Democratic Socialist Republic of Sri Lanka

Ex-Post Evaluation of Japanese ODA Loan Project

Plantation Reform Project (II)

External Evaluator: Hiromi Suzuki S., IC Net Limited

0. Summary

The objective of the project was to contribute to ensuring the sustainability of plantation projects by improving the working and living conditions of plantation workers in of Sri Lanka, through the following measures: providing plantation workers with housing loans for the construction of individual houses; improving and developing infrastructure such as line rooms[1] and latrines; providing ergonomic equipment; providing training for the prevention of alcoholism which has been a serious problem among plantation workers; and providing training such as household cash management.

The relevance between Sri Lankan national development policies, development needs and Japanese aid policies was high both at the moment of appraisal as well as ex-post evaluation. However, the project's degree of relevance was evaluated as fair, because of some issues with the appropriateness in the project planning; for example, the provision of housing loans was canceled although it was one of the pillars of this project, and the funds were reallocated to the rehabilitation of estate roads. The reroofing of line rooms and the construction of latrines were conducted as part of the project and they were effective to a certain extent in improving the working and living conditions of plantation workers. However, the rehabilitation of estate roads, which was added to the original plan at a later stage, did not result in benefiting plantation workers as much as expected. Therefore, the degree of effectiveness and the impact were evaluated as fair. The project cost was lower than planned because of a substantial reduction in the project's scope, but the project period slightly exceeded the planned period. Therefore, the efficiency of the project was evaluated as fair. With regard to the operation and maintenance of the project, there was potential for improvement in terms of the executing agency's personnel and technical skills. However, after the project ended, no problems were found concerning the organizational structures, technical skills and financial situations of the stakeholders including regional plantation companies (RPCs), the Plantation Human Development Trust (PHDT) and NGOs. Similarly, there were no particular concerns about the overall operation and maintenance of the project. Therefore, it is concluded that the sustainability of the project effect is high.

[1] Line rooms are row houses where plantation workers in Sri Lanka have been living for generations. Line rooms are provided to the plantation workers free of rent.

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

1. Project Description

Figure 1: Project Location

Figure 2: Reroofed Line Room

1.1 Background

Since the 1990s, the government of Sri Lanka has been implementing privatization policies in the state-owned plantation sector, with the aim of improving the inefficient management which had prevented its growth[2] and to improve the quality of crops as well as to adding more value to the crops. More specifically, the management rights for about 460 plantations run by the two public (state-owned) corporations were leased to 22 RPCs in June 1992 and in 1993 and another RPC was established. Initially, a partial privatization method was adopted where only the management rights were leased to the 23 RPCs. However, in April 1995, the policy to completely privatize all the 23 RPCs was decided upon by the Cabinet.

In addition to plantation management reforms, other challenges for the Sri Lankan plantation sector were also recognized, including the need to improve the working and living conditions of plantation workers as well as their social status. The majority of plantation workers are descendants of Tamils who were brought from India as cheap labor during the 19th century British colonial period. For generations, they had lived in small row houses called line rooms built in plantation estates where each dwelling unit had to be shared by seven or eight people on average. They were forced to live in social, economic and cultural isolation from surrounding communities. Many hours of outdoor labor and wretched living conditions resulted in serious problems amongst the plantation workers such as alcoholism and domestic violence against women. For a long period of time, they were not given civil rights and suffered from discrimination thus there was an urgent need to improve the overall status and living conditions of the plantation workers.

[2] Most plantations in Sri Lanka were owned by foreign nationals. By 1975, these plantations were nationalized and run by two major public (government-run) corporations. Under public management, the plantation sector gradually lost its competitiveness because of increases in labor costs, lack of efforts in improving productivity and the Sri Lankan government's policy of prioritizing rice farming, among other reasons (source: JICA internal documents).

These programs to improve the profitability of RPCs and to improve the working and living conditions of Indian Tamil plantation workers were strengthened especially since the 1990s, when the importance of the plantation sector as a source of foreign exchange was recognized by the Sri Lankan government. The Asian Development Bank (ADB) and the Japan International Cooperation Agency (JICA) among other donors provided assistance for the plantation sector. In particular, JICA conducted the Plantation Reform Project (I) (the first phase of the project) from 1996 to 2001, it has continuously been dispatching Japan Overseas Cooperation Volunteers (JOCVs) and has provided support through the JICA Partnership Program (JPP) as well. The Plantation Reform Project (II) (PRP-II) was conducted under a parallel co-financing scheme with ADB's Plantation Development Project (PDP). The ADB conducted the PDP with the aim of achieving two goals: one, improving the profitability of the plantation sector; and two, improving the living and working conditions of plantation workers. PRP-II was conducted with the aim of contributing to the achievement of the PDP's second goal, by supporting one of the PDP's components "social and environmental programs" through parallel co-financing as mentioned above.[3]

1.2 Project Outline

The objective of this project is to improve the working and living conditions of plantation workers in 15 districts where RPCs are located, by providing housing loans, improving line rooms, constructing latrines and providing training, thereby contributing to the sustainability of the plantation sector.

Loan Approved Amount/ Disbursed Amount	1,836 million yen/1,694 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	March 2003 / March 2003
Terms and Conditions	Interest Rate: 2.2% Repayment Period: 30 years (Grace Period: 10 years) Conditions for Procurement: General untied
Borrower / Executing Agency	The Democratic Socialist Republic of Sri Lanka / Ministry of Plantation Industries (MPI)
Final Disbursement Date	May 2010
Feasibility Studies, etc.	<Proposed-Type study> "The Study for the Promotion of the Project for Improving the Living Conditions of Plantation Workers," 2005

[3] PDP's four components include the following: (1) investment: providing financing for RPCs; (2) social and environmental programs: improving the living and working conditions of plantation workers; (3) marketing initiatives: supporting marketing by RPCs; and (4) institutional development and project management: supporting the strengthening of organizations involved in the plantation sector, including the Tea Association (TA). See footnote 31 for the reasons why PRP-II was conducted in the form of parallel co-financing.

Related Projects	<ODA loan> “Plantation Reform Project (I)” (loan agreement: 1996) <Technical cooperation> Dispatch of JOCVs (2000–2012) <Grant aid: Partner Type> CARE International Japan, “Tea Estate Assistance Project (TEA Project)” (May 2003 - May 2006) CARE International Japan, “Assistance for Tea Estate Residents through Enhancing and Advancing CBOs (After TEA)” (July 2006 - June 2008) <Other donors’ projects> ADB, “Plantation Development Project” (2002–2010) ADB, “Plantation Reform Project” (1997–2002)

2. Outline of the Evaluation Study

2.1 External Evaluator

Hiromi Suzuki S. (IC Net Limited)

2.2 Duration of Evaluation Study

The external evaluator conducted the ex-post evaluation study as follows:

Duration of the Study: August 2011 - May 2013

Duration of the Field Survey: November 25-December 8, 2012 and March 25-30, 2013

2.3 Constraints during the Evaluation Study

At the time of the appraisal, the plan was to conduct a baseline survey at the time of the launch of the project and to establish appropriate operation and effect indicators, in order to measure the effectiveness of the project. However, in reality no baseline data was collected at the beginning of the project as the survey did not take place until 2005, which was two years after the project started. In addition, as a result of checking with stakeholders such as the executing agency (MPI) and ADB during the field study, it was found that at that moment, the only available document from the 2005 baseline survey was the inception report. The external evaluator identified the indicators that the inception report had stipulated should be collected and an effort was made to collect similar indicator data to the extent possible from the Central Bank of Sri Lanka and the Department of Census and Statistics. Trends from the time of the appraisal to the present time were then checked using the collected data.

In the ex-post evaluation, an attempt to evaluate the effectiveness of the project based on the beneficiary survey results and the plantation sector data obtained from the Central Bank of Sri Lanka and the Department of Census and Statistics was made. However, it was very difficult to quantitatively identify the direct cause-and-effect relationships between the project and the sector's overall statistical data. Therefore, those evaluation results which are based on statistical data only indicate whether or not assistance (including the project) to the plantation sector in general contributed to its economic and social improvement.[4]

3. Results of the Evaluation (Overall Rating: C[5])

3.1 Relevance (Rating: ②[6])

3.1.1 Relevance with the Development Plan of Sri Lanka

There were two main national development policies at the time of the appraisal. One was "Connecting to Growth: Sri Lanka's Poverty Reduction Strategy" which was formulated in June 2002. With the aim of improving the social status of plantation workers who are recognized as a population living in poverty, the strategy stipulated the promotion of social infrastructure development such as health and education services for plantation workers which had been independently implemented by each RPC in the past. The other was the five-year national development plan "Regaining Sri Lanka" which was formulated in December 2002. It promotes structural reforms based on market economy. This policy was also applied to the plantation sector reforms and the plan aimed to improve the welfare of plantation workers by promoting growth through private sector participation.

At the time of the ex-post evaluation, the national development plan "Mahinda Chintana Ten Year Horizon Development Framework" (2006–2016) was being implemented. The plan stipulates 11 policies including the improvement of plantation workers' housing conditions, the development of educational infrastructure and the improvement of the RPCs' productivity. In the "National Plantation Industry Policy Framework" (2009–2016) which is a policy dedicated to the plantation sector, it is stipulated that productivity, profitability and sustainability should be ensured and living conditions and the welfare of plantation workers' communities should be improved through the promotion of public-private partnerships in the plantation sector.

As can be seen, the role of the plantation sector in the Sri Lankan economy and the importance of improving the working and living conditions of plantation workers have not changed since the time of the appraisal. Therefore, the project has been highly relevant with the country's development plan as well as plantation policies.

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4 In the ADB Project Completion Report (December 2010) which is the ADB equivalent of the JICA ex-post evaluation report, it was pointed out that the 2005 baseline survey did not reflect the baseline situation and therefore was not taken into consideration when evaluating the PDP.

