."

[2] This project improved road by paving existing road and rehabilitating dilapidated road.

Main Consultant (Over 100 million yen)	N/A
Feasibility Studies, etc.	"Special Assistance for Project Formation" (May- August, 2006, August– December, 2006)
Related Projects (if any)	"Project on Rural Livelihood Improvement in Hambantota District" (March 2007– March 2011)

2. Outline of the Evaluation Study

2.1 External Evaluator

Hisae Takahashi, Ernst & Young Sustainability Co., Ltd.

2.2 Duration of Evaluation Study

Duration of the Study: September, 2011 – October, 2012

Duration of the Field Study: January 7 – February 7, 2012, April 22 – May 7, 2012

2.3 Constraints during the Evaluation Study

N/A

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

3.1 Relevance (Rating: ③[4])

3.1.1 Relevance with the Development Plan of Sri Lanka

At the time of appraisal, the development policy of the Government of Sri Lanka (GOSL), "Mahinda Chintana (2006 – 2016)," indicated a development goal of reducing the national poverty rate to 13% by 2015. GOSL has made particular efforts to narrow the regional gap and to reduce poverty reduction through rural development. Under that policy, various programs have been implemented and expanded. For instance, the rural development program "Gama Neguma" focused on poverty reduction through rural development that included improvement of infrastructure such as agricultural roads, based on the needs of local residents.

In 2010, although "Mahinda Chintana" was modified for 2010 through 2016, no changes were made in the direction of narrowing the regional gap and poverty reduction. "Gama Neguma" is also ongoing. In addition, the "National Road Master Plan (2007-2017)" formulated in 2007 focuses on the development of a road network linking strongholds of economic growth throughout Sri Lanka.

As mentioned above, the development policy of Sri Lanka set a goal of reducing poverty and narrowing the regional gap through rural development at the time of both appraisal and ex-post evaluation, and focuses on rural road infrastructure, which is conducive to rural development.

[3] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory
[4] ③High, ②Fair, ①Low

3.1.2 Relevance with the Development Needs of Sri Lanka

At the time of appraisal, the poverty rate of rural areas in Sri Lanka was high, as shown in Table 1, and a delay in the development of rural infrastructure was pointed out as one of the causes of the gap. In particular, as shown in Table 2 for road conditions, while Western Province has a relatively higher income level resulting in a road density of about 1.6 km/km^2, Southern and Uva Provinces have high poverty rates with road densities of 0.5 km/km^2 and of 0.2km/km^2 respectively. From this aspect, insufficient basic infrastructure in rural areas has caused a bottleneck in efforts to reduce poverty. Therefore, improving road infrastructure and accessibility to economic and social services is necessary for poverty reduction along with improving income and living standards in rural areas.

Table 1 Poverty rate in Sri Lanka

	Urban	Rural	Plantation
Before project (2002)	8%	25%	30%
After project (2010)	5%	10%	12%

Source: Census and Statistics of GOSL, "*Poverty Indicators (2011)*"

Table 2 Road Density Rate in Sri Lanka

	Western	Southern	Uva
Before project (2002)	1.6km/km^2	0.5km/km^2	0.2km/km^2
After project (2010)	3.8km/km^2	2.3km/km^2	1.0km/km^2

Source: Data provided by Road Development Authority (RDA)

Although the poverty rate improved compared to pre-implementation of the project, the poverty rate in rural and plantation areas is still higher than that of urban areas (see Table 1). Therefore, the importance of conducting development activities in rural areas is continuously high. Also road maintenance rates in Southern and Uva Provinces, the targeted areas in this project, are low compared to Western Province where the income level is high. In particular, the inadequate rural road infrastructure prevents access to economic and social services. In addition, the necessity of maintaining a road network linking strongholds of economic growth throughout Sri Lanka is described in the "National Road Master Plan." Hence, from the aspect of promoting rural development, the need for rural road development is still high.

3.1.3 Relevance with Japan's ODA Policy

The 2004 Country Assistance Policy by the Ministry of Foreign Affairs of Japan at the time of appraisal aimed to support the poverty program over the next 5 years. Also, the "Medium-Term Strategy for Overseas Economic Cooperation Operations (2005-2007)" placed priority on "infrastructure development toward sustainable growth." For Sri Lanka in particular, "supporting economic growth for poverty mitigation" and "correcting gaps among ethnic groups and regions" were set as primary focuses. Furthermore, in Country-specific Programs (2007), project formation targeting Uva, Southern, Northern, and Eastern Provinces were being proactively

considered.

As described above, the policy of support for Sri Lanka at the time of appraisal emphasized the importance of dealing with poverty reduction, and also showed positive support for Uva, Southern, Northern, and Eastern Provinces — all areas with a high proportion of people living in poverty.

