

The United Republic of Tanzania

Ex-Post Evaluation of Japanese Technical Cooperation Project For Capacity Development in Road Maintenance Management

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0. Summary

This project was implemented aiming at capacity development of organizations concerned with road maintenance management for the goal of improving road conditions in Tanzania. In Tanzania, roads form part of development needs, since they are the major means of transportation. This is highly in line with Tanzanian development policy, as well as with that of Japan. Therefore, the relevance is high. The Effectiveness and Impact are high, because the outputs and project purposes were mostly achieved by the end of the project duration, and the Overall Goal (improvement of road conditions) was mostly achieved. Although project costs and the project duration surpassed the initial plan, it was appropriate enough as they were caused by the addition of Outputs, etc. Therefore, efficiency is high. Since no major problems have been observed in the policy background, or the structural, technical and financial aspects for continuation of the project effects, sustainability is high.

In light of the above, this project is evaluated as highly satisfactory.

1. Project Description



(Project Location)



(Road maintenance works in Dar es Salaam)

1.1 Background

The government of Tanzania has been putting high priority on economic infrastructural

development including development of roads due to their strategic importance. Hence, the government has been making special efforts to improve the standard of existing road networks and road maintenance works. During the economic crisis in the early 1980s, road development was stagnant and roads seriously deteriorated. This affected even major trunk roads, which led to negative impacts such as longer transportation time and damage of vehicles. Tanzania joined the “Road Management Initiative” (hereinafter “RMI”), an initiative that was undertaken by the World Bank since the early 1990s targeting 17 countries in Sub-Saharan Africa, and started a reform of its road sector. In July 2000, the Tanzanian National Roads Agency (hereinafter TANROADS) was established as the sole organization responsible for the development and maintenance of trunk roads, and has been undertaking development of the road network and its maintenance. TANROADS utilizes 70% of the Roads Fund (government fund sourced from tax revenue, including a fuel levy) and contracts maintenance works to private construction companies. However, TANROADS suffers from insufficient capacity and its staff lack experience, resulting in unnecessary actions and prolonged time for procedures, inappropriate contract planning, and improper project management and reporting procedures. This resulted in only a 70–75% implementation rate of its road works in the fiscal year 2002/2003 (1,500 contracted works and 800 works implemented by TANROADS itself).

Given these circumstances, the government of Tanzania requested Japan to undertake a technical cooperation project aiming at capacity development in terms of procurement, contract and project management of TANROADS. In response to this, a JICA Ex-ante Evaluation Team was dispatched to Tanzania in October 2004, the JICA Tanzania Office and TANROADS signed the Record of Discussions (R/D), and the project was commenced. Two years later, the Tanzanian government requested that Japan include in the target of the project cooperation both a “Constructors Registration Board” (hereinafter CRB), which is responsible for capacity development of contractors who are engaged in construction works, and a “Roads Fund Board” (hereinafter RFB), which manages the Roads Fund resourced from a levy tax. This resulted in an approximate one-year extension of the project. Afterwards, a Terminal Evaluation Survey was conducted from late February until early March in 2009.

1.2 Project Outline

Overall Goal	Good road conditions <Goal> To implement appropriate maintenance
Project Objective	To improve TANROADS’s capacity for road maintenance management

		<p>To improve the CRB's capacity for training of contractors</p> <p>To improve the RFB's capacity for monitoring and evaluating usage of the Roads Fund as well as capacity to increase the Roads Fund</p>
Output(s)	Output 1 <TANROADS>	<ol style="list-style-type: none"> 1. Improved work procedures 2. Training program was designed and trainings were conducted 3.1 Training programs and activities of the JICA team were evaluated and necessary modifications were made 3.2 Seminars for contractors were implemented and contractor capacity on procurement has improved
	Output 2 <CRB>	<ol style="list-style-type: none"> 1. Improved training framework, training programs, training methods and training materials 2. Increased number of participants who attend the training courses offered by the CRB 3. Increased number of qualified trainers
	Output 3 <RFB>	<ol style="list-style-type: none"> 1. Improved technical auditing 2. Improved performance indicators 3. Improved quality of management of the Roads Fund
Inputs		<p>Japanese Side:</p> <ol style="list-style-type: none"> 1. Experts 5 experts (63.70M/M, or men per month) 0 long-term, 5 short-term 2. 5 trainees received (5 for counterpart training in Japan) (Breakdown: 2 in FY2005, 3 in FY2006) 3. 0 trainees for third-country training programs (total) 4. Equipment and local cost 175.19 million yen 5. Other (incl. dispatch of related missions) 19.76 million yen <p>Tanzania Side:</p> <ol style="list-style-type: none"> 1. Counterparts TANROADS: 3 (including Chief Executive, Director of Maintenance) CRB: 3 (including Assistant Registrar, Head of Training Unit) RFB: 2 (including Roads Fund Manager) 2. Trainees TANROADS: engineers and managers

	<p>CRB: SSTP¹ trainers</p> <p>3. Facilities, project office, utilities Project office (TANROADS 2005-2007, CRB 2007-2009) electricity, water</p> <p>4. Local cost TANROADS: 25 million Tshs² CRB: 672 million Tshs. RFB: 10 million Tshs.</p>
Total Cost	280.53 million yen
Period of Cooperation	February 24, 2005–February 23, 2008 February 24, 2008–March 31, 2009
Implementing Agency	Ministry of Infrastructure Development, TANROADS (Counterpart organization since commencement), CRB, RFB
Cooperation Agency in Japan	None
Related Projects (if any)	<Technical cooperation project> Project for Capacity Strengthening on Labor Based Technology Training, <Yen Loan> Arusha-Namanga-Athi River Road Construction Project, <Grant aid> Project for widening of Kilwa Road, Project for Up-grading Masasi-Mangaka Road, <Other donors> Road Maintenance Management Information (RMMI, Denmark), Road Maintenance Management, Road Maintenance Initiative (RMI, the World Bank), Tinde – Mwanza/Shy Border (Shinyanga) Project (EU), Nzega – Tinde – Isaka (Shinyanga) Project (EU), Backlog Maintenance of Morogoro – Dodoma Road (Morogoro) (EU)

1.3 Outline of the Terminal Evaluation

1.3.1 Achievement of the Overall Goal

It is difficult to measure achievement of the Overall Goal at the time of the Terminal Evaluation, as the improvement of road conditions is expected to take at least five years. It is anticipated that the project will contribute to the Overall Goal to some extent because the fostering of approximately 5,000 small and medium contractors for construction

¹ The Sustainable Structured Training Program (SSTP) is the CRB's original training program.

² This figure is the approximate cost of the Road Maintenance Handbook Seminar. There were other costs borne by TANROADS, but data on the amount was not available because their financial records were not kept separately from general administration cost of TANROADS.

works is regarded as positively influencing the Overall Goal.

1.3.2 Achievement of the Project Objective

Firstly, due to the participation of the project counterpart from TANROADS in the handbook development and implementation of training, the capacity of TANROADS staff has improved. However, improvement of the indicators of the Project Purpose, such as the budget disbursement rate and reduced cost of the maintenance works, was not seen. Secondly, improvement was observed in the CRB's capacity for training of trainers (TOT), since the examination results after training showed significant improvement when compared with those from before training. Thirdly, the RFB did not achieve an improvement in audit reporting, because the Technical Audit Manual developed by the project was not applied to auditing before the end of the project period. (The Technical Audit Manual will be utilized for auditing starting from November 2009, i.e., after the project completion, due to the timing of when the Technical Audit Manual was completed).

1.3.3 Recommendations

- (1) To implement the Action Plan "Sustainable Training Program of TANROADS": the Action Plan created under the project can contribute to the implementation of a sustainable training program.
- (2) To prepare an Implementation Strategy for SSTP Evaluation: it is suggested that the CRB take actions to implement the recommendations made by the SSTP Review during the project.
- (3) To enhance the RFB Technical Audit: the Technical Audit Manual produced by the project is expected to be utilized for auditing.
- (4) To maintain appropriate levels of funding for road maintenance: it is recommended that appropriate funding levels for road maintenance be maintained for better management of road maintenance works.

2. Outline of the Evaluation Study

2.1 External Evaluator

Mayumi Hamada, Foundation for Advanced Studies on International Development

2.2 Duration of Evaluation Study

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

Duration of the Field Study: February 4, 2011–February 16, 2012

May 12, 2012–May 20, 2012

2.3 Constraints During the Evaluation Study

Nothing in particular.

3. Results of the Evaluation (Overall Rating: A³)

3.1 Relevance (Rating: ③⁴)

3.1.1 Relevance to the Development Plan of Tanzania

This project supports the realization of the Tanzania Road Development Plan (hereinafter, TRDP, 2001–2010), which stresses the importance of road maintenance in road sector development, and was in line with this at the time of project completion in 2009. Tanzania has the lowest rate of road density among East African countries and a low pavement rate (7.4%). Due to these factors, the TRDP emphasized road maintenance, especially the maintenance of trunk roads, which are strategically important for economic growth. Also, roads are regarded as an important sub-sector in the transportation sector, which shares the largest amount of transportation both in terms of cargo and passengers among the four sub-sectors, i.e., roads, railways, marine and aviation. Therefore, it can be judged that the project direction was consistent with the government policy of Tanzania from the Ex-ante Evaluation until project completion.