5 A: Highly satisfactory; B: Satisfactory; C: Partially satisfactory; D: Unsatisfactory

6 ③: High; ②: Fair; ①: Low

3.1.2 Relevance with the Development Needs of Sri Lanka

At the time of the appraisal, the plantation sector accounted for 3% of the Gross Domestic Product (GDP), 27% of the total agricultural output, and 16% of total exports and 3.5% of total employment in the agricultural sector. The plantation sector was an important sector in terms of both acquisition of foreign currency and the provision of jobs in rural areas. At the time of the ex-post evaluation, the figures showed a slightly decreasing trend compared to the time of appraisal; for example, the plantation sector accounted for 2.4% of the GDP, and 24% of total agricultural output. The main causes for this trend include the increase in production costs (wages, fertilizers, fuels, etc.) in the plantation sector in recent years and the unstable weather. With regard to employment, by 2010, the percentage of people employed in plantations had declined to 2.8% of total employment in the agriculture sector, reflecting the fact that a shortage of plantation workers is becoming a serious problem in recent years. However, exports from the plantation sector accounted for 24% of total exports, which shows that it is still an important source of foreign exchange.[7] The main crops continue to be tea, rubber and coconut, but the production of cinnamon, cloves, pepper, etc. were also on an upward trend at the time of the ex-post evaluation, mainly due to the efforts towards product diversification which have been ongoing since the 1990s. Although the contribution by the plantation sector to the Sri Lankan economy is showing a slightly declining trend, it is still an important sector at the time of the ex-post evaluation. Its role in the acquisition of foreign currency was particularly significant.

Assistance for the plantation sector is important not only from the standpoint of the Sri Lankan economy but also from the social standpoint of reducing regional disparities and poverty. At the time of the appraisal, plantation workers were working and living under wretched conditions with decrepit dwellings and degraded or undeveloped water supply, roads and other basic infrastructure. They were recognized as a population living in poverty.[8] At the time of the ex-post evaluation, the working conditions at plantations (including wages and welfare systems), the housing conditions and basic infrastructure were steadily improving and the national poverty rate including the plantation sector was decreasing.[9] However, there were still economic disparities between the "estate sector" and other sectors (the "urban sector" and the "rural sector"). In addition, because of the historical background,

[7] Central Bank of Sri Lanka, Economic and Social Statistics of Sri Lanka 2012. The latest figures available at the time of the evaluation were the 2010 figures for employment and the 2011 figures for other indicators.

[8] The average monthly salary of plantation workers in 2001 was above Sri Lanka's national poverty line of 792 rupees per month per capita.

[9] According to the Household Income and Expenditure Survey (HIES) conducted in 2009/10, the national average poverty rate was reduced from 15.2% in 2006/07 to 8.9% in 2010. The poverty rate in the estate sector was also reduced from 32% to 11.4% in the same period. In the Sri Lankan statistics, three categories are used including the "urban sector", the "rural sector" and the "estate sector." Although the poverty rate is showing a decreasing trend in all the three sectors, the poverty rate in the estate sector remains the highest.

plantation workers are still marginalized socially, economically and culturally. As mentioned above, various measures have been taken with the support of the ADB, JICA, other donors and NGOs, but the social mobility of plantation workers is still limited. Even if the overall working and living conditions of plantation workers have improved, deep-rooted problems require more time before they can be completely solved. In light of this situation, development needs in the sector still existed both at the time of the appraisal and at the time of the evaluation. Therefore, the project is relevant to the development needs of Sri Lanka.[10]

3.1.3 Relevance with Japan's ODA Policy

JICA's assistance policies at the time of the appraisal were the Medium-Term Strategy for Overseas Economic Cooperation Operations (2002–2005) and the Country-Specific Project Implementation Plan for Sri Lanka (1999). In the Medium-Term Strategy, prioritized assistance areas included the strengthening of measures to reduce poverty, the improvement of economic and social infrastructure for economic growth as well as support for human resource development, environmental improvement and rural development. In particular, it is stipulated that poverty problems in the plantation sector should be addressed by improving the living conditions of its workers. In the Country-Specific Project Implementation Plan, the prioritized assistance areas included the reduction of economic disparities between regions including the plantation sector, the development of technologies, human resources and infrastructure for the promotion of export industries, as well as comprehensive environmental improvements in major cities. In April 2004, in the course of the project's implementation, the Country Assistance Program for Sri Lanka was published. The Program addressed the need to support workers in the plantation sector as part of poverty reduction measures. It prioritized infrastructural development for daily life (drinking water, public hygiene, health and medical care, securing basic education, etc.) while taking into consideration the economic disparities between different ethnic groups and different regions. It also prioritized the development of economic infrastructure (agriculture, fisheries and rural manufacturing industries). In addition, it stipulated continuous support for the streamlining of the tea industry where privatization was progressing at a particularly fast rate, as well as continuous support for the improvement of the lives of plantation workers.

From the above, it is concluded that the project is consistent with the Japanese ODA policies that

[10] At the time of the project appraisal, the effects of social and environmental programs conducted as a component of the ADB Plantation Reform Project (PRP) were studied. The study results showed that the reroofing of line rooms led to a reduction in health problems among residents that had been caused by leaking roofs, low room temperatures and wet floors during rainy season. The study results also showed that the construction of latrines reduced contamination (caused by outdoor excretion) of the environment surrounding residential areas. Based on these findings, JICA decided to continue supporting these components through PRP-II.

existed both at the moment of appraisal as well as those formulated during the project implementation.

3.1.4 Appropriateness of the Project Planning

As explained above, the project was designed to support the "social and environmental programs" which was one of the four components of the ADB's Plantation Development Project (PDP), through parallel co-financing. The "social and environmental programs" were made up of two pillar projects, namely: the housing loan project for building new individual houses which aimed at improving the working and living conditions of plantation workers; and the social and environmental project which included amenity improvement (reroofing of line rooms, construction of latrines, etc.) and training. The plan to provide housing loans was a follow-up to the Plantation Reform Project (I) which focused on the reroofing and expansion of line rooms. It was considered an important component from the standpoint of supporting the construction of individual houses for plantation workers. Originally, the reroofing of line rooms was considered a temporary measure to improve housing conditions before the construction of individual houses.[11] However, since there was no progress on the provision of housing loans, the ADB cancelled the housing loan component in 2006 and agreed with the Sri Lankan government on the reallocation of the corresponding funds to the rehabilitation of estate roads (the memorandum was signed on May 26, 2006). In 2008, JICA also approved the reallocation of funds from the housing loan component to the improvement of estate roads. This section analyzes the appropriateness of the changes made to the project plan in reference to the cancellation of the housing loan component and the addition of the estate road improvements instead.

3.1.4.1 Appropriateness of the Housing Loan Component

The original plan which incorporated the improvement of housing conditions for plantation workers was in line with the Sri Lankan national plans, development needs and the Japanese assistance plans. However, the project's relevance was reduced as a result of the cancellation of the housing loan component. The provision of housing loans was canceled for the following two reasons.

Firstly, there was a change of government in 2005 and a major restructuring of ministries and agencies followed. As a result, the number of ministries and agencies responsible for the plantation sector increased to six, including the Ministry of Plantation Industries (MPI). The Ministry of Livestock and Rural Community Development (MLRCD) became responsible for the working and living conditions of plantation workers and the MLRCD started to provide a housing loan scheme

[11] ADB, Report and Recommendation of the President (RRP) (2002).

which had better conditions than the JICA housing loan scheme (implemented by the MPI).[12] Attempts were made aimed at eliminating the differences between the MPI loan conditions and the MLRCD loan conditions in order to provide housing loans to a larger number of plantation workers through coordination and cooperation between the two ministries; however the discussions were not successful. In summary, although there were no changes to national policies and development needs, the framework for implementing those policies lacked consistency.[13]

Secondly, assessment and coordination process at the planning stage was not sufficient. It was a necessary to assess the restrictions on land ownership especially in the plantation sector, as well as understanding the opinions and circumstances of all the stakeholders. A realistic plan should have then been formulated at the planning stage by taking into consideration each stakeholder's opinions more thoroughly. However, these procedures related to assessment and coordination was not sufficient. The following explains the problems in detail. The housing loans in this project were to be provided as three-step loans via participating financial institutions (PFIs), and it was decided that the pensions of plantation workers would be used as collateral. Yet, only two PFIs were interested in this scheme (see "Project Outputs" for details of the housing loan scheme). For the PFIs, the risks involved in financing plantation workers were too high unless the collateral would be fixed assets such as land and buildings. In addition, the opportunity cost was high because the maximum loan amount for each loan was only 100,000 rupees (slightly below 80,000 yen). Later, there was a proposal that estate workers' housing cooperative societies (EWHCS) would borrow money to finance housing loans for plantation workers, although EWHCSs were not PFIs. However, although EWHCSs are now well-organized and working actively with the trust of plantation workers' communities, it did not have sufficient personnel and capacity to handle such a task in the initial stage of the project. Therefore, the provision of loans via EWHCS was not a realistic option. There was also the problem of land ownership. In Sri Lanka, plantation land is owned by the state. The RPCs lease the land from the government for 50 years. At the time of the appraisal, the plan was to provide 7–10 perches[14] of land each through housing loans to 12,000 people. It was planned that the land leasing rights would be transferred from the RPCs to the workers when the loan repayments had been completed. However, under this scheme, there was a

[12] In the JICA housing loan scheme, the maximum loan per person was 100,000 rupees, no grant aid was provided, the annual interest rate was the average weighted deposit rate (AWDR) plus a maximum of 5%, and the repayment period was 15 years. In the MLRCD housing loan scheme, the maximum loan per person was 100,000 rupees, the maximum grant aid was 125,000 rupees, the annual interest rate was 7.5%, and the repayment period was six years. The National Housing Development Authority (NHDA) also offered a housing loan scheme. Both the MLRCD and NHDA loan schemes included grant aid, and the total amount provided for each person exceeded the maximum amount provided by the JICA scheme to each person (100,000 rupees).

[13] The executing agency explained in its Project Completion Report that the reason for the cancellation of the housing loan component was mainly due to changes in the Sri Lankan government's policy, which is contrary to the findings of this ex-post evaluation report. However, the Project Completion Report also states as a lesson learned that there should have been a consistent policy framework during project implementation.

[14] Perch is a unit of land used in Sri Lanka. 1 perch equals to 25.293m^2

possibility that the workers might sell the land leasing rights to a third party outside the plantation sector, which would result in the RPCs losing their control to manage the plantations. The RPCs needed to avoid this risk and therefore had negative views on the implementation of the housing loan scheme.[15][16] In addition, plantation workers' need for individual houses was different from what was expected. It was true that the improvement of wretched housing conditions was the top priority at the time of the appraisal. Nevertheless, it should also be noted that for many plantation workers there was a sentimental value in these row houses, where they had lived for generations this psychological attachment made it difficult for them to move out. Incentives for them to get a loan to purchase individual houses were limited when they could have their existing row houses repaired or expanded. In addition, the maximum loan amount of 100,000 rupees provided by the project was insufficient to build individual houses and they needed to finance the shortfall by themselves. Since plantation workers do not have land or other fixed assets, it was very difficult for them to receive loans from banks to cover the shortfall.[17]

In summary, the housing loan project was canceled for the following reasons. There was lack of consistency in the Sri Lankan government's framework for implementing its development policies; sufficient analysis should have been conducted at the project designing stage regarding the restrictions on land ownership in the plantation sector, the needs of the RPCs, the plantation workers, and the financing conditions of PFIs. These factors resulted in a partially inappropriate project planning which led to a difficulty in reaching a consensus between the stakeholders including the MPI, the RPCs and the PFIs.