Thus, this project has been highly relevant with the Sri Lanka's development plan, development needs, as well as Japan's ODA policy, therefore its relevance is high.

3.2 Effectiveness[5] (Rating: ③)

This project performed maintenance on central and rural roads in the targeted areas.[6] The effectiveness of central roads was measured by traffic volume and driving comfort indicators. On the other hand, the targeted zones of each rural road sub-project (SP) were short, which caused difficulties of measuring the effectiveness based on traffic volume. In addition, the original objective of developing rural roads was not to increase traffic volume or driving comfort, but to improve the accessibility of economic and social services. Therefore, the effectiveness of rural roads was determined based on a qualitative approach.

3.2.1 Quantitative Effects (Operation and Effect Indicators)

①International Roughness Index (IRI) [7]

The original and planned IRI of the whole target area and the actual IRI of each section of the target area are shown in Tables 3 and 4 respectively.[8]

At the time of planning, the IRI of whole target section of central road was expected to improve to between 2.0 and 4.0. The data that was available from RDA shows a great improvement of the IRI in most of the target section, and it was confirmed that in nearly 80% of the section, the IRI reached target figures.[9] Furthermore, appraisal documents indicated the original IRI as 4.8-8.0, but in reality, the IRI of the target section at the time of appraisal showed 9 or even 10, thus confirming the high level of effectiveness. Though some of the target section did not reach the planned figure (4.0), the IRI of all target sections have been improved compared to before the project. In addition, serious damage needing urgent repairs

[5] Sub-rating for Effectiveness is to be put with consideration of Impact

[6] As described below in "3.4 Efficiency," 28 sections of central road (241 km) and 83 sections of rural road (224 km) were improved under this project.

[7] The International Roughness Index (IRI) is a general indicator to show the roughness of a road. It indicates the roughness of a certain area of road in the subject area. A smaller value indicates a flatter and improved road condition.

[8] Since original and planned figures for each section were not set at the time of appraisal, the original figure in Table 4 was collected at the time of ex-post evaluation from RDA. These figures do not cover the entire section, thus the average of the original figures in Table 4 and Table 3 do not match.

[9] The numbers for Sub-projects for central road in each district are: 4 in Badulla district, 3 in Moneragala district, 13 in Hambantota district, and 8 in Ampara district.

was not found when the evaluation team actually drove the section where the IRI was shown as 7.0. Since the IRI is an indicator that shows the comfort of the road, the effect of the project can be ascertained in terms of smoothness of driving due to project implementation.

Table 3 Original and Planned IRI

	Original IRI (2006)	Planned (Project Completion)
Target Road (Central Road)	4.8 – 8.0	2.0 – 4.0

Source: Appraisal documents

Table 4 Original and Actual IRI

Section	Before project	After project
Badulla district (Uva Province)	2007	2010
Badulla - Karametiya – Andaupotha (42-48km)	8.3	7.3
Wellawaya – Ella – Kumbalwela (14-24.5 km)	9.3	3.5
Roehampton – Diyatalawa – Bandarawela(0-10.1km)	8.5	3.7
Moneragala district (Uva Province)	2007	2010
Passara - Monaragala (27-33.75 km)	7.3	7.0
Wellawaya – Ella – Kumbalwela (0-14 km)	6.3	2.9
Bibile - Medagama - Nakkala (15-33 km)	8.3	5.8
Hambantota district (Southern Province)	2007	2012
Pelmadulla - Madampe - Nonagama (69.2-85.8 km)	N.A.	3.6[Note 1]
Walasmulla - Weeraketiya (0-8.2 km)	6.3	3.3
Walasmulla - Katuwana (10-12 km)	8.7	3.1
Walasmulla - Katuwana - Middeniya (0-10 km)	10.5	3.1
Walasmulla - Katuwana - Middeniya (12-23.6 km)	7.9	3.2
Weeraketiya - Middeniya (0-8 km)	7.6	3.5
Weeraketiya - Middeniya (8-12.9 km)	10.1	3.2
Beliatta - Walasmulla (0-15.7 km)	8.0	3.2
Tangalle - Weeraketiya (B410) (0-13.8 km)	3.2	3.0
Ranna - Udayala - Weeraketiya (0-15.7 km)	9.8	3.0
Ranna – Angunukolapalassa - Wetiya (0-16.1 km)	9.6	3.0
Udukiriwela- Weeraketiya - Middeniya (0-12.9km)	8.4	3.4
Ampara district (Eastern Province)	2007	2011
Akkaraipattu - Warapathanchenai (0–19 km)	7.7	5.0
Samanturai – Malcumpiddy – Deegavapi (0-9km)	10.9	6.4

Note 1: Data of 2010.
Source: Data provided by RDA

②Annual Average Daily Traffic (AADT)

Since the target figures for traffic volume to indicate effectiveness were not set at the time of appraisal, it was not possible to show the degree of the attainment in terms of traffic volume. However, an attempt was made to collect information regarding traffic volume for references purposes with the support of RDA to the greatest extent possible. Though the collected data

was not entirely sufficient, available AADT information at target sections provided by RDA shows an increase compared to the level prior to the project. This result indicates that the flow of people and products has become more active than before through the implementation of this project.