3.1.2 Relevance to the Development Needs of Tanzania




From the project planning stage until project completion, roads played a major role in transportation in Tanzania, being the major means of transportation of people and cargo, forming part of its social and economic development.⁵ Furthermore, after two years of cooperation, both governments came to recognize that an integrated approach was necessary for i) promoting the implementation of road maintenance to include proper management of the Roads Fund, which is the source of funding for road maintenance, ii) the enhancement of monitoring, such as technical auditing of TANROADS (RFB), and iii) capacity development of the CRB, which is responsible for fostering contractors who implement road maintenance works. These are in addition to the capacity development of TANROADS as originally planned. The project dealt with flexibility with the newly identified needs, and it was agreed by the governments in February 2007 to add the RFB (which manages the road fund) and the CRB (which is responsible for capacity development of contractors) as counterpart organizations of the project.

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

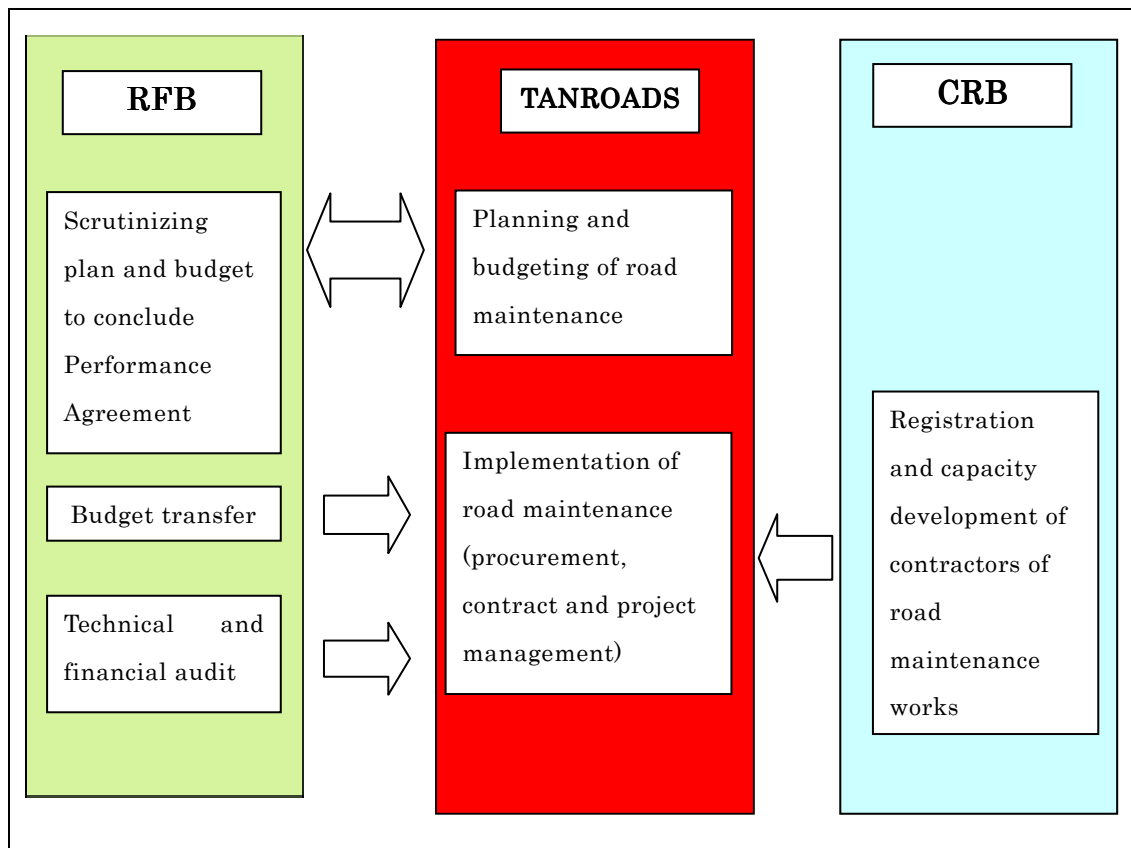
⁴ □: High, □ Fair, □ Low

⁵ For example, among the four sub-sectors (road, railway, marine and aviation), road transportation accounted for 64% of the total cargo transportation, and 80% of the total passenger transportation, which is greatly significant (TSIP, 2007-2012).

Table 1: Objectives of Counterpart Organizations

	TANROADS (Tanzania National Roads Agency): To develop and maintain trunk roads and regional roads, utilizing 70% of the Road Fund for maintenance.
	RFB (Roads Fund Board): To manage the Roads Fund, and to monitor the road maintenance budget
	CRB (Contractors Registration Board): To register construction contractors (including those who are not involved in road works) and conduct training for them

(Source) Produced by the surveyor based on documents from JICA



(Source) Produced by the surveyor based on the documents from JICA

Chart 1: The Relationship among TANROADS, the RFB and the CRB in Road

Hence, the project direction is in line with the needs for roads, which are significant for Tanzania's transportation, as well as with the needs of the organizations concerned with

road maintenance in Tanzania. The relationship between TANROADS, the RFB and the CRB is shown Table 1 and Chart 1.

3.1.3 Relevance to Japan's ODA Policy

The establishment of a domestic road network is identified as one of the development issues in a priority area of support in the section of "Enhancement of living environment by improved basic infrastructure in urban areas" in Japan's Country Assistance Program for the Republic of Tanzania issued by Ministry of Foreign Affairs, Japan in June 2000.

Furthermore, in another version of the same program issued in June 2008, "transportation, mainly focused on roads" is stated as a priority area in "Growth and Income Poverty". This is also stipulated in the National Strategy for Growth and Reduction of Poverty (NSGRP) (2005-2010) released by the Tanzanian government.

3.1.4 Relevance to Project Planning

The specific capacities of (mainly) TANROADS that the project intended to enhance, and the function of counterpart organizations in the road maintenance cycle are shown in Chart 2.

Namely, at the time of the Ex-ante Evaluation and Implementation Study, the project aimed to pursue improvement of road conditions through procurement capacity, and contract and project management for construction contractors (as shown in yellow in Chart 2). Due to situational changes brought on by TANROAD's enlargement of contract sizes before commencement, the project team collected information on the latest situation and identified priority areas again. As a result, capacity development in monitoring road conditions through the development of a "Road Maintenance Handbook", and timely financial management and road maintenance planning in accordance with the annual schedule through the development of the "Guidelines for Workflow for Road Maintenance Management (as shown in green in Chart 2) were added to the project scope to be achieved during the project period. Furthermore, the Tanzanian side recognized the necessity of enhancing the capacity of the CRB (which deals with training of contractors), as well as of the RFB (which is responsible for managing the Roads Fund) in order to improve road conditions. Hence, a request was made by the Tanzanian side to add some project components, i.e., capacity development for training contractors by the

(one-third of the previous amount) by increasing the size and the amount of money for each contract in its own efforts to improve the disbursement rate. Hence, the project was forced to review its implementation plan at the time of commencement.

In the meantime, the project team recognized this situation and undertook information collection and analysis to comprehend the latest issues and tasks related to the management of TANROADS, and slightly modified the initial project design according to the clarified needs. With this modification to the project plan, the project direction was shifted slightly towards pursuing the enhancement of management capacity through standardization of procedures. To this end, common methods were clarified and shared among those concerned. Therefore, although some confusion was observed at the initial stage, the above-mentioned problem did not cause serious negative effects.

This project has been highly relevant to the country's development plan and development needs, as well as to Japan's ODA policy, and the problem in the initial project design was already solved. Therefore, the project relevance is high.

3.2 Effectiveness and Impact⁷ (Rating: ③)

3.2.1 Project Outputs

3.2.1.1 Project Output

The Project Outputs are categorized into three groups, because the project has three counterpart organizations following its extension.

(1) TANROADS Output

1) Output 1: Improved work procedure

(Indicator 1: Road maintenance system determined by July 2005)

The result of analysis on the road maintenance management of TANROADS was compiled in a report entitled "The Review and Evaluation on Current Road Maintenance Management Ver. 2" in September 2005. Hence, Indicator 1 was achieved, although it took two more months than planned.

(Indicator 2: Increased quality and timeliness of internal communications (e.g. surveys and reports) during the project period)

Based on the "The Review and Evaluation on Current Road Maintenance Management

⁷ The rating is made for Effectiveness, integrating the assessment of Impact.

Ver. 2” mentioned above, “The Guideline on the Road Maintenance Management Workflow” was produced in 2005. This guideline identified procedures to be taken by the regional offices and reported to headquarters according to the annual schedule, so that staff assigned to the regional offices of TANROADS comprehend the whole annual schedule and perform their works accordingly. TANROADS staff that participated in training took part in a questionnaire survey.⁸ As for the improvement of internal reporting and communications about the budget and execution through utilization of the above-mentioned Guideline, the answers were as follows: one for “very much improved”, eight for “improved”, zero for “not improved so much” and “not improved at all”, and two did not answer (out of a total of 11 respondents). Although the reliability of the information above is not so high due to the small sample size and limited rate of responses, all the respondents except for the two who did not answer replied either “very much improved” or “improved”. It can therefore be assumed that certain improvements have been made on reporting and communications concerning the budget and execution.

During the interview with TANROADS staff in the field survey of the ex-post evaluation, some TANROADS staff did however mention that there are too many guidelines and manuals to be able to distinguish which is the one that this project developed. In two regional offices that were visited during the field survey, none of the staff had seen the above-mentioned Guideline, and could not identify it even when the actual Guideline was shown to them. Hence, it is not clear that the respondents to the questionnaire actually identified the Guideline produced by the project when they replied to the question. Therefore, causality between Indicator 2 and utilization of the Guideline could not be made clear⁹.

(Indicator 3: Number and range of existing manuals and guidelines identified by July 2005)

As indicated previously, since there were many manuals and guidelines that had not been kept in order, the project compiled a “Directory of Manuals/Guidelines Used in regional Offices” and delivered it to 21 regional offices. Therefore, this indicator was achieved.