3.1.4.2 Appropriateness of Adding the Estate Road Improvement Component

Since there was a substantial delay in the progress of PDP and PRP-II, the ADB dispatched a mission in 2006 to assess the situation. In July of the same year, the ADB agreed with the Sri Lankan government that the housing loan component would be canceled and estate road improvements would be added as part of amenity improvements.[18] JICA assessed the appropriateness of the estate road

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15 JICA internal documents state that there were no potential positive effects in investing in housing from the standpoint of the RPCs. During the ex-post evaluation study, such opinions as "The legal frameworks were not yet in place" and "It was premature to implement the scheme" accounted for a majority of the opinions collected through interviews with the RPCs, the PHDT and NGOs. The MPI which is the executing agency of the project said in its project completion report that the needs of the RPCs, which are the important stakeholders, were not sufficiently understood at the project planning stage.

16 In 2004, the MPI established the Committee on Collateral in order to resolve the problems of collateral and land ownership. As a result of discussions in the committee, a new scheme was devised, but a consensus could not be reached. The proposed scheme was: (1) EWHCSs should become the borrowers, the RPCs' land leasing rights should be registered as collateral and the land leasing rights should be transferred to workers when repayments were completed; (2) only the members of EWHCSs should be eligible to receive the loans; and (3) when plantation workers want to sell their houses, EWHCSs buy the houses (Source: Minutes of meetings of the Project Coordination Committee).

17 It was confirmed from interview surveys that at least double the maximum loan amount was required to build an individual house at the time of the project implementation.

18 ADB, Project Completion Report (December 2010) and MPI internal documents.

improvement component using its own procedures including the implementation of pilot projects, before approving the addition of this component the project.[19] In Sri Lanka, a rural road development program called "Maga Neguma" has been implemented since 2004 under the Ministry of Ports and Highways (MPH). Under this program, rural roads totaling 84,000 km nationwide including estate roads are being improved with the aim of improving living standards in rural areas including plantations. The program was considered as an important program for rural area development which indicates that adding estate road improvements to the project do meet the Sri Lankan development policies and the development needs for improving the working and living conditions of plantation workers. It also meets the Japanese ODA policies because the improvement of plantation infrastructure is included in the goals of the Medium-Term Strategy for Overseas Economic Cooperation Operations (2002–2005) and the Country-Specific Project Implementation Plan for Sri Lanka. Therefore, it was confirmed that adding the estate road improvement component to the project is consistent with the Sri Lankan policies, the development needs and the Japanese ODA policies.

As explained above, JICA assessed the appropriateness of adding the estate road improvement component to the project and then approved the plan. However, there was not enough evidence as to confirm that JICA conducted an appropriate monitoring of the progress including the effects and benefits to the plantation workers. At the time of the ex-post evaluation, it was found that the level of impact on the improvement of plantation workers' lives was lower than expected at the time of the appraisal (see "3.3 Impact" for details). Therefore, it was concluded that the appropriateness of adding the estate road improvement component was less than expected.

In light of the above observations, it is concluded that the project's overall relevance is fair. There were some problems in the appropriateness in the project planning, although the implementation of the project was relevant to the country's development plan, development needs and Japan's ODA policy.

[19] Details of the assessment process were as follows. (1) JICA requested the MPI to submit evidence that show how the estate road improvement component would contribute to the achievement of the project goal i.e. the improvement of the working and living conditions of plantation workers. JICA also requested the MPI to submit written consents of the RPCs, the organizational charts of each stakeholder (the MPI, RPCs, EWHCSs, the PHDT and the RDA) as well as materials clearly explaining the division of roles between the stakeholders. (2) As pilot projects, estate road improvements were implemented on 17 sites in 2007, through which the organizational structures, costs and effects of implementing these projects were checked. (3) JICA then officially approved adding the estate road improvements as part of the amenity improvement component. As the conditions for applying for an estate road improvement project, the relevant Estate was required to attach the Internal Road Profile Sheet for the estate roads subject to the project as well as the written consents of the plantation workers. The Estate was also required to submit monthly progress reports as well as photographs taken before, during and after the improvements. On the Internal Road Profile Sheet, "operation and effect indicators" were stated including the improvement of plantation workers' access to markets and hospitals, the reduction of traveling time, traffic safety, reduction in the maintenance costs for estate roads, as well as the number of beneficiaries.

3.2 Effectiveness[20] (Rating: ②)

3.2.1 Quantitative Effects (Operation and Effect Indicators)

As explained in "2.3," operation and effect indicators, baseline values and targets were not set at the beginning of the project. Therefore, in this ex-post evaluation, mainly data provided by the Plantation Human Development Trust (PHDT) was used because it was the most reliable data available at the time of the ex-post evaluation (Table 1). Based on PHDT's data, it was identified that the reroofing of line rooms and the construction of latrines conducted as part of the project made a significant contribution to meeting the needs in the plantation sector. A quantitative evaluation of the effects of these two components, based on the data of the Department of Census and Statistics was attempted.[21]

Table 1: The Project's Contribution to Meeting the Needs of Improving Housing Conditions and Infrastructure in the Plantation Sector as of 2003

	Housing	Water supply development	Construction of latrines	Nursery schools	Reroofing
Infrastructure development needs as of 2003*	225,458 units	225,458 units	225,458 units	1,541 units**	206,321 units
The number of units developed/improved by the project and the level of contribution by the project	0 unit (0%)	180 units (0.1%)	6,798 units (3%)	37 units (2%)	23,831 units (12%)

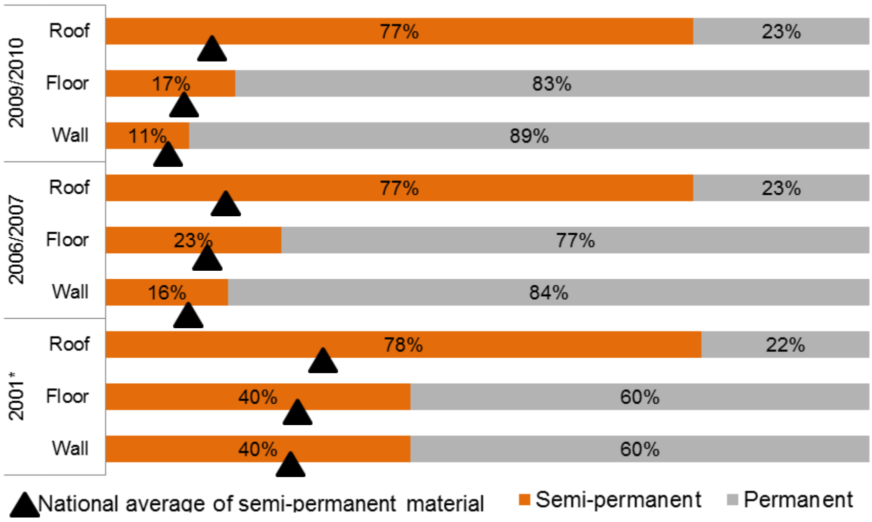
*The infrastructure development needs were calculated by the PHDT based on the population and the number of households working on plantations as of 2003.
**The data for nursery schools is from 2012.
Source: PHDT

(1) The Effects of the Reroofing of Line Rooms

In regard to housing materials, statistics in Sri Lanka are divided into "permanent" and "semi-permanent." As shown in Figure 3, in the estate sector, the percentage of housing walls made of semi-permanent materials was reduced from 40% in 2001 to 16% in 2007 and to 11% in 2010. Similarly, the percentage of housing floors made of semi-permanent materials was reduced from 40% in 2001 to 23% in 2007 and to 17% in 2010, indicating that in regard to floors and walls, there was an improvement in the housing environment. However, the percentage of roofs made of semi-permanent materials has remained at the same level, i.e. 78% in 2001, 77% in 2007 and 77% in 2010. As shown in Table 1, the project's contribution to meeting the needs of reroofing as of 2003 was 12%. However,

20 Sub-rating for Effectiveness is to be put with consideration of Impact.
21 In the ex-post evaluation, nine indicators including education, healthcare, water supply and sewage systems were identified based on the inception report for the baseline survey conducted in 2005. Data for the nine indicators was then collected to the extent possible from the Department of Census and Statistics, the PHDT, among other sources. The external evaluator then attempted an evaluation of the project's effectiveness, based on the trends shown in the data from the time of the appraisal to the time when the latest data is available. However, for most indicators it was very difficult to quantitatively identify the direct relationship between the project and these data.

as explained above, in the project reroofing was considered as a temporary measure to improve housing conditions before constructing individual houses, and thus semi-permanent materials such as corrugated iron were used for reroofing. This fact explains why there is no change in the proportion of semi-permanent materials used for roofing in the plantation sector as can be seen in Figure 3.[22] Even in the future periodic reroofing will be required more often compared to walls and floors.



Source: The 2001 data is from Census of Population and Housing 2001, the Department of Census and Statistics. Other data is from "Household Income and Expenditure Survey," 2006/07 and 2009/10.