Table 5 Original and Actual AADT

(Unit: Vehicle/Day)

Section	Before project	After project
Badulla district (Uva Province)	2007	2010
Badulla - Karametiya – Andaupotha	N.A.	1,282
Wellawaya – Ella – Kumbalwela	3,710	N.A.
Roehampton – Diyatalawa – Bandarawela	1,419	2,293
Moneragala district (Uva Province)	2007	2010
Passara – Monaragala	905	1,406
Bibile - Medagama - Nakkala	N.A.	2,251
Hambantota district (Southern Province)	2007	2012
Pelmadulla - Madampe - Nonagama	2,033	3,414
Walasmulla – Weeraketiya	3,269	N.A.
Walasmulla - Katuwana - Middeniya	1,212	2,415
Weeraketiya – Middeniya	2,165	2,727
Beliatta – Walasmulla	3,790	N.A.
Tangalle - Weeraketiya (B410)	1,638	2,611
Ranna - Udayala – Weeraketiya	1,073	1,530
Ranna – Angunukolapalassa - Wetiya	3,589	3,849
Ampara district (Eastern Province)	2007	2011
Peradeniya - Badulla - Chenkalady	1,474	1,934

Source: Data provided by RDA

3.2.2 Qualitative Effects

In order to understand the qualitative effects, a beneficiary survey was conducted alongside the target road. 227 drivers of cars, trucks, and three-wheelers,[10] as well as merchants and residents, etc. responded and the following points were confirmed as a result of this survey.

①Transportation or Travelling Time

According to the results of the beneficiary survey, almost of all respondents (99%) answered that their transportation and travelling time was reduced after the improvement of the road. When confirming this with respondents using rural roads, the average time for transportation to market and social services had been reduced approximately 42% on average.[11] This was due to

[10] Three-wheelers are one of the major means of transportation for people in Sri Lanka.

[11] Though respondents' sections were different, the changes in average transportation or travelling time to major roads and destination are as follows. 32 minutes →15 minutes (central road) and 33 minutes →13 minutes (rural road) in Badulla district, 126 minutes →84 minutes (central road) and 29 minutes → 12 minutes (rural road) in Moneragala district, 27 minutes → 13 minutes (central road) and 23 minutes → 11 minutes (rural road) in Hambantota district, 25

the fact that the services of three- wheelers and buses became available on roads where walking or using cows had previously been the only means of transportation due to poor road conditions. Though quantitative data showing correlation was not available, it would appear that the shortening of transportation or travelling time indirectly contributed to the stimulation of commodity distribution in the target area.

②Accessibility of Major Cities and Social Services

In terms of accessibility to major cities and social services, 77% and 22% of survey respondents from the central road answered "improved greatly" and "improved" respectively. This indicates that 99% of the respondents believe that the improvement of accessibility is a result of the project. All beneficiaries of rural roads also replied that access to a major road and destinations such as schools, hospitals, shops, and markets, etc. has "improved greatly" or "improved." In particular, the improvement of rural roads where even three-wheeler or bicycle passage was difficult made not only the passage of bicycles possible, but also buses. This resulted in more people realizing the improvement of accessibility.[12]

③Reduction of Transportation Costs

The cost of transportation and travelling was also reduced due to the road improvement. Beneficiary survey results show that 34% and 64% of the respondents replied that their costs were "largely reduced" and "reduced" respectively. This indicates that more than 90% of the respondents answered that their costs for transportation or travelling were reduced. Many respondents explained that transportation costs for cultivated crops were lowered since trucks now drive around the area to collect crops. However, in the past, farmers had to hire workers to transport their crops to markets or processing factories, as trucks were not able to drive on the roads before the project.

---

minutes →5 minutes (central road) and 32 minutes → 10 minutes (rural road) in Ampara district.

[12]Roads that connect villages and major roads, markets, banks, communication facilities, and shops, etc. are included as part of the selection criteria for sub-projects.

Box 1 Qualitative effects

Example of ②improvement of accessibility to Major Cities and Social Services

One of the target roads called Pahamurutota Uma Oya road in Badulla is a rural road in a village which mainly produces tea leaf and is located 6 km away from the major city of Pahamurutota Village. Before the project, the road was not paved, thus buses, cars, three-wheelers, etc. were not able to pass over the road. Therefore, people in this village had various difficulties. For example, students had to walk more than 45 minutes to go to the nearest school and harvested tea leaves were not sent to market in a timely manner.