⁸ The questionnaire was distributed through TANROADS to the 23 staff that received training under the project, and 11 responded among them.

⁹ As increase in the number of reports does not necessarily mean an improvement of procedures, since the number of reports can even decrease if unnecessary reports are reduced through streamlining processes. Hence, Indicator 2 is not exactly appropriate for measuring improvement in procedures. However, in this project, it was set as the indicator because frequent delays in procedures, such as reporting and communications from regional offices to the headquarters including budgeting, was causing serious delays in the broader procedures of TANROADS.

(Indicator 4: Development of new manuals and guidelines during the project)

A “Road Maintenance Handbook” was developed and its hardcover final version was printed and submitted in February 2009 (while the “final draft” was completed and the explanatory seminar was held in December 2007). Since it is indispensable that those who are concerned with the conduct of road maintenance management use common methodology and terminology in order to secure quality of road maintenance, this handbook targeted engineers who are engaged with road maintenance at the regional offices. It clarified basic road maintenance technical terms with photos, possible causes of deterioration of roads, effects when each problematic situation is left without any action, means of reporting, tools required for inspection, etc. Also, forms to be filled out for reporting inspection results for each inspection type, types of road defects and their ranking, recommended frequency of inspections, basic rules that inspectors must follow for their safety, and so on were identified and printed in two volumes of A5 size. These are convenient for site inspections and were distributed to all the regional offices of TANROADS. Therefore, this indicator was achieved.

Given the above reasons, Output 1 was mostly achieved with the exception of Indicator 2. As for the achievement of Indicator 2, this could not be made clear.

2) Output 2: Training program designed and training conducted

(Indicator 1: Human resources development plan prepared by September 2005)

Based on the result of the Training Needs Assessment, the “Human Resources Development Plan for Road Maintenance” was produced in September 2005. Therefore, this indicator was achieved.

(Indicator 2: Training plans and modules for TANROADS maintenance staff designed and implemented during the project period)

A “Three-Year Training Plan for Road Maintenance” was developed in September 2005, and 12 training modules¹⁰ were suggested. The plan was carefully designed based on a situation analysis, taking training costs into consideration. Therefore, this indicator was achieved. (As for training implementation, please refer to Indicator 3 below.)

¹⁰ Each teaching unit in a whole training course.

(Indicator 3: Number of courses delivered and staff/contractors trained during each stage of the project)

During the project period, 21 training courses were held, in which 535 TANROADS staff participated.

Due to confusion caused by large-scale personnel reshuffles and organizational changes in TANROADS in 2007, some planned modules of the technical training were replaced with managerial training. Two technical training modules (i.e., seven days in total) were reduced compared to the initial plan. However, TANROADS urgently needed managerial training, because a large number of new managers were transferred to TANROADS in accordance with its organizational reform. The project dealt with the needs of TANROADS with the flexible change in the training plan.

The training for construction contractors was removed from this Output during the project period, since it was included in the CRB's Output at the time when the CRB joined the target organizations. Therefore, it will be analyzed in Output 2 of (2) the CRB later.

Based on the above, implementation of the training was almost completed, although its content was partially modified due to significant changes in TANROADS's structure and personnel.

3) Output 3.1: Training programs and activities of JICA Team evaluated and necessary modifications made

(Indicator 1: Increase in knowledge gained from each course)

In relation to the training implemented under the project, an "Evaluation of Training Courses Implemented in the 2nd Year" was issued. Similar reports were made for the training in 2007 and 2008.¹¹ According to these reports, improvement was observed in terms of levels of understanding at all the trainings in which an assessment was made.

As already mentioned, although some of the technical training modules were reduced because of large internal personnel reshuffles at TANROADS, training for managers was increased. Also, the knowledge gained by the participants increased, judging from the assessment test, when comparing before and after the training.

¹¹ These correspond with the Japanese Fiscal Year (April to March).

(Indicator 2: Training plans and modules for TANROADS maintenance staff and contractors evaluated during the project)

An “End of Training Report” was issued for every training course for the total of 21 courses, in which scores, participant course assessments and recommendations were included. Furthermore, based on the training results, recommendations were compiled and submitted as an Action Plan to be undertaken by TANROADS after project completion, with its applicable training contents and means, in September 2008.

The training contents for contractors, as mentioned in Indicator 3 for Output 2 above, will be analyzed in Output 2 of (2) the CRB below, because it was omitted from this Output during the implementation stage. Therefore, Indicator 2 was achieved.

- 4) Output 3.2: Seminar for contractors implemented and contractors capacity for procurement improved

(Indicator 1: Number of courses designed and delivered to contractors trained during the project)

As already indicated, the project included CRB capacity development in its project scope from the 4th year, and training for contractors was omitted. Therefore, it will be discussed in Output 2 of (2) the CRB.

Therefore, the Outputs for (1) TANROADS were achieved, except for Indicator 2 of Output 1 and Output 2 (which was removed), by the project completion.

(2) The CRB’s Output

- 1) Output 1: Improved training framework, training programs, training methods and training materials

(Indicator 1: Number of reviewed/improved curriculum, syllabus, materials, etc. by March 31, 2009)

In July 2007, the SSTP of the CRB was reviewed, with clarification of the contractors’ needs, and analysis and recommendations on the training modules (20 in total) in seven on-going training courses for contractors that were already developed to meet various needs of companies of differing sizes. According to the CRB, the quality of this review

was fully satisfactory in terms of its content, and positively evaluated.¹² Therefore, Indicator 1 is judged as achieved.

- 2) Output 2: Increased number of participants who attend the training courses offered by the CRB

(Indicator 1: Number of participants in training courses offered by the CRB)

As mentioned before, the number of participants in CRB training courses and the improved capacity of contractors are part of Output 3.2 and Output 2 for (1) TANROADS as mentioned above. The number of contractors who participated in the CRB's training courses is as follows (Table 2).

659 contractors participated in training from FY2007, when the CRB was added to the project counterpart organizations, until the project completion. There was little change between 241 participants in FY2006 (the year proceeding project commencement), and 246 participants in FY2007 (the 1st year for the CRB). However, the number increased to 293 in FY2008 (an increase of 50 participants, or 19%) compared with the previous year. Since the duration of project cooperation for the CRB is only two years in the latter half of the whole project, and the project was completed at the end of March 2009, the number of participants in the last year seems small. However, in contrast with other governmental organizations in Tanzania, the fiscal year for the CRB starts in January and ends in December. The figure actually means that it achieved 41% of the total number of the previous year by the 1st quarter.

Table 2 The Participants of the Training by CRB (until the project completion)

Unit: persons

Fiscal Year	Number of participants
2007	246
2008	293
2009	120
Total	659

(Source) Produced by the surveyor based on the returned questionnaire from CRB

(Remarks) The fiscal year for CRB starts from January and ends in December, but the above figure for 2009 shows that until the project completion, i.e., from January to March.

¹² According to the interview with the CRB.

Hence, the number of participants is judged to have increased by project completion, although it cannot be proved that the increase was solely brought about by the project activity.

In regards to the comprehension level of contractors who participated in CRB training, among 13 contractors who responded to the questionnaire,¹³ three chose “completely understood”, 10 chose “almost understood”, and zero chose “not well understood” and “not understood at all”. This means 100% of the total answers was for “completely understood” and “almost understood”. Furthermore, as for the usefulness of the training content for their actual work, six answered “very useful”, five answered “useful”, zero answered “not so useful” and “not useful at all”, and there were two who did not answer at all. Hence, the total of “very useful” and “useful” made up 85% of the total responses.

Based on the above, the number of participants has shown a clear increase, and the comprehension level and usefulness are regarded as high.

3) Output 3: Increased number of qualified trainers

(Indicator 1: Number of trainers who have successfully completed “Training of Trainers”)

The “Training of Trainers” (hereinafter, TOT) program was conducted twice. At the 1st TOT, 13 candidate¹⁴ trainers completed all the sessions, and nine participants among 13 were judged as qualified for the trainer’s job by the trainer of TOT. Also, 11 participants, including six out of the nine qualified candidates mentioned above, participated in the two-day refresher course in August 2008. A questionnaire survey was conducted with 11 TOT participants, and six of them responded. In regards to the extent of knowledge acquired through TOT, four answered “very much acquired”, three answered “acquired to some extent”, zero answered “not acquired so much” and “not acquired at all”, and two did not choose any answer. In the interviews with TOT participants, recognition of the improved knowledge and skills is high.

Since there is no information on the number of trainers to be trained in the project plan, it cannot be judged whether the target level has been achieved or not. However, it is certainly an “improvement” that the nine trainers were qualified for the two courses, “Pre-Contract Practice” and “Contract Management”, which were difficult to implement

¹³ The questionnaire was sent to 32 contractors who participated in the training courses offered by the CRB based on information from the CRB.

¹⁴ Two participants out of 13 were trainers in different subjects at the CRB, but participated for the sake of improving their teaching skills.

due to a lack of trainers. Also, the self-evaluation of the TOT participants on the level of skills acquired and usefulness for improving performance at work was high.

Based on the above, Outputs for (2) the CRB were almost achieved.

(3) The RFB's Output

1) Output 1: Improvement in technical auditing

(Indicator 1: Establishment of standardized schedule and procedures for technical auditing)

In September 2008, a Technical Audit Manual showing the schedule, procedure and auditing method was developed. Also, a workshop explaining the manual was held in September 2008. Hence, Indicator 1 is judged as achieved.

