Simplified Ex-Post Evaluation for Grant Aid Project

Evaluator, Affiliation	Junko Noguchi Foundation for Advanced Studies on International Development	Duration of Evaluation Study
Project Name	The Project for Complementation and Amplification of Construction Equipment for the Rehabilitation and Maintenance of the Rural Roads	January 2010 – December 2010

I Project Outline

Country Name	Republic of Nicaragua	
Project Period	August 2004-September 2005	
Implementing Agency	Rural Development Institute	
Project Cost	Grant Limit: 812 million yen	Actual Grant Amount: 672.57 million yen
Main Contractors	ITOCHU Corporation, Mitsubishi Corporation	
Main Consultants	Construction Project Consultant, Inc.	
Basic Design	"Basin Design Study of Complementation and Amplification of Construction Equipment for the Rehabilitation and Improvement of Rural Roads in the Republic of Nicaragua," Construction Project Consultant, Inc., July 2004	
Related Projects (if any)	1. JICA, "Project for Capacity Strengthening of Road and Highway Maintenance in the Republic of Nicaragua (2009)" 2. JICA, "Project of Equipment for the Development of Rural Infrastructure (1995)" 3. JICA, 2KR (Part of the counterpart fund used for constructing rural roads) (1989-) 4. BID, EU, GTZ, Italia, Taiwan, Finland "Support for the Agricultural Sector including the development of infrastructure."	
Project Background	Construction of roads is considered a key to social and economic development in Nicaragua. Especially rural agricultural roads are important as the agricultural sector accounts for 40% of the total workforce and 30% of GNP. However many roads were in bad condition and access to the market was limited, and also income sources are limited for poor farmers. The Rural Development Institute implements the nationwide plan for rural road construction to improve transport efficiency, but the plan has not advanced because of a lack of necessary equipment and machinery.	
Project Objective	To procure the machinery and equipment necessary to construct rural roads in order to promote rural road construction of 278 sections (2,766 km) over 3 years (2005-2007).	
Output[s] (Japanese Side)	Procurement of a range of machinery and equipment for construction of farm roads—bulldozers, hydraulic shovels, wheel loaders, a truck crane, dump trucks, road sprinklers, etc.	

II Result of the Evaluation

Summary of the evaluation

In Nicaragua the Rural Development Institute (IDR) had been in charge of the road construction and rehabilitation when this Project was implemented, but the function was relegated from IDR to the Ministry of Transport and Infrastructure (MTI). Now MTI plans and monitors the work of road construction and rehabilitation, which is commissioned to another public organization, the Corporation of Regional Enterprises of Construction (COERCO) and also private companies. The construction work in remote areas is commissioned to COERCO and actually its affiliated organizations conduct the work. The equipment procured by this Project was transferred from IDR to COERCO during the period from July 2009 to July 2010.

This Project aimed to construct 2,766km of rural roads for 3 years, and actually IDR constructed 1,561km. Since 2009, MTI has constructed 667.97km. If these two are added, this achieves most of the original objective. As a result of the road construction, the drive time has decreased and safety has improved, and then fresh agricultural products have been sent to the market and production has increased. Also, access to educational and health facilities has been improved.

COERCO has no structural, technical or financial concerns. Most equipment is well maintained and the budget is sufficient. However, COERCO's work is not sufficiently supervised by MTI.

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

<Recommendation to MTI>

The General Road Direction of MTI monitors the construction work in the country. However, when MTI cannot adequately supervise all the road construction in remote areas from geographical reasons directly, it is necessary to establish a system where the necessary information is gathered and monitored through COERCO. For effective monitoring, it is indispensable to discuss and achieve common understanding among the related parties on what to monitor, who monitors, and when to monitor.

1 Relevance

(1) Relevance to the Development Plan of Nicaragua

In the "National Development Plan (2002)" the program for construction of rural roads was described as a means for increasing agricultural productivity, improving access to health and education facilities, preventing isolation of the remote areas, etc. Furthermore, in the "Poverty Reduction Strategy Paper," rural roads are considered as necessary means for economic and human resource development. In the "National Plan for Human Development (2009-2011)" the improvement of transport and infrastructure continues to be a priority issue.

(2) Relevance to the Development Needs of Nicaragua

Nicaragua is at high risk from natural hazards such as hurricanes, volcanic eruptions and earthquakes, which have damaged infrastructure, including rural roads. At the time of the ex-ante evaluation of this Project, many roads were unpaved or needed to be rehabilitated. However, due to a shortfall in the national budget, greater priority is put on the improvement of arterial roads to industrial areas, than on the rural roads.