Truck sent by tea collecting centre

After improving the road, buses were able to pass over the road and students could commute to school easily using three-wheelers or buses within 10 minutes. Before the project, the only means of transporting tea leaves was walking or using cows, but now farmers can transport tea leaves in a timely manner on trucks sent by the tea collecting centres or by using three-wheelers. Hence, farmers can now send high-quality tea leaves to collecting centres. Currently, 70% of tea leaf harvested in this area qualifies as high quality despite that it had previously been categorized as low. Before the project, more than half of harvested vegetables (cabbage, tomato, and aubergine) were discarded since they could not be sent to market while still fresh. However, this amount has now decreased to less than 10%. Such changes contributed to the people in this village being more informed.

3.3 Impact

3.3.1 Intended Impacts

At the time of appraisal, it was expected that the living standard and the income of the poor in the target area was improved due to the road improvement as an impact of the project. In Sri Lanka, macro-level data including the district-level Gross Domestic Product and poverty rates were not available; changes in living environment and income were confirmed through the beneficiary survey and analyzed.

① Improvement of Living Standards

In the beneficiary survey, 80% of respondents replied that their living conditions improved after the project. In particular, since accessibility to hospitals and clinics was improved, patients could easily be transported by car. In addition, it also became easier for children to commute to school.[13]

[13] Beneficiary surveys that were conducted by the project management unit during project implementation also show that 96% of respondents indicated an improvement in student education levels and 97% of respondents said that health condition in the area improved.

② Enhancement of Economic Activities and Income

Many beneficiaries said that economic activities were expanded and that income also increased after improvement of the road (see Figure 1). According to the beneficiary survey, more than 90% of respondents replied that their business or agricultural activities were largely expanded (53%) or fairly expanded (36%). They indicated the reason for such as the expansion of their customer base and activity area due to the improvement of access to the market and road networks, which had previously been limited to a certain area. In addition, household incomes in each district have increased according to the Census and Statistics survey (see Table 6). In fact, the beneficiary survey shows that 74% of the respondents answered that their income increased after project completion (74% "increased greatly" and 35% "increased") as shown in Figure 2. In particular, beneficiaries of rural road improvement said that the increase in the amount of crops that could be sold due to easy access to markets and the reduction of transportation costs due to road improvement contributed to their increased income.

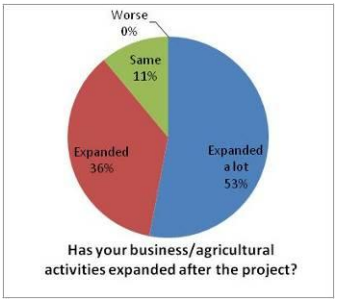


Figure 1 Changes in Economic Activities

Table 6 Household Income before and After the Project

(Unit: Rupee (Rs.))

District	Before project (2006/07)	After project (2009/10)
Badulla	22,035	32,313
Moneragala	20,118	22,161
Hambantota	24,076	36,879
Ampala	20,676	24,721

Source: Census & Statistics (2011), "House Hold Income and Expenditure Survey 2009/2010"

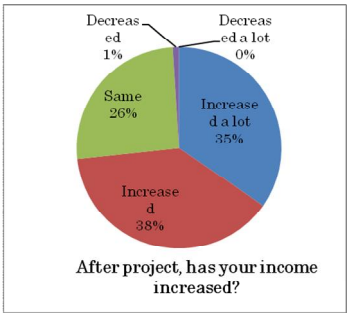


Figure 2 Changes in Household Income

As explained above, the implementation of this project is considered to have contributed to the enhancement of economic activities in the project area.

③ Changes in Poverty Rates

At the time of appraisal of the project, the delay in rural infrastructure development was pointed out as one of the factors for the income gap. Therefore, road improvement was conducted in order to alleviate poverty through increasing incomes and living standards. Since it is assumed that other various factors also contributed to improving the poverty rate, measuring the direct relationship between the road development of this project and the reduction in the poverty rate in this area is difficult. However, when comparing poverty rates before and after the project, improvement has been demonstrated in all areas except the

Ampara District, as shown in Table 7.[14] Therefore, it is thought that the project contributed to alleviating poverty within a certain level by increasing incomes and living standards.

Table 7 Poverty Rate in target Area before and after the Project

District	Before project (2006/07)	After project (2009/10)	District	Before project (2006/07)	After project (2009/10)
Badulla	33.2%	14.5%	Hambantota	12.7%	6.9%
Moneragala	23.7%	13.3%	Ampara	10.9%	11.8%

Source: Census and Statistics of Sri Lanka, "*Poverty Indicators (2011)*"

3.3.2 Other Impacts

(1) Impacts on the Natural Environment

Since the SPs of this project are relatively small in scale, it was not necessary to implement an Initial Environmental Evaluation (IEE) or Environmental Impact Assessment (EIA) in accordance with Sri Lankan guidelines. There were no particular impacts on the environment. For this project, the small impact on the natural and social environment was a factor that was included in the selection criteria for the SP. The absence of a negative impact on the environment was in fact confirmed upon interviews with beneficiaries and employees of implementing organizations.