2) Output 2: Improved performance indicators

(Indicator 1: Improved satisfaction of RFB members on the Performance Indicators)

As mentioned before, the RFB concludes a contract on the annual plan and budget (i.e., Performance Agreement) with TANROADS every year. However, some of the indicators (Performance Indicators) were not sufficient or appropriate to measure achievement of the objectives in the agreement. For example, a performance indicator to measure "Road Maintenance Level" was "No road closure for more than two days", while there was no indicator to measure the safety of traffic. Therefore, the project compiled a series of recommendations, including the addition of performance indicators such as "No debris or trash left between road shoulders". The RFB revised the Performance Indicators, reflecting those recommendations. Furthermore, an evaluation of the revised Performance Indicators was conducted by RFB Board members at the time of project completion, and the satisfaction level of the board members was enhanced. Therefore, Indicator 1 was achieved.

3) Output 3: Improved quality of management of the Roads Fund

(Indicator 1: Improved documents published by the RFB to promote an increase of the Roads Fund)

Since 2007/2008 (starting from July 2007), the revenue of the RFB doubled due to an increase in fuel levies. Because of this, the project activities planned for promoting an increase of the Roads Fund were omitted. The RFB regards this judgment on omission

as appropriate.

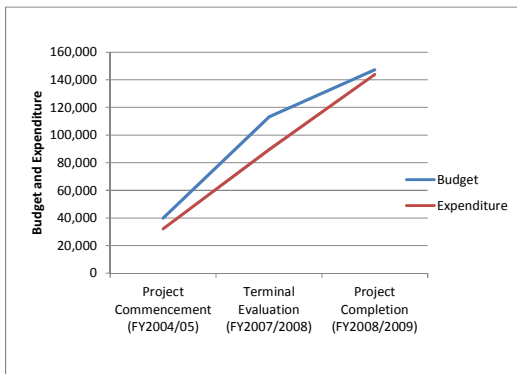
Therefore, Outputs for (3) the RFB were achieved except for Output 3, which was omitted during the implementation stage.

3.2.1.2 Achievement of Project Objectives

In this project, a project purpose was set for each of the three counterpart organizations.

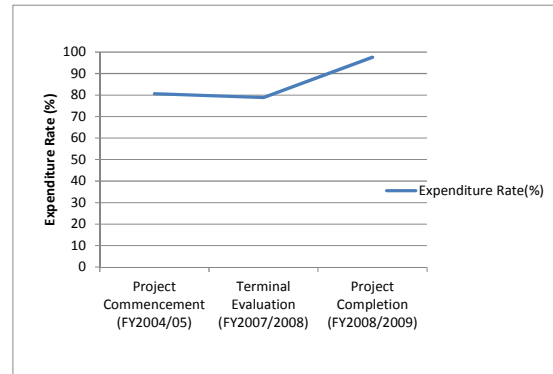
(1) TANROADS: To improve TANROADS' capacity for roads maintenance management (Indicator 1: Percentage of expenditure at the end of each financial year)

The achievement is shown in Chart 4. The rate of expenditure improved by 17% from the time of project commencement till project completion. The rate decreased by 1.5% at the time of the Terminal Evaluation (FY2007/2008), compared with the situation at Project commencement. However, the budget amount in that fiscal year increased by 2.8 times compared to the previous year. As there was little decrease in the expenditure rate in spite of a drastic increase in budget, the low expenditure rate (which was a serious issue for TANROADS) is regarded as having already been resolved at this stage. Hence, Indicator 1 is judged as having been achieved by the end of project duration.



(Source) Produced by the surveyor based on the documents from JICA and returned Questionnaire from TANROADS

Chart 3: Budget and Expenditure of TANROADS (till Project Completion)



(Source) Produced by the surveyor based on the documents from JICA and returned Questionnaire from TANROADS

Chart 4: Expenditure Rate of TANROADS (till Project Completion)

(Indicator 2: Reduced cost/km of maintaining roads to specification during the project)

The achievement is shown in Table 3. The cost per km of maintaining roads decreased by 0.28 million TShs in FY2006, but increased by 0.36 million TShs the following year. Hence, it cannot be judged that the cost per km decreased. Also, the same data was not collected in FY2008, although different type of data exist, which makes it difficult to compare with previous years. Furthermore, this indicator is hardly usable for measuring capacity enhancement of TANROADS brought about by this project, as many other elements¹⁵ influence the cost of roads maintenance.

Table 3 The Cost per km of maintaining roads (Trunk Roads)

Unit: million TShs.

Fiscal Year	Cost
2004/05	0.86
2005/06	0.86
2006/07	0.58
2007/08	0.94
2008/09	N/A

(Source) Produced by the surveyor based on the documents from JICA and returned Questionnaire from TANROADS

Therefore, judging the achievement of the Project Purpose by utilizing Indicator 2 is not possible.

<Other information related to achievement>

- Utilization of knowledge gained through training at work

In addition to the Indicators shown in the Project Design Matrix (hereinafter, PDM), the extent of utilizing knowledge gained through training is regarded as another means for measuring achievement of capacity development under the project. The result of the questionnaire survey mentioned previously shows that in regards to utilization of knowledge and skills gained through the training by the end of the project duration, no respondents replied “utilized very much”, nine replied “utilized”, none replied “not utilized much”, one replied “not utilized at all”, and one did not reply to the question. This means 82% is comprised of the total of “very much utilized” and “utilized”. As for

¹⁵ For instance, price increases, the cost of raw materials affected by changing exchange rates, and the appropriateness of cost estimations by construction contractors are regarded as influences.

the usefulness of the training, the number of respondents who replied “very useful” was three, “useful” was seven, “not so useful” was one, and “not useful at all” was zero. This shows that the total respondents who answered either “very useful” or “useful” made up 91% of the total. Furthermore, in regards to the improvement of work performance by gaining knowledge through the training, the number of respondents who answered “very much improved” was two, “improved” was seven, “not so much improved” was two, and “not improved at all” was zero. This shows that 82% of the respondents answered either “very much improved” or improved”. Although the data above is not so reliable due to the limited number of responses, most of the staff that participated in the training utilized the knowledge gained at work, which was useful to some extent. The result was that their performance is recognized to have improved by themselves.

- Development of a Road Maintenance Handbook and capacity development of staff

As mentioned previously, a “Road Maintenance Handbook” targeting engineers at the regional offices was developed in order to share common definitions on basic terminology about road maintenance, as well as to standardize the methodology of how to cope with the situation at the sites. In the questionnaire survey given to the training participants on the Handbook’s contribution to improving management of road maintenance, among 11 respondents, the number of staff who replied “contributed very much” was one, “contributed” was seven, “did not contribute much” and “did not contribute at all” was zero, and three did not answer the question. This shows “contributed very much” and “contributed” made up 73% of the responses. The Handbook is regarded as having contributed to improving the work performance of staff,¹⁶ being utilized mainly by young and middle generations at road maintenance sites covered by the regional offices.

- A project supporting TANROADS (RSSP) by the Danish International Development Agency¹⁷ (hereinafter, DANIDA)

DANIDA implemented the Road Sector Support Program (2005-2010) as a technical cooperation project with TANROADS at almost the same time as this project. The purpose of the project was efficient and effective road maintenance through capacity development of TANROADS staff and improvement of management systems such as through the development of a database. The major components included: 1)

¹⁶ According to the interviews at TANROADS regional offices (Coat, Dar es Salaam, Morogoro).

¹⁷ An internal organ of the Foreign Ministry of Denmark, and implementing organization of humanitarian assistance and development cooperation to developing countries.

establishment and reinforcement of a database on the road maintenance plan and its budget management (Road Maintenance Management System, hereinafter RMMS), 2) development of manuals (for engineers at regional offices), and 3) training, etc.¹⁸ The Danish project is similar to this project in the sense of being a technical cooperation project aimed at capacity development of TANROADS at its headquarters, including the road maintenance section¹⁹ and the regional offices. TANROADS regards the Danish project highly, especially from the viewpoint of its effects on enhancing work performance through database development. Furthermore, both projects have affected each other, resulting in complementary effects. For instance, JICA developed a manual (the Road Maintenance Handbook) for the sake of appropriate and quick action on road maintenance at sites, while DANIDA's manual is aimed at improving road maintenance from the medium and long-term perspective, including recurring prevention measures, etc. Hence, both projects produced complementary effects on each other, and are regarded as having contributed to the development of the management capacity of TANROADS.

As explained above, in terms of the Project Purpose of TANROADS, Indicator 1 was achieved, and Indicator 2 cannot be utilized as it is not appropriate, while it was not achieved. On the other hand, many of the training participants utilize the knowledge gained through the training at work. It is judged that certain achievements were made in the capacity development of TANROADS due to the utilization of knowledge through the training, as well as the complementary effects of the DANIDA project.

(2) The CRB: To improve the CRB's capacity for training of contractors
(Indicator 1: Increase of knowledge through training)

The achievement of this indicator is as follows.

- The ratio of correct answers before the test: 32% (average of all the 12 participants)
- The ratio of correct answers: after the test: 85% (average of nine participants)

Basically, "improvement of understanding" is included at the level of Output, because it is a result of implementing training courses, i.e., activities. Hence the CRB's capacity for training contractors cannot be measured solely by this indicator. On the other hand, it is regarded that the project purpose for the CRB had to be limited, as the CRB was

¹⁸ RAMBOLL (2010) *Consultancy Services for Provision of Technical Assistance to TANROADS Project Completion Report, Final*

¹⁹ Staff in charge of the database in the planning section are included in the target group of the Danish project, in contrast with this project. Managers at headquarters and regional offices are common targets of both projects.

added to the counterpart organizations in the latter half of the project duration, with only about two years of cooperation. Since it is difficult to enhance the whole capacity of CRB's training within two years, what the project intended is not regarded to be the enhancement of all the seven courses which the CRB offered, but fostering trainers for only two of the courses within in which trainers were in severe shortage. Therefore, this indicator is utilized for the evaluation.

