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.

Simplified Ex-Post Evaluation for Grant Aid Project

Evaluator, Affiliation	Keiko Asato Foundation for Advanced Studies on International Development	Duration of Evaluation Study
Project Name	The Project for the Improvement of Educational Equipment of Nursing	January 2010 – December 2010

I Project Outline

Country Name	Republic of Nicaragua	
Project Period	November 2004-March 2006	
Implementing Agency	Ministry of Health, National Autonomous University of Managua, National Autonomous University of Nicaragua, León	
Project Cost	Grant Limit: 242 million yen	Actual Grant Amount: 201 million yen
Main Contractors	Sirius Corporation	
Main Consultants	International Techno Center CO., Ltd.	
Basic Design	"El Estudio de Diseño Básico del Proyecto para el Mejoramiento de los Equipos Educativos de Enfermería en la República de Nicaragua", Japan International Cooperation Agency (JICA) and International Techno Center Co., Ltd., Octubre 2004	
Related Projects (if any)	"El Proyecto de Fortalecimiento de la Educación Básica y Permanente de Enfermería en el Salvador, Guatemala, Hoduras, Nicaragua y República Dominicana"	
Project Background	In Nicaragua, 9 out of 11 schools of nursing are placed either in national universities or under the control of the Ministry of Health. With the progress of medical technology, nurses are required to acquire advanced knowledge and skills. However, due to the delay in responding to such changes and the aging of medical equipment, nurses were unable to acquire necessary knowledge and skill through appropriate practical training.	
Project Objective	To provide nursing schools of national universities or the Ministry of Health with nursing educational equipment, in order to improve their practical training/education, to rectify the gap in educational environment between nursing schools and to raise the standard of medical services to be provided by nurses.	
Output[s] (Japanese Side)	1. Procurement of equipment for nursing education (*) 2. Giving technical advice to teachers on how to teach students by making advantages of nursing equipment provided and also on how to maintain them. (*)Equipment procured: Multipurpose patient training mannequins; Newborn training mannequins; Expectant mother training mannequin; Intramuscular injection simulators; Uterine cervix dilation simulators; Intravenous injection simulators; Practical obstetric training sets; Vital signs examination sets; Electrocardiographs; Incubators; Beds, etc.	

II Result of the Evaluation

Summary of the evaluation

This project covered the following 9 nursing schools of national universities (1-4) or under the control of the Ministry of health (5-9): 1. Nursing School of the Health Technology Institute, Managua National Autonomous University (hereinafter referred to as MNG); 2. Nursing School, MNG Juigalpa (No replies obtained); 3. Nursing School, MNG Matagalpa (MTG); 4. Nursing School of Medical Department, National Autonomous University of Nicaragua, León (Leon); 5. Jinotepe Nursing School (JTP); 6. Puerto Cabezas Nursing School (PC), 7. Blue Fields Nursing School (BF); 8. La Trinidad Nursing School (TRD); 9. Ocotal Nursing School (OCT). Through this project, nursing training/education equipment was provided to these schools and the instruction and guidance were given to their teachers on the operation and maintenance of these equipments and on the methods of teaching using them.

Compared with other Latin American countries, Nicaragua is lagging behind in improving health and medical services, and fostering of medical professionals, especially nurses, is urgently needed. This project intended to suitably meet the needs and policies of both the target country and Japan. By the provision of training equipment as well as implementation of the technical guidance as a soft component of this project, the lesson contents by teachers were improved, the understanding of the students deepened and the level of their nursing skill was raised. Thanks to the higher level of nursing education thus made available to local areas, more students were now enrolled in local nursing schools, who otherwise had to leave home to go to other nursing schools. Also, owing to the technical guidance of this project, the nursing training equipment provided have been well maintained by the good operational and maintenance methods instructed to the teaching staff, and most of the equipment is still used in good condition. On the other hand, when repair work is necessary, not all equipment is reparable due to the constraint of the school budget, and consumables or spare parts are not always replenished in a timely manner. While there is only one equipment out of order and not in use, we need to strengthen the system for their operation and maintenance to ensure higher sustainability.

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

<Recommendations>

<Recommendation to the nursing schools (Leon, PC and MTG)>

Some cases have been reported, in which teachers could not figure out how to use their nursing training equipment. Supplementary instruction and guidance is desired on how to use them (including the method of teaching), by the two teachers at each nursing school who took part in given technical guidance in this project. (At Leon nursing school:Enf.Joba Fanny Jaime and Enf.Nubia Meza, at PC nursing school:Enf. Darling Welter Sam and Enf. Rubén Abelardo Ceferino , and at MTG nursing school:Enf.Aura Marina Vargas and

Enf.Ruth Isabel García López)

<Constraint in making evaluation>
As the reply was not sent in by one of the 9 nursing schools covered by this project to our questionnaire, this evaluation has been made based on the information obtained from the remaining 8 schools.