Figure 3: Housing in the Plantation Sector: Distribution by Type of Material, 2001-2010

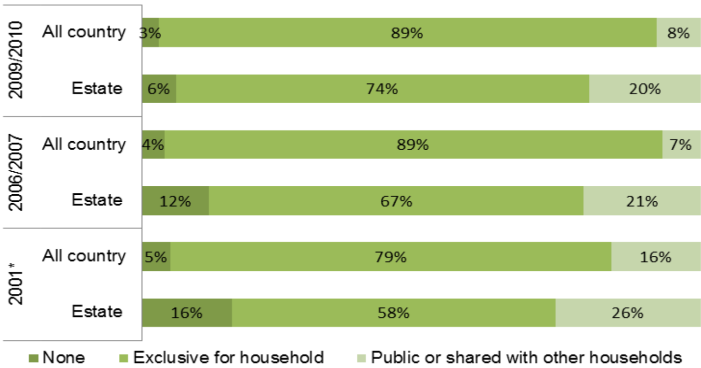
According to the beneficiary survey, it was found that the reroofing conducted by the project had the effect of increasing the income of plantation workers because they no longer need to take days off work as frequently as before in order to repair the roof. Workers can now work for 21 days or more every month (see "3.2.2 Qualitative Effects" for details).[23]

(2) The Effects of the Construction of Latrines

In the estate sector, the percentage of households with no latrine was reduced from 15% in 2001 to 6% in 2009/10; percentage of households using shared or public latrines was reduced from 25% to 20% (Figure 4) while percentage of households with their own latrines increased from 58% to 74%. As can be seen, condition of toilet facilities is clearly improving. The number of latrines constructed by the project was 6,798 units, which accounted for 3% of the needs as of 2003 (Table 1). This suggests that the project contributed to the improvement of hygiene on plantations to a certain extent.

[22] Corrugated iron, which is a semi-permanent material, was used in the project. Corrugated iron is thin (about 5 mm) and requires periodic maintenance (once every 3-4 years) such as applying water-resistant coating.

[23] In the mountainous and highland area, workers need to work for at least 21 days in a month in order to maintain the wage rate of 515 rupees a day. If less than 21 days, the wage rate is reduced to 385 rupees a day.



Source: The 2001 data is from Census of Population and Housing 2001, the Department of Census and Statistics. Other data is from "Household Income and Expenditure Survey," 2006/07 and 2009/10.

Figure 4: Status of construction of latrines: 2001～2010

(3) The Effects of Estate Road Improvements

The expected effects of the estate road improvement component when it was added to the project were that it would contribute to: an improvement in safety of the daily lives of plantation workers (such as a reduction in traffic accidents and injuries caused by landslides and in the rainy season); and the improvement of convenience (such as an improvement in access to markets and public institutions, a reduction in traveling time and a reduction in the number of days that roads are closed because of natural disasters). However, the lengths of the sections of roads improved were 100 meters on average (the shortest 50 meters and the longest 3 km) and the estate roads on either side of these sections were left unimproved. Therefore, no significant effects were observed in the daily lives of the majority of plantation workers because they mainly use estate roads on foot. It was found that the main direct beneficiaries of the project were the RPCs who use the estate roads in vehicles. As shown in Table 2, according to interviews with estate managers, a reduction in vehicle maintenance costs and a reduction in driving time were recognized as the most important quantitative effects.

On the other hand, the majority of plantation workers' opinions were that they did not recognize any quantitative effects such as a reduction in traveling time or a reduction in injuries, because they often travel on foot on partially improved estate roads. Thus, no significant quantitative effects were observed in the ex-post evaluation.

Table 2: The Quantitative Effects of the Improvement of the RPCs' Estate Roads

[Norwood Estate] Total length of roads improved: 2.4 km Number of beneficiaries: 305 households, approximately 1,200 people 10 vehicles use the estate roads improved by the project. The maintenance cost for the vehicles was 300,000 rupees per month in total before the improvement. This was reduced to 15,000–20,000 rupees per month (in the dry season). Time required for rounds (patrolling the estate): Before the improvement (2008): 1.5 hours per round. After the improvement (at the time of the ex-post evaluation in 2013): 45 minutes per round
[Laxapana Estate] Total length of roads improved: 1 km Number of beneficiaries: 55 households, approximately 570 people The Estate owns 56 vehicles. After the estate road improvement, annual vehicle maintenance costs were reduced by: 700,000–800,000 rupees

Figure 5: Rehabilitation of Estate Roads

Source: Interviews with estate managers
Note: The reduction in traveling time and maintenance costs shown in Table 2 includes the effects of estate road improvements conducted outside the project. Therefore, these effects are not exclusively the effects of the JICA project.

3.2.2 Qualitative Effects

The qualitative effects expected from the project were improvements to the working and living conditions of plantation workers and an increase in work motivation. The verification of these effects was conducted mainly through the beneficiary survey.[24] Tables 3 and 4 summarize the details of the beneficiary survey and the characteristics of the samples.

[24] Four Estates in the mountainous and highland areas and in lowland areas near to the southern coastline were selected out of the 23 RPCs which were subject to the project. A beneficiary survey was then conducted for a total of 185 plantation workers on the four estates. The estates were selected so that the survey would include beneficiaries of all the components of the project. However, there were many cases where workers were using ergonomic equipment and vehicles without knowing which ones had been purchased by the project. Therefore, a focus group discussion was conducted with 15 workers who use the ergonomic equipment purchased by the project on the Laxapana Estate.

Table 3: Details of the Beneficiary Survey

	Name of the RPC	Name of the Estate	Sample size	Survey period
Low-country (Tea plantations located at an altitude of less than 600 meters)	Kotagala	Gikiyanakanda	100 people	Early December, 2012
	Watawala	Homadola		
Up-country (Tea plantations located at an altitude of more than 1,200 meters)	Agrapathana	Diagama West	85 people	Early January, 2013
	Bogawanthalawa	Poyston		
	Maskeliya	Laxapana	15 people*	
Total			200 people	

* Participants of the focus group discussion

Table 4: Sample Characteristics of the Beneficiary Survey

The number of males and females	Male: 126; female: 59 (percentage of valid responses: 92%)
Average age	44 years old
Average wage income	9,280 rupees/month
Household size	Five members on average
Occupation	Tea (114 people), rubber (34 people), oil palm (1 person), retired (11 people), working outside plantations (14 people), without job (8 people), RPC staff (3 people)
Working hours	Plantations: six hours/day on average Factories: 10 hours/day on average

(1) Amenities (Improvement in infrastructure, acquisition of ergonomic equipment and vehicles)

- Overall satisfaction level: Plantation workers' satisfaction levels were surveyed regarding amenities introduced in order to improve living conditions. A large percentage of respondents replied "good" or "very good" for reroofing of line rooms (97%), construction of latrines (95%) and estate road improvements (86%).[25] With regard to water supply development, 100% of the respondents replied that their satisfaction levels were "average" or "low". In this regard, it was found that there were some technical problems on the Estates subject to the beneficiary survey and that water was not supplied stably during the dry season because the water sources dried up. On the other hand, 87-100% of respondents were satisfied with all the amenities (factory and field rest rooms, RPC staff quarters among others) introduced in order to improve working conditions.
- Effects on daily life and quality of life: Most of the respondents answered that "they feel more dignified" as a result of the construction of latrines which secured privacy; "number of hours that can be dedicated to work increased" because need for reroofing was reduced; and "the number of hours required to complete the same amount of work was reduced (efficiency increased)" as a

[25] The overall satisfaction level for estate road improvements was high (86%) which seems to contradict the results of "3.2.1 Quantitative Effects." Explanations from plantation workers were that they were satisfied with the high quality of the estate roads although they did not feel significant effects on aspects such as convenience.

result of the improvement in housing conditions which increased comfort levels. In sum, many workers mentioned that there were improvements in work motivation and work efficiency. However, no respondents answered that "there were major changes" regarding health improvements. Many of the respondents who said that "they feel more dignified" and "the number of hours dedicated to work increased" were beneficiaries of the construction of latrines and reroofing of line rooms. Before the project, they frequently had to take days off work to repair the roofs, but after the project, they can now engage in work without any worries.

- Effects of providing ergonomic equipment and vehicles: At Laxapana Estate where the focus group discussion was conducted, 50 crates, two tea plucking machines and 10 pruning machines were introduced. However, since the safety gear (rubber boots and goggles) needed to use the pruning machines was not purchased; many workers said that they are not keen on using the machines because of health and safety concerns. On the other hand, before crates were introduced, tea leaves were put in polyethylene bags and carried on the workers' backs. Since crates can be carried on trolleys, the workers replied that crates were "very effective" and they were "satisfied" with them in terms of work safety, efficiency and ensuring the quality of tea leaves. Plucking machines broke down two weeks after their introduction (currently not in use).
- Effects of the rehabilitation of estate road: As mentioned above, the largest beneficiaries of estate road improvements were the RPCs. A small number of plantation workers said that "convenience increased particularly in the rainy season" and "ambulances can now use the roads more easily."[26] However, with regard to reduction in traveling time, many workers answered that they "do not recognize clear effects, although there might be some". There were no effects on reduction of injuries or accidents as well. The results show that, although there is a strong need to improve safety and convenience for workers who mainly travel on foot, which was the expected effect of this component, in order for it to be effective, it would be necessary to improve longer lengths of the main estate roads rather than short distances as was done by project. The beneficiary survey results showed that estate road improvements are still very much needed, following other infrastructure developments including reroofing of line rooms, construction of latrines and water schemes.

(2) Social development programs (prevention of alcoholism, gender issues, household cash management, etc.)

[26] It is worth mentioning as a reference that ADB's Completion Report (December 2010, p25.) indicates that *"At project conclusion, all stakeholders, including workers and management, agreed that the rehabilitation of roads has improved access to schools, hospitals, and rural markets*". However, this conclusion is not the result of a specific study/survey on the road rehabilitation component; therefore, in this evaluation this conclusion is taken solely as reference information.

- Overall satisfaction levels: The number of respondents who attended social development programs was 23 in total (gender issues: one person, alcoholism prevention: 20 people, household cash management: one person, EWHCS training: one person). All respondents answered that the programs were "good" or "very good", which shows a high level of satisfaction of these programs.
- The effects on daily life and the quality of life: With regard to "the reduction of alcoholism," many people answered that the program was "good" or "very good." Respondents said that the training program which most directly influenced daily life and had the largest impact was the "alcoholism prevention program." In the impact assessment conducted by the PHDT which was one of the main service providers for these training programs, it was confirmed that "alcohol consumption had been reduced" and "alcohol-related expenses had been reduced" after people had taken part in the program.[27]

  According to the interview survey of estate managers, the "alcoholism prevention program" led to changes in workers' attitudes and greatly reduced the incidence of alcoholism; for example, in Kotagala Estate the incidence of alcoholism was reduced by 60%. The estate managers said that social development programs were very important not only for workers but also for the RPCs. More specifically, they said that the training of estate managers and staff had deepened their understanding of plantation workers' needs concerning working and living conditions, which contributed to improvements in management-worker relationships and in turn led to an increase in productivity. Therefore, it can be said that these programs contributed to changes in the attitude of the estate managers as well.