<Other information related to achievement>

1) Capacity development of the CRB through TOT

- Improved performance of the TOT participants

With regard to the improvement in performance as a trainer of TOT participants by the end of the project duration, in the questionnaire to which six TOT participants responded, the number of replies for "very much improved" was four, "improved" was one, "not improved much" and "not improved at all" was zero, and one respondent did not give an answer to the question. The total of the respondents who answered "very much improved" and "improved" made up 83% of the total. It is observed that many of the participants perceive that their performance as a trainer improved through TOT.

- Utilization of trainer candidates trained

In the questionnaire given to the TOT participants, in regards to how many times the participants experienced trainer jobs by the project completion, the number of replies for "one to five times" was five, and one respondent did not answer the question. However, not all the participants who experienced trainer jobs were engaged by the CRB, as teaching experience at a university and at seminars at private companies are included above. Only two TOT participants were engaged with training at the CRB as trainers by the end of the project duration, while the rest were not.²⁰ This is because the CRB focused on the best TOT participants based on advice from the TOT trainer, and the CRB's budget for training was limited and the number of courses could not be drastically increased. However, the advice to intensively utilize the best participants for accumulating experience is adequate, in consideration of the limited opportunities for the trainers.

2) Capacity development of the CRB in training contractors

- Comprehension level of contractors who participated in the training by the time of the

²⁰ According to an interview at the CRB.

project completion

In the questionnaire survey given to the thirteen contractors who participated in the training by the CRB, in regards to understanding of the training, the number of replies for “very well understood” was three, “mostly understood” was ten, and “not so well understood” and “not understood at all” was zero. As it shows, the total of “very well understood” and “mostly understood” make up 100%, so it is regarded that the comprehension level of the participants of the training contents improved. Also, there were favorable comments on the training from contractors such as, “I could understand the training content” and “the lecture was easy to understand”, etc., made at the interview survey with the contractors.

- Usefulness of training

In the same questionnaire survey given to the contractors, as for the improvement of work performance through the training, the number of replies for “very useful” was six, “useful” was five, “not so useful” and “not useful at all” was zero, and two respondents did not answer the question. As the total of “very useful” and “useful” made up about 85% of the total, it is regarded that many of the participants recognize that the training was useful. In the interview survey with contractors who attended the training courses as well, most of the contractors made comments that the training was useful.

Based on the above, 1) Indicator 1 for the Project Purpose of the CRB was achieved, 2) the participants of TOT recognize that work performance was improved through the training, and 3) the contractors who participated in the CRB training also highly evaluated the utilization of knowledge gained through the training, as well as the improvement of work performance as a result.²¹ Therefore, the Project Purpose for the CRB was mostly achieved by the end of the project duration.

(3) The RFB: To improve the RFB’s capacity for monitoring and evaluating usage of the Roads Fund as well as capacity to increase the Roads Fund
(Indicator 1: Improved quality of auditing reports)

Although the final draft of the Technical Audit Manual was completed in September 2008, it was not in time to be applied to the Audit Report because the Audit Report has to be completed by November every year and the time is therefore limited. Therefore, Indicator

²¹ According to interviews with the contractors who participated in the training.

1 for the Project Purpose of the RFB was not achieved by the end of the project duration.

(Indicator 2: Improved documents published by the RFB to promote an increase in the Roads Fund)

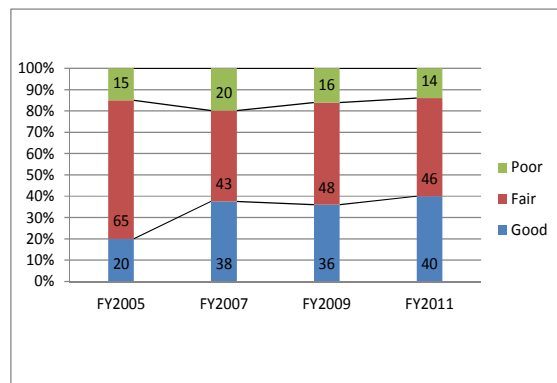
After the project commencement, the revenue of the RFB was doubled in FY2007/2008 (starting from July 2007) as the fuel levy was raised. Because of this, the activities to promote an increase in the Roads Fund were omitted from the project plan. Therefore, its achievement is not evaluated.

Therefore, the Project Purpose for the RFB was not achieved by the time of project completion, as Indicator 1 was not achieved and Indicator 2 was omitted from the plan.

Based on the above, this project has largely achieved its objectives, except for the ones that were omitted due to the change in the project plan, or were not appropriate, and Indicator 1 for the RFB. Therefore, its effectiveness is high.

The improvement of knowledge gained through training and its utilization at work, as well as the development and utilization of the handbook contributed to the improvement of the expenditure rate of TANROADS (of which the project duration was the longest among the three organizations), by the time of the project completion. As for the CRB, which joined the project when it was extended, focusing the project purpose on a specific area led to a high level of achievement.²² As for the RFB,

the planned time for completion was too short for the Technical Audit Manual (one of the Outputs) to be applied to the Auditing by the end of the project duration.



(Source) TANROADS Road Condition Trend
(Remarks) Impassable roads are not included.

Chart 5: Road Condition of Trunk Roads and Regional Roads

²² However, for the same reason, the project’s effect on capacity enhancement of the entire CRB is limited.

3.2.2 Impact

3.2.2.1 Achievement of the Overall Goal

Overall Goal: Good road conditions

(Goal: Appropriate maintenance implemented.)

(Indicator 1: Road condition (good, fair, poor)²³)

This indicator is in line with the three levels of evaluation criteria on road condition utilized by TANROADS. The average of the paved and unpaved roads throughout the project duration is shown in Chart 5.²⁴

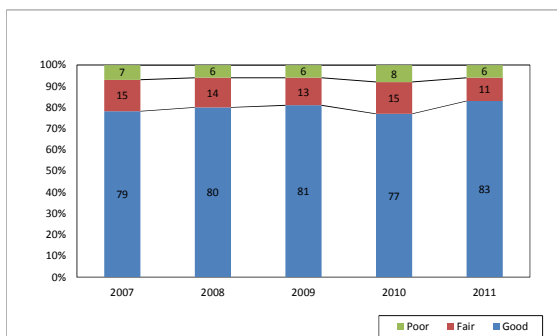
As this project intended to develop capacity for road maintenance management, it is appropriate to emphasize the extent of the decrease in the incidence of “poor” categorization among the three levels. The data for the average of all the roads under TANROADS management does not show a decrease in the “poor” categorization in regards to Indicator 1.

On the other hand, the data for Indicator 1 for Trunk and Regional Roads and paved and unpaved roads respectively are shown in Charts 6–9. Namely, the three categories except for the trunk and paved roads show a decrease in the incidence of “poor” categorization, while the incidence of “poor” categorization for trunk paved roads is almost the same as at the project commencement time. The incidence of “poor” categorization for unpaved roads slightly increased in 2009, but the reason was aggravation of road conditions caused by heavy rain.²⁵

²³ The evaluation criteria of road conditions adopted by TANROADS. According to the interview with TANROADS, “travel speed of vehicles” and “Roughness Index” (both are included in the indicators for the Overall Goal) are taken into consideration when the data is calculated. Furthermore, it is recognized by TANROADS that this evaluation criteria does not strictly indicate the change in road conditions over time, due to periodic changes in classification of roads from roads under management of local governments to that of TANROADS (information from JICA Tanzania Office).

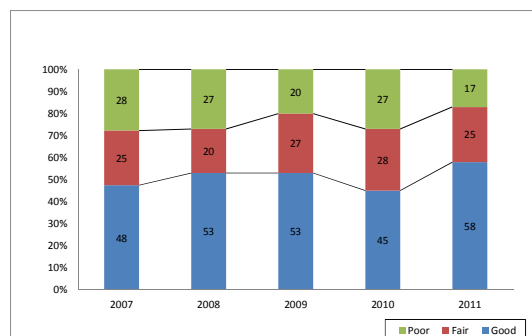
²⁴ The data for this indicator for 2008 adopted in the Terminal Evaluation Report was good 55.8%, fair 33.9%, and poor 15%. However, it was revealed that the reliability of this data is low because there were two types of data collection methods simultaneously utilized by TANROADS, and the data above was collected through the “Quarterly Report Data Collection Method”, which was less reliable. Therefore, the data from the RMMS database was adopted at the ex-post evaluation survey. According to the interview with TANROADS, the reliability of data collected through the “Quarterly Report Data Collection Method” is low, because this simple method was utilized for the sake of quickly grasping the latest situation on a quarterly basis, without waiting for the formal data collection (once a year).