(2) Land Acquisition and Resettlement

No land was acquired and residents were not resettled under this project.

(3) Unintended Positive/Negative Impact

①Enhancement of Contractor Capacity

For this project, one of the SP selection conditions stipulated that the sub-projects be appropriate scale for domestic tendering to be conducted. Although this was not clearly stated in the documents at the time of appraisal, an additional objective was one of improving the capacity of domestic construction companies by giving them experience in road construction for the sub-projects.[15] By implementing multiple small-scale road constructions for this project, small local contractors with no previous experience in donor aid projects were given an opportunity to gain this experience in this project.[16]

During this project, all of the contractors acquired a broad range of knowledge and experience by

[14]The reason that the poverty rate in Ampara district did not improve is assumed to be because of special circumstances in the eastern area. This area has suffered from damage from the civil conflict until recently.
[15]From interviews with the Project Director during implementation and employees of the implementing organization.
[16]The numbers of small local contractors from which road construction work was ordered for this project are: 11 in Badulla District, 9 in Moneragala, 15 in Ampara, and 19 in Hambantota for a total of 54 companies. These companies have 100 employees or less including laborers, with an average of 4-5 technical staffs per company. In addition, upon interviewing four of these companies, it was found that before this project, they had never had a road construction work order for which concrete paving skills were necessary.

participating in lectures and orientations held by the Consultants or RDA. For example, the Consultants and RDA employees provided contractors with appropriate administrative and technical support for matters such as drawing up tendering documents prior to accepting orders, preparing contracts and statements of account, time management, concrete paving technology, safety management, quality control, and using new equipment. Through this, the contractors gain experience similar to on the job training (OJT). As a result, before project implementation, the number of local contractors that had independent experience in concrete paving work was extremely limited, but since most of the sub-projects involved concrete paving, there were many contractors who were able to acquire skills in this field. Furthermore, local contractors who did not have experience in subcontracting work for donor aid projects will be able to use the experience they gained in this project. Enhancement of their capacity has been ascertained as they are currently working as subcontractors for Asian Development Bank projects and other JICA operations.

② Administrative Management Abilities of the RDA

This project also contributed to the improvement of project management abilities among the employees of the RDA, which was the implementing agency. According to interviews with RDA employees, they have said that "Through the experience of implementing and managing this project, our capacity has been improved in terms of contract operations and management, procurement operations, supervisory/managerial work, and financial administration."

In the past, since the technical level of private companies was insufficient, road maintenance and rehabilitation work was commissioned by RDA to the Road Construction and Development Corporation (herein called RC&DC). Work was further subcontracted by RC&DC to private companies, who performed construction work under the supervision of RC&DC.[17] Therefore, RC&DC was in charge of procurement, supervisory work, and contract work, etc. that are implemented by the Consultant. Subsequently, when the government encouraged the entrance of private companies into the market, it became necessary for RDA to also coordinate operations that had been handled by RC&DC. Prior to this project and the small-scale infrastructure projects[18] that preceded it, large-scale projects were the norm. These larger projects were implemented while receiving support from overseas consultants. However, for this project, the scale of the SP was small and RDA employees had to coordinate work operations for which they had previously been dependant

[17]RC&DC is a public corporation that was formed in the 1980s when the construction department broke off from the RDA as a government-owned company.

[18]This is a small-scale scattered-type project that implemented multiple small sub-projects over a wide area. In Sri Lanka, the Small-scale Infrastructure Rehabilitation and Upgrading Project (SIRUP I, 2003~2007), (SIRUP II, 2004~2008) was implemented after the tsunami subsequent to emergency aid as a small-scale scattered-type project. During implementation of this project, Project Execution Units were set in each region under the supervision of the Project Management Unit, thereby employing systems learned from experience with SIRUP.

on the consultant. For RDA employees, implementing operations and management for this project was similar to experiencing OJT. Also through the implementation of this project, a system/process was created so that a series of work operations including procurement, contract work, project management, and financial administration could be implemented without donor support. This has thereby led to improvement of their capacity as an organization.[19]

③ Measures against Speeding

After some of the central roads were rehabilitated, the number of vehicles driving at high speeds increased, with the number of traffic accidents also increasing. This was ascertained through results of interview surveys. Although it is not a serious problem at this time, it has been observed that there are some locations on central roads where traffic signs have not been placed. So that this situation does not worsen in the future, the local police department has suggested that installing speed limit signs would be effective. Since it will also be necessary to improve awareness and morals of drivers at the same time, local police and schools are expected to conduct awareness activities together with RDA.