[27] In the project, it was expected that gender training, alcoholism prevention training, etc. would lead to changes in plantation workers' attitudes. In the project, it was initially decided that the RPCs should pay 50% of the training costs. The RPCs' interest in the training programs was low because the RPCs' share of the costs was increased from 20-25% in phase one of the project to 50%, and also because the Sri Lankan government was providing similar programs free of charge. Therefore, hardly any of the programs were implemented in the first three years of the project. The programs only began after the RPCs' share of the costs was eliminated (see "3.4.1.2 Project Scope (2) The Social and Environmental Project" for details of the RPCs' share of the costs). The PHDT was the main coordinator of the training programs. The programs were completed within the project period, thanks to the PHDT's active efforts to cooperate with other service providers (NGOs, expert organizations and individual experts) and the RPCs, to check the training content and to coordinate with plantation workers via EWHCSs. In 2009, the PHDT conducted an impact survey on eight of the RPCs and 16 estates using its own financial resources, regarding gender training and alcoholism prevention training which were conducted as part of the project.

Table 5: Effects of Social Development Programs on the Attitudes of the Participants

Training program	Impact
Gender	Respect for women within the family increased. Women started to recognize that they are contributing to the livelihoods of their families by earning income through tea picking.
Household cash management	Plantation workers started to save money. More workers started saving money with the EWHCS which is being used to improve living standards such as the expansion of line rooms and the purchase of three-wheeled vehicles.
Strengthening the EWHCSs	Understanding of the EWHCS roles deepened and the number of members increased considerably. At some EWHCS visited during the site survey, nearly 100% of the workers in the area were members of the EWHCS, and all EWHCS were planning and implementing an action plan every fiscal year.
Social development programs for plantation managers	Managements' levels of understanding about plantation workers' social and economic problems increased. All the RPCs now consider tackling these problems to be part of their corporate social responsibility.
Team building	Workers' understanding of the importance of teamwork increased and conflicts between workers and management were reduced. Since the program was introduced, the number of strikes on the plantations started to decrease and has now gone down to zero.

Source: Based on interview surveys of estate managers, regional PHDT officers and EWHCSs.

With the exception of rehabilitation of estate roads, in general, it was confirmed that the project did bring about a certain level of qualitative effect in regard to the improvements on both the working and living conditions of the plantation workers, and on an increase in their motivation to work. With regard to rehabilitation of estate roads, the main beneficiaries were the RPCs and effects for the plantation workers have been limited, although the project's original plan was to benefit the workers. The introduction of ergonomic equipment contributed to improving working conditions, and through social development programs, there were changes in attitude of both the plantation workers and the RPCs. Therefore, it can be concluded that certain qualitative effects can be recognized as a result of the project.

3.3 Impact

3.3.1 Intended Impacts

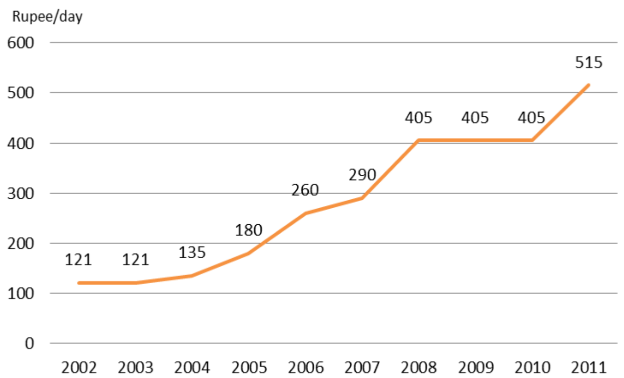
The impact intended by the project was to "ensure the sustainability of the plantation sector." At the time of the appraisal, the word "sustainability" was not clearly defined, thus in the ex-post evaluation, "sustainability" was defined as an increase in plantation workers' income and the reduction of poverty problems in the plantation sector.

As shown in Table 6, the population in the plantation sector has not changed since 2002. The average income per household increased from 7,346 rupees per month on average in 2002 to 24,162 rupees in 2010, although income levels in the plantation sector are still low when compared to other sectors. This substantial increase is due to an increase in the wages of plantation workers (Figure 6) and an increase in income from sources other than wages. Wages have increased every two years since 2000. Since 2005, bonuses such as the work attendance bonus have been paid in addition to wages.[28] In addition, an increasing number of households are earning additional income through pig farming, poultry farming and growing vegetables in household gardens although they are in small scale, which are then sold in markets. In recent years, the income of young people who work outside the plantations while living on the estates as well as remittances from young people who work overseas have increased. As of 2007, income other than wages already accounted for 50% of total income.

Table 6: Changes in the Population and Income in the Plantation Sector

FY	Population (million people)*				Average family income (rupees/month)			
	Sri Lanka	Urban sector	Rural sector	Estate sector	Sri Lanka	Urban sector	Rural sector	Estate sector
2002	17	2	14	1	13,038	23,436	11,819	7,346
2006/07	18	3	15	1	26,286	41,928	24,039	19,292
2009/10	20	3	16	1	36,451	47,783	35,228	24,162

*Population data is from 2001.
Source: The Department of Census and Statistics, HIES 2009/10, May 2011



Source: Statistical Information on Plantation Crops, 2011(MPI)
Figure 6: Wages of Plantation Workers between 2002 and 2011

As indicators for the reduction of poverty problems in the plantation sector, the Head Count Index (HCI) and the Poverty Gap Index (PGI) were used (Table 7). The HCI is the percentage of people with consumption levels below the poverty line out of the total population. Although the HCI increased from 30% in 2002 to 32% in 2006/07, it had been substantially reduced to 11.4% by 2009/10. The PGI indicates how far the consumption levels of people in poverty are below the poverty line. Similarly to the HCI, the PGI improved as it was reduced from 6.0 in 2002 to 2.1 by 2009/10. Although the

[28] Increases in wages for plantation workers are decided through negotiations between plantation labor unions (the Ceylon Workers' Congress and the Lanka Jathika Estate Workers Union) and the estate managements (the Employers' Federation of Ceylon and the RPCs), which are followed by the signing of labor agreements.

poverty rate in the estate sector is still high when compared to the urban and rural sector, the differences are steadily narrowing.[29]

Table 7: Poverty Indicators

FY	Head Count Index (HCI) (%)				Poverty Gap Index (PGI)			
	Sri Lanka	Urban sector	Rural sector	Estate sector	Sri Lanka	Urban sector	Rural sector	Estate sector
2002	22.7	7.9	24.7	30.0	5.1	5.6	1.7	6.0
2006/07	15.2	6.7	15.7	32.0	3.1	1.3	3.2	6.2
2009/10	8.9	5.3	9.4	11.4	1.7	1.2	1.8	2.1

	Inequality indicator: Gini coefficient				Living standards indicator: The percentage of food and drink expenditure out of the total household consumption expenditure (%)			
	Sri Lanka	Urban sector	Rural sector	Estate sector	Sri Lanka	Urban sector	Rural sector	Estate sector
2002	0.47	0.48	0.45	0.34	44	36	45	60
2006/07	048	0.55	0.45	0.41	36	28	38	53
2009/10	0.49	0.48	0.49	0.43	42	36	44	51

Source: The Department of Census and Statistics, the Ministry of Finance and Planning, HIES 2009/10, May 2011

When looking at the Gini coefficient[30] which measures the level of inequality in income distribution, the income distribution within the estate sector was more equal than in other sectors. However, the coefficient increased from 0.34 in 2002 to 0.43 in 2009/10. This indicates that the income distribution within the estate sector was becoming less equal during this period. It became clear from the interview survey that one of the causes is that young people tend to choose work in urban areas or overseas (particularly in the Middle East) rather than working on plantations and the percentage of remittances out of the total household income is showing an increasing trend. In addition, parents do not want their children to become plantation workers. This trend is particularly strong on plantations in the low-country area which have easy access to job opportunities in other industries or city centers. As a living standards indicator, the percentage of expenditure on food and drink out of general household consumption expenditure was used. It is known that radically cutting back on food expenditure is difficult and that a higher percentage of expenditure on food and drink out of total household consumption expenditure indicates lower living standards. Although the percentage decreased from 60% in 2002 to 51% in 2009/10 in the estate sector, the percentage is still the highest

[29] JICA General Training Center for International Cooperation, "Various Forms of Poverty in Each Region from the Standpoints of Health, Education and Gender Based on Quantitative Poverty Indicators" (June 2003)
[30] The Gini coefficient shows how far the income distribution in a specific economy has deviated from the coefficient zero where distribution is completely equal. The closer the value is to one, the greater the disparities are.

when compared to other sectors in Sri Lanka. Therefore, living standards are still lower than in the urban sector and the rural sector, although they are improving.

In general, income has increased and poverty problems have been reduced in the plantation sector in the period between 2002 and 2010. However, since various organizations including the Sri Lankan government, other donors and NGOs have been providing assistance to the plantation sector, the causal relationship between the above results and the project are not clear.

3.3.2 Other Impacts

3.3.2.1 Impacts on the Natural Environment

The project did not require an environmental impact assessment (EIA) according to Sri Lankan environmental laws. However, an initial environmental survey was conducted in 1993 and the project was approved by the Central Environmental Authority (CEA). With regard to rehabilitation of estate roads which were added to the project in 2006, an initial environmental survey was conducted based on a request from the ADB and the component was approved by the CEA. In addition, no negative impacts on the natural environment were found from interviews with the executing agency, the RPCs and the beneficiaries.

3.3.2.2 Land Acquisition and Resettlement

It was confirmed from interview surveys with the executing agency, the RPCs, the PHDT, beneficiaries and through on-site visits during the evaluation, that the project required no land acquisitions or resettlements. The same can be said for rehabilitation of estate roads, which was later added to the project, because they were all improvements to existing estate roads.

3.3.2.3 Other Impacts

(1) Reducing the Water Fetching Burden on Women

At the time of the appraisal, the water fetching burden on women was expected to be reduced because the project included the development of infrastructure for living on plantations such as water supply development. Although water supply systems were installed on the premises of line rooms, it was found from interview surveys that there were cases where the running water stopped in the dry season, when women still have to fetch water. Therefore, the originally intended impact could not be confirmed.