²⁵ TANROADS Operational Plan FY2012/13



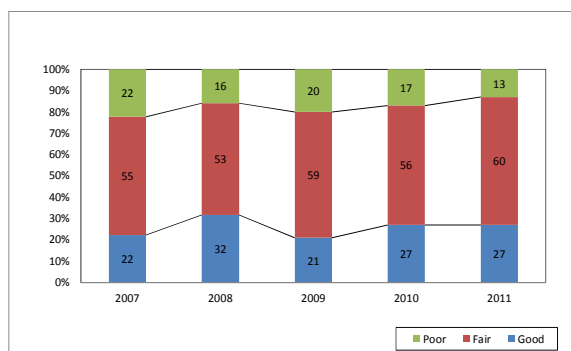
(Source) TANROADS Operation Plan
FY2012/2013

Chart 6 Condition of Paved Trunk



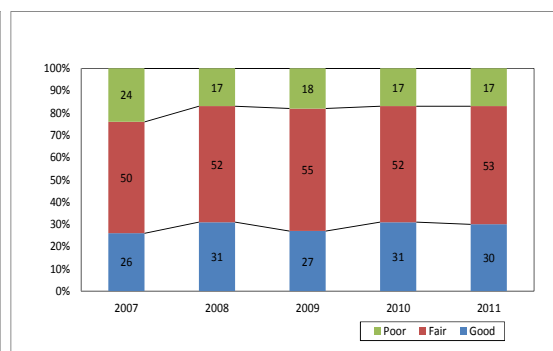
(Source) TANROADS Operation Plan
FY2012/2013

Chart 7 Condition of Paved



(Source) TANROADS Operation Plan
FY2012/2013

Chart 8 Condition of Unpaved Trunk



(Source) TANROADS Operation Plan
FY2012/2013

Chart 9 Condition of Unpaved Regional

(Remarks) Impassable roads are not included in Chart 6 – 9 above.

As stated before, a decrease in the incidence of “poor” categorization signals the appropriate implementation of road maintenance works. Also, among the roads managed by TANROADS, the three categories (especially unpaved roads), except for paved trunk roads, make up an overwhelmingly large portion.²⁶ Therefore, Indicator 1 is regarded as achieved.

2) Indicator 2: Travel speed of vehicles

There is no existing data on the travel speed of vehicles on the roads under TANROADS management. Instead, the data for Indicator 1 (average of all the roads) is made open to the public annually.

²⁶ For example, the total length of all roads under TANROADS management was 86,472 km in FY2011. Paved trunk and regional roads were 7,092km (8.2%) and 91.8% was unpaved roads (Joint Infrastructure Sector Review 2010).

3) Indicator 3: Smoothness of ride (Roughness Index)

There is no existing data on the smoothness of ride (Roughness Index) for the roads under TANROADS. Instead, the data for Indicator 1 (average of all the roads) is made open to the public annually.

4) Indicator 4: Decrease in the percentage of disqualified bids

Information on the assessment of the qualification of bidders (construction contractors who participated in the biddings of road maintenance works) and the results of biddings are not made open by TANROADS. Also, the data is kept by each regional office, and not compiled in the same way as the information of the entire organization of TANROADS. Hence, the data on disqualified bids (that might have shown the sign of improved capacity of contractors) in TANROADS was not available.

Based on the above, the Overall Goal was mostly achieved in terms of the target indicators available. Therefore, its impact is high.

3.2.2.2 Other Impacts

- (1) Impacts on the natural environment: Nothing in particular.
- (2) Transmigration of residents, land acquisition: None.
- (3) Other impacts: As shown below.

● Change in TANROADS staff who participated in the training

The following changes are recognized by TANROADS staff, according to the interviews and questionnaire survey.

- It was recognized more clearly that appropriate planning and management of road maintenance management contracts was necessary in order to effectively utilize limited resources.
- The project led us to conduct our work in a timely manner.
- We have acquired a way of thinking that promotes thinking ahead and starting preparations in advance.
- The importance of “standardization” and “common procedures” was emphasized and is now well recognized.
- We understand the importance of a systematic way of thinking.

- Utilization of knowledge of contractors at work

In regards to the utilization of knowledge gained by contractors who participated in the CRB training in their work at the time of ex-post evaluation, in the questionnaire survey to which 13 contractors responded, the number of replies for “very much utilized” was four, “utilized” was six, “not utilized so much” was two, and “not utilized at all” was one. The respondent who answered “not utilized at all” also answered another question, making the comment, “the knowledge gained through the training was very useful, and I have been trying to further improve my capacity through my daily work”. Therefore, it is probable that the previous answer was chosen by mistake. Furthermore, 10 out of 13 participants (77%) answered either “very much utilized” or “utilized”, so it is regarded that many contractors utilize the knowledge gained through the training at work.

- Contribution of CRB’s training to improvement of work

As for the usefulness of the training for contractors to improve work performance, in the questionnaire survey to which 13 responded, the number of replies for “very useful” was six, “useful” was five, “not so useful” was one, and “not useful at all” was zero. Since the total of “very useful” and “useful” makes up 85% of the responses, participation in the training is recognized as useful by the participants.

- Utilization of the Road Maintenance Handbook outside of TANROADS

A local government (Dar es Salaam) expressed intentions to utilize the Road Maintenance Handbook developed by the project, and some handbooks were offered to them. This is a ripple effect of the project on other roads (under the management of the “Prime Minister’s Office Regional Administration and Local Government,” or PMORALG), as its usefulness was recognized by the local government.

- Negative impacts

No negative impact was observed.

This project has largely achieved its objectives, except for the project purpose of the RFB. As for the Overall Goal, an improvement of road conditions was observed, together with other effects seen mostly as planned. Therefore, its effectiveness is high.

3.3 Efficiency (Rating: ③)

3.3.1 Inputs

Inputs	Plan	Actual Performance
(1) Experts	<p>4 (No indication of M/M) There was no specification about long or short-term, while the possibility of “shuttle type dispatchment,” or dispatching short-term experts repeatedly or frequently instead of dispatching a long-term expert, was indicated.</p> <p>1. Chief Advisor/Road Maintenance Plan 2. Organization Enhancement/Human Resources Development 3. Road Maintenance Monitoring/Road Maintenance System 4. Procurement</p>	<p>0 for long-term 5 for short-term (63.70M/M)</p> <p>1. Chief Advisor/Road Maintenance Plan 2. Human Resources Development I 3. Road Maintenance System 4. Procurement 5. Human Resources Development II</p>
(2) Trainees Received	<p>Field(s) of training: N/A 2 trainees per year</p>	<p>Field of training: Road management administration 5 trainees (2 in FY2005, 3 in FY2006)</p>
(3) Third-Country Training Programs	N/A	None
(4) Equipment	Equipment required for training activities	PC, projector, screen, video, etc.
Total Project Cost	Approx. 200 million yen	Approx. 280.53 million yen

Total Local Cost	Approx. 10 million yen ²⁷	TANROADS: 25 million TShs. ²⁸
		CRB: 672 million TShs.
		RFB: 10 million TShs.
		TOTAL: 707 million TShs.
		Approx. 39 million yen ²⁹

3.3.1.1 Elements of Inputs

(1) Experts

The actual figure of dispatching experts was five (63.70M/M), while the initial plan was four. However, as there is no record of the targeted figure on the volume of works by Japanese experts to be dispatched on M/M basis at the planning stage, comparison between the planned and actual figures is hardly possible. Although TANROADS was the only counterpart organization in the initial plan, the addition of two organizations (the CRB and the RFB) led to the extension of the project duration, and an increase in project purposes and outputs for the extended period. To cope with these additional objectives, an increase of one more expert is not judged to be excessive.

(2) Trainees received

Two trainees were received in the second year, and three in the third year, although two trainees were expected to be received per year in the initial plan. The topics covered in the training-in-Japan program include Japan's road administration, road maintenance management, and the Roads Fund. The program was designed with an appropriate combination of lectures and field visits (such as to Hanshin Superhighway), and was efficiently planned to be implemented within a limited duration of nine days.

(3) Equipment, etc.

Equipment required mainly for the training was provided, such as a projector, screen, PC, video, etc.

3.3.1.2 Project Costs

Project costs surpassed the initial plan by about 80 million yen. However, it was mostly as planned, or still within an appropriate level, considering the increase in the project

²⁷ Material offered by JICA.

²⁸ The figure is the cost for implementing the seminar for the Road Maintenance Handbook. There were other costs borne by TANROADS, such as travel costs of participants for seminars on the Guidelines, etc. However, they are not included as there is no record of them, as the project costs were not managed separately from other general costs of TANROADS.

²⁹ The exchange rate was adopted for the year of 2009, when the project was completed, although it is the rate as of June.

purposes and outputs.

3.3.1.3 Period of Cooperation

This project was extended for approximately one year and one month, because the project purposes, outputs and activities required concerning the CRB and the RFB were added. As explained in 3.2.1 Effectiveness (1), the outputs concerning with TANROADS which has been the counterpart organization from the beginning, were mostly achieved by the end of the initial planned project duration, except for the printing of a hardcover version of the Handbook³⁰ and training of contractors, which was omitted from the project plan.

In the meantime, PDM was not established for the project at the time of the Ex-ante Evaluation, and the expert consultant team was instructed to make it after project commencement (in the scope of work in the contract for the second year). As a result, it gave the impression to the Tanzanian side at the discussion with TANROADS that some of the requests were disregarded, and it consumed more time than expected for the expert consultant team. If PDM were established before the project commencement as per usual, it would have been possible to execute the tasks more efficiently. However, this problem did not have a serious negative influence on this project.

Hence, although the project duration was slightly longer than planned, it was mostly as planned considering the increase of the project purposes, outputs and activities.

Therefore, the inputs were appropriate for producing outputs and achieving the project objectives, and project costs and the period of cooperation were mostly as planned. Therefore, the efficiency of the project is high.

3.4 Sustainability (Rating: ③)

3.4.1 Policy Related to the Project

In “The Tanzania Development Vision 2025”, the government put top priority on investment in infrastructure, especially development of the road network as the pivot of regional development.³¹ Also, “The Tanzania Five Year Development Plan” (2011/2012-2015/2016) indicates the importance of the development of the road network, which is indispensable to economic growth, and the promotion of a road corridor through construction, rehabilitation and maintenance of roads in order to optimize distribution

³⁰ The development of a softcover version of the handbook was completed and distributed within the project duration as initially planned (3.2.1. Effectiveness).