1 Relevance

(1) Relevance to the Development Plan of Nicaragua

The "National Development Plan (Plan Nacional de Desarrollo 2003)" at the time of planning this project set the improvement of health and medical service as the challenge in its chapter "Toward integral and sustainable social policy." As one of the ways to achieve it, the "Plan of Development of Nursing 2004-2007 (Plan de Desarrollo de enfermeria 2004-2007) was laid out, which pointed to the necessity of capacity building of nurses, who are able to respond to the technical and scientific demands of the people. Even now, in the "National Plan of Human Development (Plan Nacional de Desarrollo Humano (2008-2012)", "development and equality in society" is set as one of the national goals. Nicaragua regards the fostering of health and medical professionals and technical workers (including nurses) capable of responding to the needs of the nation as the urgent issue, so that every person can enjoy quality health/medical services free of charge.

(2) Relevance to the Development Needs of Nicaragua

At the time of the planning, the improvement of the low health/medical indicators (mortality rate of pregnant and parturient women, infants, under-five, etc.) was seen as an important national agenda, but human resource in the area was insufficient both in quality and quantity. Especially in the field of nursing education, lack of laboratory training, gap between educational contents and actual situations, and lack of funds were viewed as problems. Still now, in Nicaragua's national policy on health (Politicia Nacional de Salud), the necessity of training medical professionals capable of providing medical service to meet the needs of the nation is emphasized, and the Ministry of Health also sees the aging of nurses and unskilled nursing practices as problems. The importance of fostering young nurses and improvement of overall nursing skills are emphasized. The challenge for each nursing school is the lack of laboratory training opportunities, educational equipment and reference books on nursing.

(3) Relevance to Japan's ODA Policy

"Assistance Policy on Nicaragua (2002)" at the time of planning the Project designated the "field of health and medical services" as one of the priority areas of support. Special emphasis was laid on the development of local human resources and community participation in the field of medical and public health (including nursing management and nursing education).

In light of the above, the implementation of this project was fully in accordance with Nicaragua's development policy, development needs and Japan's ODA policy, and therefore evaluated to be highly relevant.

2 Efficiency

(1) Project Output

Outputs from the Japanese side were generated as planned. The technical training on the method of teaching making use of the equipment provided was also implemented as scheduled in most cases.

(2) Project Period

It took 14.7 months to complete the Project (101% of the time planned), almost according to the plan of 14.5 months.

(3) Project Cost

The actual cost was 2.01 million yen (87% of the plan), as opposed to the planned cost of 2.42 million yen. Due to the fair bidding, the procurement was made within the estimated price.

The project cost was within the plan and the project period was almost as planned; therefore the efficiency of the Project is high.

3 Effectiveness / Impact

(1) Effectiveness (quantitative effect)

As opposed to the target of 100% students' completion of laboratory classes on the care of pregnant and parturient women, the delivery assistance and the care for newborn baby, in 6 nursing schools, 100% completion was achieved. Therefore the target has been met by the schools covered by the Project. (Confirmation was not obtained from 2 schools, which did not give the figure in their replies.)

(2) Expression state of indirect effects and other positive/negative indirect effects

Following effects were confirmed by the nursing schools: 1) After the implementation of the Project, the number of students of each nursing school increased in 6 schools. (MNG: 431 students → 743; MTG: 31→258; Leon: 161 →176; JTP: 459→480; PC: 132→176; BF: 70→ 225) (No answer was given by 2 schools.) 2) Some schools reported that students who had to leave home to get nursing education would now go to local nursing schools. This seems to be one of the reasons for the increased number of students. 3) As more laboratory classes are included in the curriculum, teachers are giving lessons in more hands-on forms. Especially, as they can connect theories with practices, students are able to understand the subjects more deeply and acquire the knowledge more firmly. Students are also more positively participating in the classes and their motivation and interest is increasing. 4) According to the observation of teachers, laboratory classes have helped students acquire nursing skills more accurately. 5) In giving actual nursing service after their graduation, students are able to face patients with greater confidence, which they have acquired through the laboratory classes in their

schools. They are also more careful in treating patients.

In light of the above, as the result of the implementation of the Project, we can observe the expression of effects mostly in accordance with the original plan; therefore effectiveness of the Project is high.

4 Sustainability

(1) Structural Aspects of Operation Maintenance

The maintenance of the nursing educational equipment is done by the teachers who give lessons using the equipment, or by someone (designated teachers) in charge of the laboratory room. Nursing educational equipment in the preparation room next to the laboratory room is used by the teacher who actually give lessons, and is checked, cleaned and stored by the same teacher after use. Where a teacher is appointed full-time for the work of the preparatory room, that teacher is in charge of maintenance of the equipment. No particular problems have been reported so far over the structure of the operation maintenance.