(2) Negative Impacts due to the Cancellation of the Housing Loan Component

There was a concern that the cancellation of the housing loan component in 2006 would have negative impacts on the living conditions of plantation workers. However, the need to cancel or reject plantation workers' housing loan applications did not arise because the housing loan component was cancelled while discussions on the loan scheme and coordination within stakeholders were still going on. There were also other housing loan schemes which had better conditions targeting the same population at the same period of time. Therefore, the cancellation of the housing loan component of the project did not have any negative impacts.[31]

(3) Cooperation with Related Projects and Its Impacts

As mentioned above, the project was designed to support the "social and environmental programs" which were a component of the ADB's PDP through parallel co-financing. Cooperation between ADB and JICA were mostly limited to opinion exchanges at the project Coordination Committee (PCC) level and no closer cooperation was observed. According to the executing agency, although a coordinated and cooperative framework which would enable more efficient project implementation had been originally expected from the two institutions, since the project was conducted in the form of parallel co-financing, the JICA portion and the ADB portion ended up being two separate projects which supplemented each other, each contributing to the improvement of the working and living conditions of plantation workers.[32]

Figure 7: Nursery School Built by the Project (Waverley Estate)

With regard to cooperation with other JICA projects and its impacts, close cooperation with a project conducted by NGO CARE International Japan had been expected. The said project was carried out in the form of JPP. However, due to the delay in the project, this

[31] According to the statistics on housing characteristics from the Department of Census and Statistics, the number of households living in housing units provided free of rent (line rooms) in the estate sector remained at the same level (a little more than 60%) from 2001 to 2009/10. In the urban sector and the rural sector, the percentage of households owning their houses is over 70%, but the percentage is 10% in the estate sector. From these numbers, it is evident that line rooms are still the main housing units used in the estate sector. This shows that housing loan schemes have hardly been utilized in the plantation sector since 2001.

[32] The main reasons why the project was conducted in the form of parallel co-financing were because: (1) JICA decided to support only the "social and environmental programs" out of the four components of the ADB's PDP; and (2) JICA had different conditions for financing the RPCs from those of ADB in the same "social and environmental programs." With regard to (2), the ADB put as a precondition that the RPCs should sign an agreement with the Sri Lankan government which set a ceiling on the "management fees," while JICA did not put any preconditions. Since JICA and the ADB had different overall project goals and different methods, they conducted their projects separately, under the name of the "Plantation Development Project" for the ADB and the "Plantation Reform Project" for JICA (the names were written in the official document issued by the MPI addressed to the Ministry of Finance on November 17, 2003). "Management fees" are arrangements that are unique to the Sri Lankan plantation sector. The RPCs as parent companies collect a specified percentage of the EBITDA as management fees from their subsidiary companies which run the plantations. Each RPC sets a different percentage for its management fees. In the PDP, the ADB set a ceiling for management fees because there was a concern about the possibility that the parent companies would invest the funds collected as management fees into other businesses, resulting in the outflow of profits made in plantations into other sectors.

collaboration did not materialize.[33] With regard to JOCV activities, a total of 12 JOCVs were dispatched to the MPI and the PHDT from 2000 to 2012.[34] It was found from the interviews with the PHDT and the estate managers, that the JOCV activities in nursery schools on estates were particularly appreciated (e.g. improvement in nursing care, development of playground equipment, awareness raising, etc.). Although the synergy between the project and the JOCV activities was not prominent because of the limited scale of activities as well as number of volunteers dispatched, JOCV activities played an important role as activities that were rooted in the plantation workers' communities.

To conclude, it was confirmed that the reroofing of line rooms and the construction of latrines had some quantitative and qualitative effects and contributions. It was also confirmed that the social development programs resulted in some changes in the attitudes of both the plantation workers and the RPCs. On the other hand, with regard to the rehabilitation of estate roads which were later added to the project, the main beneficiaries were the RPCs in terms of both quantitative and qualitative effects, and there were only very limited effects for the plantation workers, contrary to what was originally intended. With regard to the project's intended impacts "an increase in the plantation workers' incomes and the reduction of poverty problems among plantation workers," it was confirmed that income increased and poverty was reduced in the period between 2002 and 2010. However, because various organizations including the Sri Lankan government have been providing a variety of support in this regard, direct causal effect between these reductions in poverty and the project could not be specified. In general, the project has achieved its objectives to a certain extent; therefore its effectiveness and impact are evaluated as fair.

3.4 Efficiency (Rating: ②)

3.4.1 Project Outputs

3.4.1.1 Project Area

The project area comprises 15 districts where the RPCs are operating their plantations (Badulla, Chilaw, Colombo, Galle, Gampaha, Kalutara, Kandy, Kegalle, Kurunegala, Matale, Matara, Monaragala, Nuwera-Eliya, Puttalam and Ratnapura). The project area has not changed since the appraisal.

[33] NGOs focusing on support for plantation workers were expected to participate in the project as training service providers of the social development programs. More specifically, 14 NGOs had passed the preliminary screening, as of 2005. However, the NGOs withdrew their participation because of constant delays in the project. JICA strived to utilize the knowledge and experience obtained through JPP by interviewing and exchanging ideas with the NGOs about how to improve plantation workers' living conditions and how to change their attitudes as well as what would be the different approaches to tackling these issues.

[34] JOCVs were six infantile education personnel; one youth activity personnel; four rural development personnel; and one nurse.

3.4.1.2 Project Scope

(1) Housing Loan Project

The housing loan project was cancelled in 2006 before it was implemented at all for the reasons explained in the “Relevance” section. The project funds were reallocated to rehabilitation of estate roads in 2008.

(2) Social and Environmental Project

The social and environmental project components were amenity developments (infrastructural development, the provision of ergonomic equipment and vehicles) in order to improve the working and living conditions of plantation workers, and “social development programs” which were training programs for both the RPCs and the plantation workers. As shown in Table 8, some items had pre-established output targets. The items with targets are the ones whose needs were deemed high at the time of the appraisal.[35] The items without targets are the ones that were added after the project started, and were conducted on a request-basis from the RPCs.

Table 8: Outputs from the Social and Environmental Project and Target Achievement Rates

(PRP-II)	Planned (2003)	Actual (2012)	Achievement rate (%)
B-I. Amenities			
B-I-I Infrastructure development			
Repairing roofs of line rooms	11,000 units	23,831 units	212%
Construction of playgrounds	200 sites	29 sites	15%
Construction of rest rooms in factories	180 sites	142 sites	79%
Construction of rest rooms on tea plantations	1,500 sites	444 sites	30%
Construction of latrines	-	6,798 sites	-
Ground leveling and infrastructure development resulting from the provision of housing loans	-	Cancelled	Cancelled
[Added outputs]			
Rehabilitation of estate roads	750 km	711 km	95%
Construction of estate staff quarters	-	840 sites	No planned values or target achievement rates*
Concrete paving of walkways	-	24,655 ft	
Repairing factories (mainly floor repairing)	-	46 sites	
Construction of water pipes, etc.	-	3,889 sites	
Water supply development	-	180 sites	
Nursery schools (construction or repair)	-	37 sites	
Others (electric power, chimneys, volleyball courts, religious worship places, etc.)	-	190 units or sites	

[35] With regard to the assessment of needs and setting project output targets, the ADB assessed the needs through its Project Preparation Technical Assistance (PPTA) in 2001 and then set specific planned values for some of the intended outputs in its RRP (2002).

(PRP-II)	Planned (2003)	Actual (2012)	Achievement rate (%)
B-I-II Ergonomic equipment, vehicles			
Tea plucking machines	5,575 units	424 units	8%
Trimmers	6,275 units	1,006 units	16%
Improved tea picking baskets	31,000 units	1,600 units	5%
Improved pruning shears	25,000 units	1,270 units	5%
[Added outputs]*			
Crates	-	23,220 units	No planned values or target achievement rates*
Jumbo crates	-	14,921 units	
Mist sprayers	-	281 units	
Subsoil injectors	-	171 units	
Chain saws	-	153 units	
Tractors	-	56 units	
Other 11 types of equipment in total (water tanks, backhoes, solar panels, etc.)	-	190 units	
B-II. Social development programs (Number of times the programs were conducted. Numbers between parentheses are the number of total direct/indirect beneficiaries.)			
Gender programs for plantation workers	500 times	33 times (12,306 people)	7%
Alcoholism prevention programs for plantation workers	500 times	71 times (2,586 people)	14%
Household cash management programs for plantation workers	500 times	203 times (36,715 people)	31%
Programs for strengthening estate workers' housing cooperative societies (EWHCSs)	500 times	166 times (24,027 people)	33%
Social development programs for the RPCs	2,500 times	138 times (317 people)	6%
Team building programs for the plantation workers	2,500 times	37 times (1,872 people)	1%
[Added outputs]			
RPC staff orientations	-	22 times (164 people)	No planned values or target achievement rates*
Others (Quality Circle training)	-	16 times (523 people)	

* Since these outputs were added in 2006 on a demand-basis from the RPCs, target achievement rates were not calculated as no target values were set.

With regard to amenities, planned output values were set for nine items, but the target achievement rate was only exceeded in the repairing of line room roofs (212% of the planned value). 95% of the planned value was achieved for rehabilitation of estate roads which were added to the project in 2006, and 79% of the planned value was achieved for the construction of rest rooms in factories, but the target achievement rates for all the other items were much lower than 100%. This was because, although it was decided at the time of the appraisal that the RPCs should pay 50% of the social and environmental project costs, RPCs interest was low and their demand for amenity improvements was lower than expected. The reasons for the low interest were that the RPC's financial situation worsened from 2002 onwards because of declines in the prices of plantation crops and requests from labor unions for higher wages. The fact that the RPCs' share of the social and environmental project costs was increased from the 40% set in the first phase of the project to 50% in second phase was also a factor that decreased RPCs interest in this components.[36] When in 2006 the housing loan component was canceled and the rehabilitation of estate roads was added, it was also agreed that the project should be flexibly implemented by changing or adding output items on a request-basis from the RPCs. Since then, items that were included in amenity improvements were changed and/or added. Applications for these changes were submitted based on the need on the ground; therefore, this component of the project was conducted efficiently.

With regard to social development programs, planned output values (the number of times the programs were to be conducted) were set for six types of programs. "Programs for strengthening estate workers' housing cooperative societies (EWHCSs)" had the highest target achievement rate, but it was only 33%. The reason for the low target achievement rates for social development programs was that the project decided that the RPCs should pay 50% of the costs (the RPCs' share of the costs in phase 1 of the project was 20–25% for these programs) while the Sri Lankan government was providing similar programs in other areas for free. In addition, the RPCs did not understand the necessity for changing the attitudes of plantation workers at the beginning of the project. The RPCs' share of the costs was eliminated and the programs were funded totally by the project from 2006 onwards while also the RPCs gradually understood the importance of social development programs. Therefore, similarly to amenity improvements, the implementation of these programs was concentrated in the latter half of the project period.