(3) Relevance to Japan's ODA Policy

In the "Country Assistance Program for the Republic of Nicaragua" prepared in 2002, "agricultural and rural development" and "infrastructure improvement" are two of the priority areas for Japan's assistance. For infrastructure improvement, construction of major arterial roads and upgrading of the equipment for road maintenance are regarded as necessary.

This project has been highly relevant to the country's development plan, development needs, as well as Japan's ODA policy, therefore its relevance is high.

2 Efficiency

(1) Project Outputs

As the outputs by the Japanese side, machinery and equipment for construction of rural roads were procured as planned—bulldozers, wheel loaders, hydraulic shovels, a truck crane, dump trucks, etc.

(2) Project Period (Project Inputs)

It took 12 months to complete the Project, as planned.

(3) Project Cost (Project Inputs)

The actual cost was 672 million yen, lower than planned (82% of the planned). Through a fair bidding, a contractor which submitted a lower tender price was selected.

Both project period and project cost were within the plan; therefore, efficiency of the project is high.

3 Effectiveness / Impact

(1) Quantitative Effects

IDR had established an objective of constructing 2,766km of rural roads over 3 years (2005-2007), and achieved 1,177km by 2007. In 2008, 384km was constructed. The Project completed the equipment delivery in September 2005, so it is reasonable to count also the achievement in 2008, and in this case, IDR's construction reached 1,561km by the end of 2008. Since July 2009, COERCO has constructed 667.97km with the procured equipment by the Project. (IDR's function of road construction was relegated to MTI, and its affiliated organization, COERCO, has conducted the construction work.)

(2) Impacts (Impacts on the natural environment, Land Acquisition and Resettlement, and Unintended Positive/Negative Impacts)

As a result of the road construction, reported by MTI, the running velocity of vehicles has increased, the drive time has decreased, and the safety has improved compared to before. Now the traffic is assured regardless of the weather. Therefore, the farmers can deliver fresh products to the market. According to IDR, the annual production of coffee beans, basic crops, livestock and milk have increased. Furthermore, access was improved to 290 schools and 120 health centers. A total of 253,400 farmers and residents have benefited.

No negative impact was caused, including on the natural environment.

This project has somewhat achieved its objectives; therefore, its effectiveness is fair.

4 Sustainability

(1) Structural Aspects of Operation Maintenance

As described earlier, IDR's function of road construction has been relegated to MTI, and now MTI is in charge of planning of road construction and rehabilitation, preparation of technical specification, ordering of the work, etc. Road construction and rehabilitation in remote areas has been delegated to COERCO. COERCO has 4 affiliated organizations by region, and it currently has 4 administrative personnel, 39 engineers, 138 operators, 40 mechanics and 10 electricians. The number of operators has increased by 25 since 2005. COERCO says the staff is sufficient for operation and maintenance of the construction equipment. MTI monitors the construction work through the General Road Division. However, as the construction sites are scattered in remote areas, monitoring priority is given to the sections with problems and not all construction is sufficiently monitored by MTI.

(2) Technical Aspects of Operation Maintenance

COERCO has long conducted the road construction, and the personnel in charge of operation and maintenance of the equipment have

15-20 years' experience. Also in the report on the "Basic Design Study on the Project for Strengthening of the Capacity of Road Maintenance in the Republic of Nicaragua," the technical level of COERCO is evaluated as sufficiently high, judging from the status of operation and maintenance of the equipment. COERCO hires personnel who already have sufficient skills for the construction work. The spare parts are available near COERCO.

(3) Financial Aspects of Operation Maintenance

The budget of the road section in 2010 is 2,040 million cordobas, and has been increasing since 2005 (1,520 million cordobas). The budget of COERCO in 2010 is 348 million cordobas, which is a 150% increase from 2005. Among this budget, 277 million cordobas are assigned for equipment operation and maintenance, which COERCO says is sufficient for purchase of fuels and spare parts.

(4) Current Status of Operation Maintenance

Among the procured equipment a small bulldozer, a medium bulldozer, a vibratory roller and a road sprinkler were not functioning at the time of the survey in June 2010, but they got repaired and now all are working. These had already broken down when transferred from IDR to COERCO, and since then they haven't been repaired. For maintenance, the operators or field mechanics regularly inspect the equipment based on the check list, and the mechanics repair it if necessary. When the mechanics cannot repair a machine, it is sent to the central workshop for repair.

Some problems have been observed in the structural aspects of operation maintenance; therefore, sustainability of the project effect is fair.