From the above, it can be seen that the expected impacts, which are contributing to an increase in income levels and an improvement in the living environments of poor people living in target regions, have been largely achieved.

As indicated above, this project has largely achieved its objectives, therefore its effectiveness is high.

3.4 Efficiency (Rating: ③)

3.4.1 Project Outputs

Table 8 shows output (planned, modified and actual) of the project.

Table 8 Project Output (Planned/Modified/Actual)

Item	Planned	Modified[Note1]	Actual
Central Road			
Number of SP	26	26	28
Length	256 Km	263 Km	241 Km
Rural Road			
Number of SP	100	58	83
Length	383 Km	206 Km	224 Km
Badulla district			
Number of SP	34	17	20

[19]According to RDA employees, prior to implementation of the project these jobs were handled by individuals with no special knowledge. However, the implementation of this project not only improved abilities of individuals, but also allowed for the systemization of a series of operations at RDA. Currently, work continues to progress at RDA following that system.

Length	160 Km	65 Km	53 Km
Moneragala district			
Number of SP	40	15	20
Length	140 Km	45 Km	49 Km
Hambantota district			
Number of SP	11	11	16
Length	81 Km	64 Km	72 Km
Ampara district			
Number of SP	23	15	27
Length	43 Km	32 Km	50 Km
Consulting Service	・Tendering Assistance ・Technical Support ・Project Supervision & Monitoring ・Project Evaluation ・155M/M	・As planned ・157M/M	

Source: Appraisal documents, answer to questionnaire
Note 1: Modified output was designed based on the detailed design study.

This project consists of a number of small-scale sub-projects categorized into central road and rural road rehabilitation. The planned outputs before implementation (at the time of appraisal), modified outputs after project commencement, and actual outputs are each noted above. Major changes are as described below.

(1) Number of SP and length of central road (modified output ⇒ actual outputs)
Due to currency exchange rate fluctuations, there was some leeway in project costs. Thus, in order to utilise the funds effectively, two extra SP were added.

(2) Number of SP and length of rural roads (planned output ⇒ modified outputs)
The planned outputs were provisionally estimated at the initial stages of project formation. When these outputs were reconfirmed during the detailed design study, it was discovered they would not fall within the budget and that there were sections that did not thoroughly reflect the opinions of some of the residents. According to the Project Director, time was limited when conducting the preliminary survey prior to project commencement. It was thus indicated that on-site conditions were not completely reflected and the cost estimate was unrealistic. Therefore, upon receiving results of the detailed design study implemented at project commencement, the outputs were altered to be more realistic. This type of project, where a number of small-scale SP are financed is highly flexible, with high-priority SP appropriately selected in accordance with the objectives. Because of this, making the realistic changes as described above was an appropriate decision.

(3) Number of SP and length of rural roads (modified outputs ⇒ actual outputs)
Utilising the funds generated from currency rate fluctuations, 25 SP were added.

(4) Consulting services

This accompanies the increasing of the outputs (SP), and is relevant because these services are essential to the smooth implementation of the SP.

Sri Wijeyapura Road (Moneragala)

Akkaraipattu - Warapathanchenai (Ampara)

3.4.2 Project Inputs

3.4.2.1 Project Cost

The planned project cost at the time of appraisal[20] was 5,450 million yen (no foreign currency, 5,450 million yen domestic currency), of which 4,085 million yen was the yen-loan portion. The actual cost was 4,696 million yen (all domestic currency), of which 4,049 million yen was the yen-loan portion. Thus, actual cost was lower than planned at 86% of the planned cost. According to the implementing agency, the main reason that the actual cost fell below the planned cost was due to the fluctuating currency exchange rate. At the time of appraisal, the rate was 1 Japanese Yen (JY) = 0.89 Rs., but in 2009 it was 1JPY = 1.27 Rs., creating a difference of approximately 716 million Rs. In order to use these funds effectively, the project period was extended by six months and construction work on rural roads was added. As a result, the difference totalled approximately 36 million JPY.

3.4.2.2 Project Period

At the time of appraisal, the project period[21] was planned from March 2007 to March 2009 for a total of 25 months, but the actual period was 30 months from March 2007 to August 2009, slightly longer than the planned period. However, the planned SP construction work was completed as planned in March 2009, thereby making it necessary to consider the output changes when evaluating the project period. This extension period was used to implement the

[20]When the plan was altered after the detailed design study, only outputs were revised, with no changes made to the planned cost.

[21]The project period is defined as from the signing of the L/A to the completion of SP work. Furthermore, when the plan was altered after the detailed design study, only outputs were revised, with no changes made to the project period.