3.4.2 Project Inputs

3.4.2.1 Project Cost

The total project cost was planned to be 5,838 million yen (foreign currency portion: 3,306 million yen; local currency portion: 2,533 million yen). The actual total project cost was 4,017 million yen, which was lower than planned (69% of the planned value).[37]

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[36] According to the interview with the executing agency, the RPCs' share of the costs was raised from 40% in phase 1 of the project to 50% in phase 2 because the RPCs were expected to understand their corporate social responsibility as private companies and to take responsibility. However, since the share of the costs (50%) was set without the RPCs' consent, the percentage was reduced back to the same level as in phase 1 of the project (40%) in 2006.

[37] When considering the allocation status of the Japanese loan, the approved amount was 1,836 million yen, and the actual disbursed amount was 1,694 million yen. 92% of the Japanese loan was allocated for the project.

3.4.2.2 Project Period

At the time of the appraisal, the project period was planned to be a total of 72 months, from July 2003 to June 2009. The actual project period was from July 2003 to March 2010, a total of 81 months (9 months longer, i.e. 113% of the planned period). Therefore, the actual project period was slightly longer than planned.

The main reason was that there was a 15-month delay in strengthening the Project Implementation Unit (PIU)[38], which was planned for July–December 2003, and the establishment of the administrative processes and procedures needed for the implementation of the project. In addition, there were delays in the launch of amenity improvements and social development programs, as explained in 3.4.1.2(2) above.

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

The internal rate of return was not calculated at the time of the appraisal. Therefore, the internal rate of return for the project was not calculated because it is not possible to compare the estimated and actual internal rates of return.

In conclusion, although the project cost was within the plan due to the significant change (reduction) in the project's scope, the project period slightly exceeded the planned period. Therefore, efficiency of the project is fair.

3.5 Sustainability (Rating: ③)

3.5.1 Institutional Aspects of Operation and Maintenance

(1) Before the Project's Completion

As mentioned above, the MPI was the executing agency of the project. A PIU was established within the MPI and was in charge of the coordination between the ADB's PDP and the project, as well as supervision, fund management and evaluation of the project. At the time of the appraisal, it was concluded that there was no problem with the institutional structure of the PIU, but in reality it was necessary to make some improvements. More specifically, it was found at the beginning of the project that the expertise and the number of staff members were insufficient and the need to employ additional experts arose several times.[39] Eventually, a total of 13 staff members were engaged in the implementation of the project, namely a project manager, an agricultural expert, a financial expert, an agro economic expert, a road expert (engineer), an environmental expert, a gender expert, a person in charge of statistics and monitoring, as well as five other members including those in charge of general

[38] When the need to hire an outside financial consultant instead of a civil servant at the PMU aroused, procedures for making the necessary arrangements took time which caused a delay in the project. The wage mandated by the public servant pay scheme (the pay scheme based on the government administrative directive No. 10) was not enough to attract an outside expert at that time. The cost of employing the consultant was borne by the ADB.

[39] Report on a Study conducted in 2005 by JICA, PCC minutes of meeting and ADB's PCR.

affairs, assistants and programmers. With regard to rehabilitation of estate roads, the executing agency could not conduct sufficient monitoring or provide reports up to the standard required by JICA, which clearly shows that having one person in charge of monitoring was not enough.

On August 1, 2003, the Project Coordination Committee (PCC) was established as a decision making body for the policies of the project. The Secretary of the MPI chaired the committee and the representatives from the External Resources Department (ERD) of the Ministry of Finance and Planning, the Central Bank of Sri Lanka (CBSL), the PIU and the Planters Association (PA) were selected as the committee members. According to the minutes of meetings obtained from the MPI, the PCC meetings have been held almost every month since the third quarter of 2003, as well as when it was deemed necessary, where they had discussions about the progress of the project, issues and challenges, etc. The PCC served as an effective platform for checking the progress of the project and for discussing solutions to various problems.

(2) After the Project's Completion

With regard to the amenities introduced or improved in order to improve working conditions including the ergonomic equipment provided by the RPCs and the rest rooms constructed in the factories and on the tea plantations as well as the rehabilitated estate roads, the estate managers from each RPC are in charge of their operation and maintenance. Technical management officers maintain the amenities and ergonomic equipment under the guidance of the estate managers. There were no significant problems with this institutional structure (Table 9). As for the maintenance of the estate roads, plantation workers get organized to clean the side ditches as part of their volunteer activities.

Table 9: The Institutional Structure of an Estate
(Average for the Estates Visited for the Evaluation)

	Number of personnel
A. Managerial positions	
Estate manager	1
Assistant manager	2-3
Factory manager	1
Medical and welfare officer	1
Estate doctor	1
Technical management officer (including maintenance)	1-2
B. Staff	
Clerical work	5-10
Factory	30-40

Source: Interviews with the RPCs

After the project concluded, the plantation workers continued to maintain the amenities introduced or improved with the aim of improving their living conditions, using their own household budgets in some cases. These amenities include the improved roofs through the reroofing of line rooms, the latrines constructed and the water supply systems installed among others. However, many workers think that the estate managers are responsible for reroofing when roofs become old and need replacing. This shows that it is still necessary for workers to change their attitudes by recognizing the importance of making independent efforts to improve their living conditions rather than completely relying on outside support.

With regard to the social development programs, the PHDT (whose mission is to improve the housing conditions, the working conditions and the living standards of plantation workers) mainly coordinated the programs. The PHDT continues with trainings related to alcoholism, gender, household cash management, health management and reproductive health, with the cooperation of the RPCs. Since the PHDT is under the jurisdiction of the MLRCD, these training are being conducted using the MLRCD budget, funds from RPCs and donors. The PHDT has seven regional offices with personnel who have knowledge and experience in the plantation sector. These personnel with expertise conduct tailor-made activities for each plantation. The PHDT is highly trusted by the RPCs and the plantation workers. The efforts of the PHDT are largely responsible for the increase in the number of EWHCS members and the continuous implementation of social development programs including the ones conducted in the project.

In addition, Corporate Social Responsibility (CSR) has become an important issue in recent years and all the RPCs are continuing social development programs as part of their CSR activities.[40] In particular, with regard to the tea industry, the RPCs have obtained certifications which can only be obtained by estates which met strict social and environmental criteria set by Rainforest Alliance, Ethical Tea Partnership, Fairtrade Labelling Organizations International (FLO) among others, in addition to criteria set by the International Organization for Standardization (ISO). The conditions for maintaining these certifications include the provision of training for plantation workers every year, and there is an established structure for cooperating with the PHDT in order to implement the training programs. Therefore, the institutional framework for the operation and maintenance of the project was confirmed to be sustainable and no major problems have been observed.

3.5.2 Technical Aspects of Operation and Maintenance

(1) Before the Project's Completion

At the time of the appraisal, it was concluded that there were no problems with the technical skills of the PIU. In reality, it was found at the beginning of the project that the expertise of the PIU staff

[40] CSR reports for the RPCs are available on the website of each RPC.

was insufficient and additional experts needed to be employed in the areas of gender, environment, etc. during the project's implementation. Although staff members with expertise were added every time the need arose, it was still necessary to improve technical skills for the operation and maintenance of the project. In particular, the monitoring capacity of the PIU was insufficient. JICA asked the executing agency to frequently monitor the progress and maintenance systems for rehabilitation of estate roads, asking the executing agency to submit monthly reports and to attach photographs taken before, during and after the improvements. However, the reports were not submitted every month, inconsistencies were sometimes found between the reports and no photographs were attached.

With regard to rehabilitation of estate roads which were added in 2006, the Road Development Authority (RDA) (which is responsible for the operation and maintenance of national roads) joined the project based on a strong request from the ADB. The main roles of the RDA were the calculation of the total length of estate roads subject to the project, the preparation of the quantity records, the supervision and monitoring of civil engineering work and giving approvals on standards. Thanks to the cooperation of the RDA, procedures to ensure quality control and the safety of estate roads were followed and the technical sustainability of the project was ensured.

(2) After the Project's Completion

With regard to the amenities managed by the RPCs, one or two technical management officers in charge of maintenance are permanently stationed at every estate. They mainly conduct corrective maintenance for equipment such as changing the blades of trimmers and pruning shears when the blades become chipped. The officers do minor repairs by themselves whenever needed, and they outsource the job when major repairs are required. In the site visits, no particular problems were observed, as the ergonomic equipment which seemed to have passed their expected life and the semi-consumable crates were being maintained in good condition and are still being used. With respect to estate roads improved by the project, these are of a higher quality and are more durable than the estate roads improved with other funds, because they were rehabilitated according to RDA's standards. Daily maintenance such as cleaning side ditches is also conducted as required and no particular problems have occurred.

As for social development programs, there are no technical problems with the PHDT. Personnel in regional offices are experts with a deep knowledge of the plantation sector as they have been involved with plantations for many years. The PHDT outsources the implementation of the social development training programs to external expert training organizations and NGOs. In order for the NGOs to conduct activities on estates, they need to be registered at the PHDT and obtain permission from the PHDT. The PHDT set criteria for controlling program quality. The main NGOs include the Alcohol and Drug Information Centre (ADIC), CARE International and the World University Service of Canada (WUSC) among others, all of which have considerable expertise. Therefore, the technical sustainability of the programs has also been ensured.

3.5.3 Financial Aspects of Operation and Maintenance

The operation and maintenance costs are included in the budget of each RPC every year. During the ex-post evaluation, the “2013 Budget Guidelines” for a particular estate (one of the RPC estates inspected in the field study) was obtained. It was confirmed by checking the details of the budget requests of this estate that the costs of maintaining the amenities and social development programs provided by the project, i.e. those items shown in Table 10 were included in the budget every year. The maintenance costs related to the project accounted for 40% of total maintenance costs in the FY 2012 budget for and 32% of total maintenance costs in the FY 2013 budget.[41] Other RPCs also secure budgets based on their respective budget guidelines, for the maintenance of amenities and training related to the project, using almost the same items as the ones shown in Table 10.