(2) Technical Aspects of Operation Maintenance

In 7 out of 8 respondent schools, they set the necessary qualifications (bachelor's degree, master's degree, experience in actual nursing, experience in teaching, etc.) in employing teachers of nursing. After employment, senior teachers give training to the newcomers on the teaching methods using nursing education equipment over the period of several hours to 1 week (depending to schools). Out of 19 teachers who directly participated in the technical guidance of the soft component by the Project, 18 teachers are still working in the schools. The turnover ratio of teachers in these schools is generally low and the technical capability is maintained at each school. (The turnover ratio of 6 schools that replied to the questionnaire is below 20%. Others did not reply.) Except for 3 schools that reported such problems as new teachers not being able to handle the equipments, these schools are making good use of the equipment manuals and have no technical problems on the use of the equipment.

(3) Financial Aspects of Operation Maintenance

In 3 schools out of the 8 respondent schools, the budget from the national government increased during the period of 2003 – 2009. (TRD:Nicaraguan Cordoba Oro (hereinafter referred to as NIO) 1,062 (USD70) → NIO1,835(USD93), PC:NIO537(USD35) → NIO1,421(USD72), BF:NIO1,734(USD114)→NIO2,613(USD133) Unit: either 1000 NIO or 1000 USD) Two schools out of these 3 reported that the budget is not enough, as the expenses also increased. Three schools out of the 5 that did not give concrete information on the amount of the budget also reported that the budget is not enough. (2 schools did not respond.) In 6 schools out of the 8 respondents, problems have arisen over the replenishment of consumables or spare parts and the repair of the equipment.

(4) Current Status of Operation Maintenance

On simple equipment, daily checking is basically conducted and repair work is carried out when necessary, therefore most of the equipment is in good use. Regarding advanced equipment, in some schools, daily checking is not conducted due to the lack of technical staff or other reasons (OCT, TRD, PC, Leon). Except for one (Cardiograph in OCT), which is out of order and not in use, all equipment continues to be used. In the technical guidance as a soft component by the Project, the Nine Rules (**) were laid out in the operation maintenance of the equipment. Except for one school, where such rules are partially not observed, all rules are well observed. Regarding the replenishment of consumables and spare parts and repair of the equipment, more than half of the respondent schools have designated supplying agents, acknowledger of the application, persons in charge of ordering or contracts. But due to the constraint in their budget, not all the applications for purchase or repair are approved within the school. For example, regarding the securing of designated 18 parts important for maintenance, 2 schools answered that all parts are available, while 3 schools indicated that about half (7 – 10 items) of the parts are difficult to secure and the other 2 schools said they have difficulty in securing all of them. Also, about half of the respondent schools answered that their internal procedure takes too much time to secure these parts in a timely manner. Regarding the function of the agents, 3 schools out of the 5 that gave the relevant information said their local agents provided repair work, while the Local Health and Medical Service System (SILAIS) provides repair work for one school.

In light of the above, mild degree of problems is recognized in the financial aspect of the Operation Maintenance; therefore the sustainability of the effectiveness expressed in this project is fair.

(*)Foreign exchange rate : US1=NIO15.16 (2003), US1=NIO19.63 (2009)

(**) Nine Rules: (1) Storage need ventilation and humidity should be excluded; (2) After use, equipments have to be cleaned and returned to original place with the original number; (3) Equipment used with artificial blood or other liquid requires water removal and one day dry; (4) Person in charge has to be assigned for storage and laboratory room; (5) Mannequin and simulator should be covered by cloth; (6) equipments and laboratory room can be used submission base of application form; (7) Schedule, teaching staffs who accompany, equipments to be used, subject, lab theme has to be described on the application form; (8) Operation manual has to be read before use; (9) Manuals are accompanied when the equipments are lent.

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 Equipment of the Public Health Laboratories for Surveillance, Investigation and Control of Infectious Diseases	January 2010 – December 2010