SP added to utilise the monetary surplus that was generated by the currency exchange rate and was appropriate with the increase in outputs.

3.4.3 Results of Calculations of Internal Rates of Return (IRR)

At the time of project appraisal/PCR, the internal rate of return (IRR) was not calculated and could not be compared to actual results. Calculating the IRR for a large number of small-scale SP is difficult, and due to the nature of the project, a quantitative analysis of the IRR was not possible and was thus not performed.

From the above, it can be seen that the project cost was within the plan. Though the project period was exceeded as the output was increased, this change is appropriate and the efficiency of the project is thus high.

3.5 Sustainability (Rating: ②)

3.5.1 Structural Aspects of Operation and Maintenance

The Project Management Unit (herein called PMU) that managed the project during its implementation was dissolved after project completion. Currently, the Maintenance Division and Works Division of the RDA are in charge of operations and maintenance for central roads, and the provincial road development authority/department (PRDA/D) at each provincial council is in charge rural roads. Additionally, there are district offices under each PRDA/D where operations and maintenance staff members (senior engineers, technical staff, and supervisors) have been placed to implement operations and maintenance of rural roads.

With some exceptions (PRDA of Hambantota Province), there tends to be a shortage of technical staff when considering the size of the areas covered by each office. For example, according to provincial road authority staff members in the Eastern Province, which has jurisdiction over the three districts of Ampara, Batticaloa, and Trincomalee, there are only ten technical staff members. This is an insufficient number to regularly conduct maintenance and management. This issue is not exclusive to only the RDA or provincial governments, but is one that is shared by all ministries in the country. Yet for rural roads (especially in Uva Province, including Moneragala and Badulla), local resident involvement in operation and maintenance activities have been observed. The Village Monitoring Committee was formed by a group of residents during the implementation of this project. Members of this group frequently conduct clean-up activities and report on damaged segments to contribute to road operation and maintenance.

3.5.2 Technical Aspects of Operation and Maintenance

The RDA and provincial governments/district office road authorities have been performing

road operation and maintenance for their respective covered areas without any particular technical problems. In addition, the RDA has their own training center where employees are given appropriate training. Technical staff members at provincial governments/district office road authorities also have a sufficient level of experience and knowledge. With this, and the fact that roads are well-maintained, it is concluded that there are no technical problems on this level.

3.5.3 Financial Aspects of Operation and Maintenance

The budget for operation and maintenance at the RDA shows a steady upward trend, as shown in Table 9. They have also made budgetary allowances to exceed the inflation rate. However, according to interviews held with RDA employees, in contrast to the actual operation and maintenance demand, a sufficient budget has not been secured. In addition, according to provincial government employees, although the budget in Badulla and Moneragala districts cannot be called sufficient, operation and maintenance is covered within the allotted budget. In contrast, when confirming with operation and maintenance officials for each province, a budget sufficient for appropriate operation and maintenance in Hambantota district and Amapara district has not been secured (see Table 10). In particular, Amapara District has an operation and maintenance budget of 10 million Rs for 418 km of road, which is extremely limited in comparison with other districts. The reason for this is likely because they are at the height of building infrastructure following a civil conflict, with construction projects continuing to take precedence over operation and maintenance.

Table 9 Trend in the Road Operation and Maintenance Budget of RDA

(Unit：Million Rs).

2007	2008	2009	2010	2011	2012
3,410	3,103	3,530	4,200	5,000	5,500

Source：Documents provided by RDA

Table 10 Distance of Road Covered by Operation and Maintenance Budgets for each Office

Office Name	Amount	Road length
Uva Province (Badulla District, Moneragala District)	Rs.80 mil.	550 km
Hambantota District	Rs.60 mil.	345 km
Ampara District	Rs.10 mil.	418 km

Source: Documents provided by each PRDA/D.

Furthermore, according to the Ministry of Ports and Highways, which is the supervisory agency of the RDA, the national road operation and maintenance budget for 2012 has been increased by approximately six times the 2004 budget. This reflects the Sri Lankan awareness of the importance of not only road construction, but also of road operation, management, and maintenance.

3.5.4 Current Status of Operation and Maintenance

In regard to the operation and maintenance conditions of target roads, two years have not yet passed since their completion. However, during on-site observation of a portion of the roads, no areas with significant damage were found. Furthermore, the following operation and maintenance work is being implemented on both central and rural roads.

- Routine maintenance: Approximately 4 times/year. Mainly roadside vegetation trimming, drain cleaning, etc.
- Periodic maintenance: Every 2-3 years depending on road conditions. Concrete repairs, etc.
- Emergency maintenance: After disasters, etc. Implemented as needed.