³¹ The Tanzania Development Vision 2025 P20.

and services for strategically important sectors and regions.³² Also, in the “Short Transport Sector Investment Plan (2011–2014), the budget of TANROADS comprises 80% of the total budget, which shows the importance of trunk and regional roads in transportation.³³

Therefore, Tanzanian policy emphasized road sector development and road maintenance at the time of ex-post evaluation. Also, this policy direction is expected to continue in basically the same way for the next few years, considering the targeted duration of the policies above.

3.4.2 Institutional and Operational Aspects of the Implementing Agency

At the time of ex-post evaluation, the roles and positions of the counterpart organizations were the same as before, and there was no problem in terms of their mutual relationships. The specific situation for each organization is as follows.

(1) TANROADS

As for the institutional aspect of TANROADS, there was a comment that the allocation of staff as trainers is not necessarily sufficient. Also, some of the vacant posts for engineers at regional offices are not filled because not all staff that retire are replaced with newcomers due to the lack of budget. However, this problem is not so serious enough to endanger the continuity of work for TANROADS.

Also, at the interview with TANROADS, it was explained that a human resources development plan exists, although its details and the extent of correlation with the personnel plan were not made clear. However, it is a favorable factor that the “Action Plan”, which was developed and described in a report produced by the project and is concerned with recommendations on the future staff training of TANROADS, was shared with the person responsible for human resources development in TANROADS through this evaluation survey.

(2) The CRB

As for the institutional aspect of the CRB, there was a reply in the questionnaire survey that the number of staff who were engaged in training was not sufficient. As mentioned before, not many of the participants of TOT have continuously been utilized. This is

³² The Tanzania Five-Year Development Plan (2011/2012-2015/2016): unleashing Tanzania’s Latent Growth Potentials (June 2011) PP60-61.

³³ Short Transport Sector Investment Plan (TSIP Three-Year Rolling Plan 2011/12-2013/14 (Dec 2011) P25.

because the targeted course for which the project conducted TOT is focused on two courses out of seven, and the number of the targeted courses per year cannot be drastically increased due to budget limitations. On the other hand, most of the participants of TOT are not CRB staff but have other main jobs as consultants or contractors.³⁴ Sometimes, they cannot accept requests to give lectures due to other engagements, and at other times, it is difficult to teach a five-day course alone because of the same reason.

Because of this, from 2012 the CRB started to invite expressions of interests from external consultants who are possible candidates for trainers in order to secure a sufficient number of trainers. The CRB will make course modules, secure about four trainers for each course, and establish a new system in which a team of trainers teaches one course. Also, by the end of 2012, the CRB will conduct a TOT for the newly secured trainers as well as the trainers fostered under the project. Therefore, the institutional aspect of the CRB has been gradually strengthened although there are some issues.

(3) The RFB

The RFB has established a stable implementation system for technical auditing by securing a sufficient number of staff. This was possible as they could secure external auditors by outsourcing in addition to utilizing internal personnel.

3.4.3 Technical Aspects of the Implementing Agency

(1) TANROADS

The main target of the training under the project is managers, engineers at regional offices and managers at the headquarters, etc. In the questionnaire survey, in regards to whether or not the participant shared what he/she learned with other staff, the number of replies for “yes” was six, “no” was two and three respondents did not answer the question (from a total of 11 respondents). As for with whom participants shared knowledge with, the number of replies for “subordinate or junior staff” was three, “colleague” was three, out of six respondents (it was acceptable to give more than one answer). As for the number of people who had knowledge shared with, the number of replies for “1-5” was three, “6-10” was one, and “more than 11” was two. This shows that many participants shared the training contents with subordinates or junior staff at the same office.

³⁴ As mentioned before, among nine participants who completed TOT, three of them were acknowledged as “qualified as trainers” by the trainer of TOT. Among the three participants acknowledged, two of them were hired by the CRB in the form of supporting a trainer who was already working for the CRB (material offered by JICA).

With regard to the utilization of knowledge gained through training at the time of ex-post evaluation, among eleven respondents to the questionnaire, the number of replies for “very well utilized” was two, “utilized” was seven, “not utilized much” was zero, “not utilized at all” was one, and one respondent did not answer the question. As the total of “very well utilized” and “utilized” made up more than 80% of the total, the knowledge gained through the training is regarded as being mostly utilized by the participants.

As for “The Road Maintenance Management Handbook” developed by the project (Indicator 4 for Output 1 of (1) TANROADS), it is widely recognized at TANROADS and utilized mainly by the young and middle group of engineers at regional offices.³⁵ In the meantime, “The Guideline for the Workflow of Road Maintenance Management” (Indicator 2 for Output 1. of (1) TANROADS) is not clearly recognized by the staff and is confused with other guidelines, as there are many other guidelines in spite of the development of the “Directory of Manuals/Guidelines Used in Regional Offices” (Indicator 3 for Output 1). At three of the regional offices visited during the field survey, the above-mentioned guideline was not utilized, and none of the staff met has seen it before. On the other hand, the procedures are taken in the order and schedule as instructed in the guideline, because the headquarters keep sending letters of instruction to the regional offices in accordance with the workflow described in the guideline above. Hence, the problem of delays in internal procedures caused by late reporting and communications is regarded as having been solved already, and a smooth and timely management system has been already established. The guideline is regarded as having contributed to the standardization of procedures at the headquarters level.

Also, the project has been contributing to capacity development in terms of planning, procurement, and project management of road maintenance management, coupled with other donors’ support at the time of ex-post evaluation. In regards to support from other donors to TANROADS, CTCP-2 (Central Transportation Corridor³⁶ Project II) is being implemented simultaneously with the upgrade of the Central Corridor with support from the World Bank. This is following CTCP-1, in which training of TANROADS staff has been conducted on road management in general in and out of Tanzania (South Africa, Swaziland, Ghana, etc.). Furthermore, the African Development Bank has been

³⁵ The interviews at TANROADS (Regional Offices of Coast, Morogoro and Dar es Salaam)

³⁶ The international trunk road, which is 463 km, stretches from Dar es Salaam Port in Tanzania to Kigali, the capital of Rwanda, by way of the south side of Victoria Lake. It is called the “Central Corridor”, which is recognized as the major international economic corridor. The World Bank has been conducting CTCP project Phase 2, in which improvement of roads as well as development of management capacity on road management are included.

supporting TANROADS's capacity development in project management and improvement of expenditure rate as a part of TSSAP-2 (Tanzania Road Sector Support Project 1).

Although its budget is not abundant, TANROADS has been supporting 20 staff members in acquiring master's degrees (through support for school expenses, provision of convenience to leave office at 4pm, etc.).

(2) The CRB

As for the quality of trained trainers at the CRB, both the self-evaluation of the trainers and evaluation by the contractors who participated in the training was high, even at the time of ex-post evaluation. However, the opportunities for the participants of TOT to accumulate experience as trainers at the CRB training are not sufficient, as the CRB cannot increase the number of courses due to budgetary reasons. Also, many of the TOT participants shared the knowledge and skills gained through TOT with their colleagues, but have not reached the level of fostering a new trainer by themselves. If the TOT that is now planned by the CRB is implemented (as mentioned in 3.2.1.1.(2)), it will contribute to the capacity of the CRB to train trainers, providing a good opportunity for brushing up for the participants of the TOT provided by the project, especially for those who do not have sufficient experiences so far, and enhancing capacity of trainers to be recruited under the new system.

(3) The RFB

During the technical audits by the RFB, the Technical Audit Manual developed by the project has been applied since FY2009.³⁷ Also, the RFB expressed its intentions to continue utilizing it in the future as well. The RFB evaluates the Technical Audit Manual highly, and is determined to improve it if necessary.

The RFB has been receiving support for capacity development from the African Development Bank, and for capacity development in technical and financial management from DANIDA. Complementary effects on the capacity enhancement of staff are recognized, which is regarded as further increasing the possibility of maintaining the quality of technical audits in the future.

³⁷ Interview with the RFB.

3.4.4 Financial Aspects of the Implementing Agency

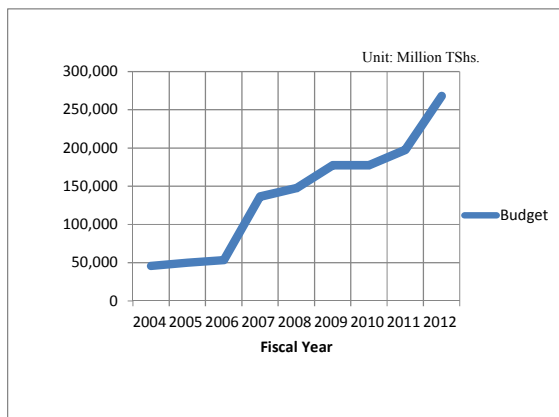
(1) TANROADS

The transition in the amount of the road maintenance budget of TANROADS is shown in Chart 10, which shows a constant increase. It increased by 5.9 times for the last eight years since project commencement, without any decreases at all. In FY2012, it increased by 36% compared with the previous year. As a result, the gap between the maintenance needs (requested amount) and the budget (accepted amount) was narrowed to 16%,

making a significant difference from 30% in the previous year. The main reason for this budget increase is the increased consumption of diesel, which is a taxable item under a fuel levy, caused by decreased illegal mixing of diesel with kerosene.³⁸ Kerosene used to be non-taxable, but the government has changed its policy to make it taxable.