Table 10: An Example of the Items in the Estate Maintenance Budget (Estate A)

Item in the budget	Description
Vehicles	Frequency of changing tires, oil and filters and detailed budget
Machinery	Mainly budget for factory machinery, but maintenance costs for ergonomic equipment are also included
Factory	Maintenance costs for the factory building
Plantation workers’ housing conditions	Costs of reroofing line rooms and changing water pipes
Estate roads	Maintenance costs for each type of estate road
Welfare and sports	Payment to the EWHCS for festivals, sport activities, funerals for plantation workers, etc.
Nursery school	Labor costs and maintenance costs for nursery schools
Human resource development cost	Costs of providing training for estate managers, staff and plantation workers

Source: Documents provided by the RPC (The name of the RPC is undisclosed because they are internal documents.)

The financial sustainability of the project largely relies on the financial indicators of the RPCs. According to the financial statements of 18-20 RPCs for the past three years which could be collected, the financial situation improved in FY 2011 because of good weather and a surge in the world market price of tea in particular. However, in FY 2012, profitability deteriorated because of a wage increase which takes place every three years, unstable world market prices for fuels and chemical fertilizers and

[41] The names of the RPCs and the estate are not disclosed. The estate included 30,000 rupees for “the maintenance of 6.7-km PDP estate roads” in the FY 2012 budget.

delayed crop diversification. Therefore, there were only minor increases in the financial status compared to the status at the time of the appraisal (Table 11).

Table 11: The Profitability and Financial Stability of the RPCs

	Indicator	FY	Average for RPCs*
Profitability	Return on assets (Current net income/total assets)	2002	0.2%
		2010	4.0%
		2011	5.4%
		2012	2.5%
	Return on equity (Current net income/equity capital)	2002	0.8%
		2010	10.9%
		2011	11.0%
		2012	-0.8%
	Sales profit ratio (Current net income/sales)	2002	0.4%
		2010	5.5%
		2011	7.6%
		2012	1.8%
Financial stability	Equity ratio (Equity capital/total assets)	2002	27.5%
		2010	38.9%
		2011	42.4%
		2012	59.1%
	Current ratio (Current assets/current liabilities)	2002	74.0%
		2010	129.6%
		2011	134.9%
		2012	134.5%

* The FY 2009/10 figures are the average for 18 RPCs, the FY 2010/11 figures are the average for 20 RPCs and the FY 2011/12 figures are the average for 19 RPCs.
Source: The 2002 data was taken as reference data from the FY 2003 Ex-post Evaluation Report for PRP Phase 1 (the average for 20 RPCs). Other data is based on RPC annual reports provided by the MPI.

However, the equity ratio and the current ratio, which are the indicators for RPCs' financial stability, have substantially improved in the past three years when compared to the time of the appraisal. This shows that the RPCs' finances have strengthened. Although profitability is dependent on the weather and fluctuation of world market prices, the RPCs' finances have become more stable as a result of past efforts including crop diversification, modernization of processing facilities and development of highly value-added products. Since the improvement in the financial stability of the RPCs (which was a concern at the time of the appraisal) was confirmed, there should be no major problem with securing funds for the project's future operation and maintenance.

3.5.4 Current Status of Operation and Maintenance

With regard to the amenities managed by RPCs, corrective maintenance is the main method currently used. Although some improvements are needed such as more systematic maintenance record keeping, there are no major problems in the operation and maintenance in general. All the equipment is used relatively carefully, although they have many consumable parts. There were no particular problems with estate roads and the quality of the roads was highly appreciated by all the beneficiaries. Daily maintenance such as the cleaning of side ditches is conducted at the estate community level, for example the manager of each estate cooperates with the EWHCS and plantation workers clean the ditches as part of their volunteer activities.[42]

With regard to the reroofing of line rooms which should be directly maintained by plantation workers, some households were maintaining the renewed roofs by applying a waterproof coating. Since they are made of semi-permanent material, it is expected that reroofing will be needed in several years' time. With regard to latrines, the majority of the latrines are maintained in a clean condition, thanks to continuous awareness-raising and guidance activities for workers by the PHDT.

With regard to social development programs, the RPCs and estate managers did not understand the importance of the programs at the beginning of the project. However, the social development programs are currently continuing (mainly the programs on household cash management and alcoholism prevention) thanks to successful examples set by the estates which introduced training for estate managers or the project's training programs at an early stage of the project. As mentioned above, all the RPCs have been conducting CSR activities and have been certified by meeting the ISO, FLO criteria among others. In order to maintain certified status, they are implementing training for plantation workers in cooperation with the PHDT and NGOs. On some estates, medical staff members have developed training materials for preventing tuberculosis, parasitic diseases, anemia, etc. and are implementing their own training. Therefore, there is no problem with the current status of operation and maintenance of these programs.

In light of the above findings, it has been concluded that no major problems have been observed in the operation and maintenance system. Therefore, sustainability of the project effect is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objective of the project was to contribute to ensuring the sustainability of plantation projects by improving the working and living conditions of plantation workers in of Sri Lanka, through the following measures: providing plantation workers with housing loans for the construction of individual houses; improving and developing infrastructure such as line rooms and latrines; providing ergonomic equipment; providing training for the prevention of alcoholism which has been a serious problem among plantation workers; and providing training such as household cash

[42] In Sri Lanka, there are volunteer activities called "Shamadana" which are conducted at the community level. The maintenance of estate roads is sometimes conducted as part of Shamadana activities.

management.

The relevance between Sri Lankan national development policies, development needs and Japanese aid policies was high both at the moment of appraisal as well as ex-post evaluation. However, the project's degree of relevance was evaluated as fair, because of some issues with the appropriateness in the project planning; for example, the provision of housing loans was canceled although it was one of the pillars of this project, and the funds were reallocated to the rehabilitation of estate roads. The reroofing of line rooms and the construction of latrines were conducted as part of the project and they were effective to a certain extent in improving the working and living conditions of plantation workers. However, the rehabilitation of estate roads, which was added to the original plan at a later stage, did not result in benefiting plantation workers as much as expected. Therefore, the degree of effectiveness and the impact were evaluated as fair. The project cost was lower than planned because of a substantial reduction in the project's scope, but the project period slightly exceeded the planned period. Therefore, the efficiency of the project was evaluated as fair. With regard to the operation and maintenance of the project, there was potential for improvement in terms of the executing agency's personnel and technical skills. However, after the project ended, no problems were found concerning the organizational structures, technical skills and financial situations of the stakeholders including regional plantation companies (RPCs), the Plantation Human Development Trust (PHDT) and NGOs. Similarly, there were no particular concerns about the overall operation and maintenance of the project. Therefore, it is concluded that the sustainability of the project effect is high.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

(1) The executing agency MPI mentioned in its Project Completion Report that the needs of the RPCs, which were one of the major stakeholders of this project, were not sufficiently understood at the project planning stage, especially with reference to the fact that the housing loan component had to be canceled. In this regard, conducting the necessary coordination during the project implementation is an important role for an executing agency. When similar projects are to be conducted in the future, it is expected that the executing agency will recognize the ownership of the project and become more involved in the project from the planning stage. More specifically, it is desirable that the executing agency should actively communicate and exchange opinions with all stakeholders and propose and implement necessary correction measures by convening PCC meetings when necessary.

(2) The executing agency should monitor the projects and prepare materials to implement necessary correction measures. For example, it would be important to secure personnel and create manuals with the correction measure procedures.
(3) It is recommended to create a database with all the information related to the project as part the institutional memory, because labor fluctuates very often in Sri Lanka. A database would prevent the information to be lost with changes in the project members.

4.2.2 Recommendations to JICA

None

4.3 Lessons Learned

(1) When supporting part of a component of a project conducted by another donor, JICA should conduct independent assessments and analysis during the project planning stage, so as to check the feasibility of the project components which will be subject to JICA's assistance, rather than relying only on other donor's appraisal results. In this project, JICA studied how the plantation sector was financed and the need for government policy-based financing, but the scope of the study was limited to the RPCs and the PFIs. JICA did not interview other stakeholders such as the PHDT or the NGOs, nor did it understand correctly the needs of plantation workers who were intended to be the main beneficiaries of the project. In case of sectors like the plantation sector, there are many stakeholders that should be considered. In order to ensure the efficient and effective implementation of the project, it is important to check in detail the characteristics of the stakeholders, their relationships, the historical background and whether or not the legal framework needed for support schemes is in place.
(2) It is important for the departments responsible for a project to correctly understand its effects and impacts. For this purpose, it is necessary to conduct a baseline survey at the time of the launch of the project and to share the survey results with all the stakeholders, as well as assessing the project's effects after the project has been completed.

(3) Comparison of the Original and Actual Scope of the Project

Item	Original	Actual
1. Project Outputs*		
Housing loan	12,000 people	None
[Amenities]		
Repairing roofs of line rooms	11,000 units	23,831 units
Construction of playgrounds	200 sites	29 sites
Construction of rest rooms in factories	180 sites	142 sites
Construction of rest rooms on tea plantations	1,500 sites	444 sites
Rehabilitation of estate roads	750 km	711 km
Tea plucking machines	5,575 units	424 units
Trimmers	6,275 units	1,006 units
Improved tea picking baskets	31,000 units	1,600 units
Improved pruning shears	25,000 units	1,270 units
[Social development programs**]		
Gender programs for plantation workers	500 times	33 times (12,306 people)
Alcoholism prevention programs for plantation workers	500 times	71 times (2,586 people)
Household cash management programs for plantation workers	500 times	203 times (36,715 people)
Programs for strengthening estate workers' cooperative societies (EWHCSs)	500 times	166 times (24,027 people)
Social development programs for the RPCs	2,500 times	138 times (317 people)
Team building programs for the plantation workers	2,500 times	37 times (1,872 people)
2. Project Period	July 2003 - June 2009 (72 months)	July 2003 - March 2010 (81 months)
3. Project Cost		
Amount paid in Foreign currency	3,306 million yen (2,563 million rupees)	2,282 million yen (2,615 million rupees)
Amount paid in Local currency	2,533 million yen (1,963 million rupees)	1,402 million yen (1,607 million rupees)
Total	5,838 million yen (4,525 million rupees)	4,017 million yen (4,603 million rupees)
Japanese ODA loan portion	1,836 million yen (1,423 million rupees)	1,694 million yen (1,942 million rupees)
Exchange rate	1 rupee = 1.29 yen (As of November 2002)	1 rupee = 0.8728 yen (Average between July 2003 and March 2010)

* Only items for which the planned output values were set are shown in the table.
** The numbers in parenthesis are the numbers of total beneficiaries (both direct and indirect).