One concern is that some rural roads between towns, villages and main roads that had not been fully connected were observed. According to residents and provincial government employees, although it was explained to them that provincial governments should rehabilitate the part of the roads that were not covered by the project after project completion, this was not implemented due to subsequent budget shortfalls. As a result, smooth passage on roads will be affected and it is hoped this will be resolved in the future.

Some problems have been observed in terms of institutional and financial aspect, therefore sustainability of the project effect is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project aims at reducing rural poverty and mitigating regional inequality by enhancing the accessibility to economic and social services through the improvement of roads in rural areas of Sri Lanka.

The project is consistent with Sri Lanka's development policy as well as Japan's aid policy. Also given the growing development needs, relevance of the project is high. The primary indicators of operating effectiveness have met the planned target values, producing valuable effects in a practical manner. It is therefore concluded that the target Impacts of the project were also largely achieved. Effectiveness of the project is also rated as high because the project cost was as planned and the project period was extended only due to an increase of outputs. Although there were no significant issues related to technical capacity for operation and maintenance management conditions, there were concerns in terms of institutional aspects such as understaffing and financial aspects such as under-budgeting, which hinders the continuation of appropriate maintenance and management. Therefore, sustainability is rated as fair.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

- On some roads that were supported by this project, there were segments where rural roads and main roads were not completely connected. It was planned that these roads would be maintained by provincial governments after completion of the project. However, they have not been maintained due to problems with budget shortfalls. As a result, smooth passage along these roads has been affected and residents have also voiced their demands for the rehabilitation of these segments. In order to use the target roads effectively, the government should allot an appropriate budget to local governments and follow-up should be conducted by provincial governments in the future.
- On some central roads, the installation of traffic signs is incomplete. With a future increase in vehicles, a rise in the risk of traffic accidents is a concern. Although it is not a serious problem at this time, so that conditions do not worsen in the future, it is recommended that the RDA install signs pertaining to traffic rules, especially those regarding speed limits, etc. In addition, since it is also necessary to raise user awareness at the same time, it would be effective for the RDA to work together with local police and schools on awareness activities.

4.3 Lessons Learned

・Appropriateness of project formation survey period

At the time of project commencement, the number of SP and lengths of target rural roads were reduced as the scope of the project was altered considerably. This was because the original estimate was too general since the survey period implemented was shorter than thought necessary. The initial scope was not realistic in terms of time period and budget, nor were the opinions of local residents fully reflected. As a result, another, more detailed design study was conducted at the time of project commencement and a new scope was set. It was necessary to make the plan more realistic and to secure a sufficient on-site survey period.

・Unique properties of small-scale scattered-type projects

This project covered a wide target area (multiple districts) in which small-scale sub-projects were implemented. From the time of project commencement, various efforts were made in capacity-building for local contractors and implementing agency employees. These included setting the SP at a certain size to create domestic competition, holding seminars to coincide with tendering orientations, and implementing administrative and technical support. As a result, the provincial governments in charge of implementing and managing the SP gained experience in conducting multiple projects simultaneously, and were also given an opportunity to develop their project management abilities. In addition, small local contractors who had not

had the opportunity to be involved in large-scale projects were able to improve their administrative management and technical abilities during the implementation of this project.

Using this type of small-scale scattered-type project, it becomes possible to make a large contribution to the capacity-building of regional government agency employees and contractors, who do not often have the opportunity to be involved in large-scale projects. Therefore, it is effective to incorporate innovations and mechanisms into the project, such as those described above that correspond to objectives so that small contractors are also able to participate.

Comparison of the Original and Actual Scope of the Project

Item	Original	Actual
1.Project Outputs	1) Central Road Number of SP: 26 Length: 263 Km	 28 241 Km
	2) Rural Road Number of SP: 580 Length: 206 Km a) Badulla district Number of SP: 17 Length : 65 Km b)Moneragala district Number of SP: 15 Length: 45 Km c)Hambantota district Number of SP: 11 Length: 64 Km d)Ampara district Number of SP: 15 Length: 32 Km	 83 224 Km 20 53 Km 20 49 Km 16 72 Km 27 50 Km
	3) Consulting Service: 155M/M ・Tendering Assistance ・Technical Support ・Project Supervision & Monitoring ・Project Evaluation	157 M/M As planned
2.Project Period	March, 2007 – March, 2009 (25 months)	March, 2007 – August, 2009 (30 months)
3.Project Cost Amount paid in Foreign currency Amount paid in Local currency Total Japanese ODA loan portion Exchange rate	 - 5,450 million yen (4,816 million Rs.) 5,450 million yen 4,085 million yen 1Rs. = 1.12 yen (As of October, 2006)	 - 4,696 million yen (5,050 million Rs.) 4,696 million yen 4,085 million yen Rs. = 0.9 yen (Average between April, 2007 and March, 2010)