There is some uncertainty regarding the financial aspects from a future perspective. It is not assured that the Roads Fund will increase in the future like this year, since there is criticism against making kerosene taxable (some say it will put pressure on households),³⁹ while maintenance needs keep increasing due to an increase in road construction and the degradation of roads. At the same time, the tax rate is almost at the highest level under the present framework of the Roads Fund.

Moreover, a part of District Roads⁴⁰, which used to be under the management of local governments, is “upgraded” or put into another category of roads, i.e., trunk or regional roads, under the management of TANROADS. This puts financial pressure on TANROADS because the budget for these newly “upgraded” roads is not provided to TANROADS. This “upgrading” occurred three times: July 2010, November 2011, and



(Source) Produced by Surveyor based on the returned questionnaire from TANROADS

Chart 10 Transition of Road Maintenance Budget of TANROADS

³⁸ If there had been no change in the taxability of kerosene, the gap between the maintenance needs and the budget was expected to remain at about 30% (28% specifically), as the budget was expected to be 228,545 TShs. (TANROADS Operational Plan FY2012/13)

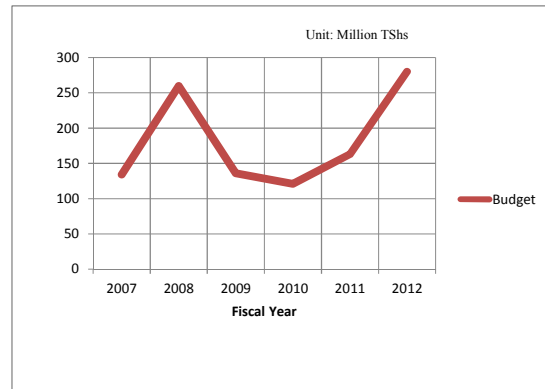
³⁹ Interview at the RFB.

⁴⁰ The local governments are also responsible for management of urban roads and feeder roads in addition to district roads. However, the roads mentioned here are only district roads (interview with TANROADS).

May 2012. These roads total 5,259 km without a budget allocation. Within the total length, only 7.5km is paved, and the rest (5,252 km) is unpaved road, which is susceptible to damage caused by weather. These are matters of concern for further improvement of road conditions in the future.

(2) The CRB

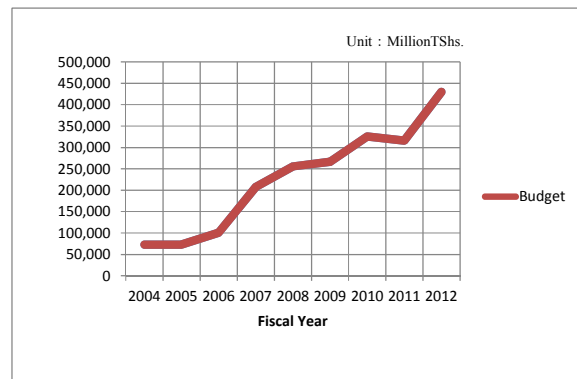
The transition of the CRB budget is shown in Chart 11. The CRB does not receive any government budget and the main source of revenue is the registration fee, member fee and the tuition fee collected for the contractor training courses. The annual budget fluctuates depending on the year, and drastically increased in 2008, decreased in the next year, and increased again from the 2010. Hence, it is not certain whether this increasing tendency will continue in the future.



(Source) Produced by Surveyor based on the returned questionnaire from CRB

Chart 11: Transition of Training Budget of CRB

In the meantime, the CRB has been gradually increasing the ratio of costs borne by participants for training, according to the government policy. At present, the CRB covers 40% and the participants cover 60%. The CRB will continue to increase the ratio gradually, so the possibility that the revenue will drastically decrease is low, although a drastic increase cannot be expected either. There were some comments from the contractor side that the burden of costs for training is not too heavy, considering the expected performance improvement of companies to be brought about by a high training effect.⁴¹



(Source) Produced by Surveyor based on the returned questionnaire from RFB

Chart 12: Transition of Road Maintenance Budget of RFB

⁴¹ Interviews with the contractors who participated in the training by the CRB, and their bosses.

(3) The RFB

The transition of the budget of the RFB is shown in Chart 12, which illustrates a constant increase. The RFB has been making efforts to make suggestions and requests for the budget of the Roads Fund every year, including raising fuel levies, etc. As the expected revenue from the fuel levy is almost at the maximum level already, however, the RFB is planning to hire a consultant in order to conduct a survey and examine a new framework for the future.

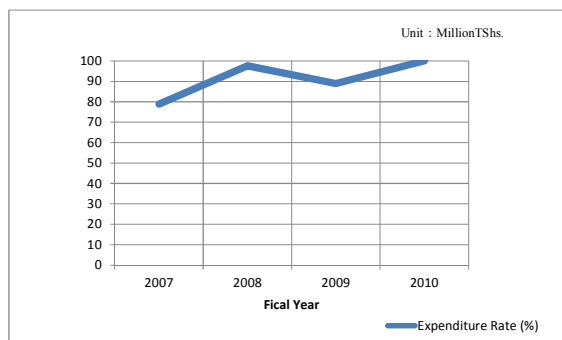
Based on the above, the sustainability from the financial aspect is high, as the budget of TANROADS and the RFB has been increasing constantly, and the gap between the maintenance needs and the budget has decreased.

3.4.4 Continuation of Project Effects

(1) Expenditure rate of TANROADS (Project Purpose)

Among the indicators for the Project Purpose of TANROADS, which is the core counterpart organization of the project, the expenditure rate is the only indicator for which the latest data is available. The expenditure rate from the project commencement till the ex-post evaluation is shown in Chart 13.

Although the expenditure rate after the project completion decreased in FY2009 by 8.7% compared with the previous year, it increased by 11.1% to make it 100% in FY2010. The reason for the decrease in FY2009 was the delay in the remittance of money by the RFB (received three or four days before the end of the Fiscal Year).⁴² The rate increased by 19.4% compared with the time of the project commencement (80.6%) until the time of ex-post evaluation. It remains high after the project completion, with slight fluctuations.



(Source) Produced by Surveyor based on the returned questionnaire from TANROADS

Chart 13: Expenditure Rate of TANROADS

(2) Future perspective on road conditions (maintenance/improvement)

As mentioned before, paying attention to the incidence of “poor” categorization among

⁴² Interview at TANROADS.

the three levels of criteria, i.e., “good”, “fair” and “poor” categorizations of road conditions, the ratio of “poor” categorization decreased in all the three categories of roads except for “paved trunk roads”. It is especially important that the ratio of “poor” categorization decreased in unpaved roads, which are susceptible to damage caused by weather conditions such as heavy rains. This is regarded as having been brought about by the enhancement of the management capacity of the headquarters and regional offices through standardization of procedures and sharing common methods; improvement of the Performance Agreement and Technical Audit (which became a stimulus for TANROADS);⁴³ and support from other donors including DANIDA (which further strengthened the system and knowledge of TANROADS staff).

Considering the above-mentioned situation and the policy, institutional, technical and financial aspects, a certain level of improvement can be expected for the road conditions of trunk and regional roads in the future as well, although there are minor matters of concern, such as upgrading roads without budgetary allocations.

No major problems have been observed in the policy background, or the structural, technical and financial aspects of the executing agencies. Therefore, the sustainability of the project effects is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project was implemented aiming at capacity development of organizations concerned with road maintenance management for the goal of improving road conditions in Tanzania. In Tanzania, roads form part of development needs, since they are the major means of transportation. This is highly in line with Tanzanian development policy, as well as with that of Japan. Therefore, the relevance is high. The Effectiveness and Impact are high, because the outputs and project purposes were mostly achieved by the end of the project duration, and the Overall Goal (improvement of road conditions) was mostly achieved. Although project costs and the project duration surpassed the initial plan, it was appropriate enough as they were caused by the addition of Outputs, etc. Therefore, efficiency is high. Since no major problems have been observed in the policy background, or the structural, technical and financial aspects for continuation of the project effects, sustainability is high.

In light of the above, this project is evaluated as highly satisfactory.

⁴³ Interview at the RFB.

4.2 Recommendations

Recommendations based on the above for the counterpart organizations and JICA are as follows.

4.2.1 Recommendations to the Executing Agency

(1) TANROADS

The Action Plan developed by the project concerned with training for TANROADS staff should be examined and utilized for future personnel development planning.

(2) The RFB

It is recommended that examination of the means for securing sustainable roads funds as well as continuous budget requests to cope with the increasing needs of road maintenance be undertaken.

(3) The CRB

It is recommended that continuous efforts are made to increase the frequency of the training courses to cope with the training needs of contractors.

4.2.2 Recommendations to JICA

None.

4.3 Lessons Learned

(1) Points to consider when supporting newly established organizations

In supporting a relatively new organization after its establishment like TANROADS in circumstances in which social, economic and political changes are rapidly occurring within a short time span, it is possible to have significant changes even after the Ex-ante Evaluation until the time of project commencement. If there are any significant changes after the Ex-ante Evaluation until project commencement related to points that are essential to the project cooperation, such as the result of analysis of the problems and needs that became the basis for the whole project planning, it is difficult to cope with during the implementation stage. In such cases, it is very important to pay attention to the future aspect of the change more carefully than usual, and collect sufficient information to be reflected in the project planning.

(2) Establishment of PDM before project commencement

Establishment of PDM after project commencement requires more time for mutual

understanding than usual. It can sometimes lead to distrust among organizations concerned and a delay in activities. It should be avoided to establish PDM after project commencement, so that a draft of PDM is established at the Ex-ante Evaluation, and mutual understanding at the R/D mission is secured, in order to maximize project effects within the limited project duration.