I Project Outline

Country Name	Republic of Honduras	
Project Period	March 2005-November 2005	
Implementing Agency	Ministry of Health	
Project Cost	Grant Limit: 146 million yen	Actual Grant Amount: 145 million yen
Main Contractors	Mitsubishi Corporation	
Main Consultants	Fujita Planning Co., Ltd.	
Basic Design	"Basin Design Study on the Project for Equipping the National Network of the Public Health Laboratories for vigilance, Investigation and Control of Infectious Diseases in the Republic of Honduras," Fujita Planning Co., Ltd., March 2005	
Related Projects (if any)	1. JICA, "Project for Control of Chagas' Disease" (Phase 1: 2003-2007, Phase 2: 2008-2011) 2. JICA, JOCV in the area of control of Chagas' disease 3. JICA, Training in Japan on "improvement of screening examination of blood (Central America) 2006-2008" and "control of infectious diseases and other health issues by strengthening the regional health system" and "clinical examination (2008)" 4. JICA, Training in Japan: "Workshop on parasites control for the Latin American region (2004)" 5. JICA, Training in the third country: "Training on HIV/AIDS (Brazil): 2006" and "tests of uterus cancer (Mexico): 2007-2011" 6. JICA, follow-up activities implemented by ex-trainees (2005, 2006, 2008, 2010)	
Project Background	Because the Republic of Honduras has a tropical climate, infectious diseases caused by the microorganisms are more prevalent and thereby of more concern. Cases of tuberculosis, malaria and HIV/AIDS had increased rapidly, and the recrudescence of these diseases had been widely acknowledged. The Ministry of Health established a department of health surveillance for infectious diseases in 2003 to develop a comprehensive understanding of the health sector. Therefore substantive surveillance has been conducted by the central and 8 regional laboratories. However, the surveillance system was not functioning satisfactorily due to lack of and deterioration of necessary equipment.	
Project Objective	To procure inspection equipment for the central and 8 regional surveillance laboratories and for training at the central laboratory in order to strengthen the infectious disease surveillance system.	
Output[s] (Japanese Side)	1. Procurement of the inspection equipment for the central and 8 regional laboratories 2. Procurement of the training equipment at the central laboratory	

II Result of the Evaluation

Summary of the evaluation

In Honduras, control of infectious diseases is a major issue in the health sector, and is regarded as politically important. In this situation, the Project was implemented as planned in terms of period and cost. Using the procured equipment, examinations have increased at the 7 Regional Laboratories, but at the Central Laboratory, the examinations have not been conducted as targeted. At both the Central and Regional Laboratories, surveillance data accuracy has improved, and at some laboratories some diseases which were on the increase have now been decreasing. On the other hand, training courses have not been conducted as planned due to budget constraints despite the procurement of related equipment. At present, most of the procured equipment is functioning except at one Regional Laboratory, and there have not been any major problems. The only concerns are that future funding for "technique and budget for repair isn't sufficient" at the Regional Laboratories and that there is no collaboration and coordination for equipment operation and maintenance among the Ministry of Health, Central Laboratories and Regional Laboratories.

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

<Recommendations for the Ministry of Health>

1. It is necessary to prepare a plan for equipment maintenance and to ensure adequate budgetary funding based on the surveillance and training needs at the Central Laboratory. In addition, personnel at the Central and Regional Laboratories need to be trained in this matter.
2. It is crucial to share the Regional Laboratory surveillance data. Based on an understanding of the issues and needs of each Regional Laboratory, the Central Laboratory can provide them necessary support.
3. It is necessary to share the data concerning the outbreak of the infectious diseases with the Regional Laboratories. This will help them strengthen surveillance according to the situation.
4. Each regional laboratory needs to carefully compile data including the number of examinations conducted, and share this information with the Central Laboratory and the Ministry of Health. The surveillance record and results are indispensable for

- policy formulation for controlling infectious diseases, and this will help the Central Laboratory give necessary assistance to the Regional Laboratories.

<Recommendation to the Regional Health Offices>

1. It is necessary to prepare a plan for equipment maintenance and to ensure adequate budgetary funding based on the surveillance needs at the Regional Laboratories.

<Recommendation for the Regional Laboratory of Gracias a Dios>

1. Repair the two pieces of equipment which were not dealt with after a breakdown, and utilize them for surveillance.

<Constraints in this evaluation study>

In this evaluation study, information was collected by questionnaire survey. However, no information was received from one laboratory (Regional Laboratory of Santa Rosa de Copan). The evaluation analysis was conducted excluding this laboratory.

Note: After this Project completed, the 8 health administration areas have been reorganized to 20 areas: 18 departments, Tegucigalpa City, San Pedro Sula City. The 8 Regional Laboratories, targeted by this Project, became laboratories under the department where they are located, but the facility and equipment have been used in the same way, and the surveillance system has not been changed.

1 Relevance

(1) Relevance with the Development Plan of Honduras

The health sector has made efforts to control diseases including insect-borne infectious diseases, HIV/AIDS, and tuberculosis, as described in the "National Development Plan 2002-2006" which was implemented at the commencement of this Project and the present government plan. Also, control of the infectious diseases is one of the priority programs in the "Health Sector Government Policies" and the "National Plan for Health 2021."

(2) Relevance with the Development Needs of Honduras

Honduras is located in the tropical zone and so there were many infectious diseases such as malaria and dengue fever. In addition, according to the Ex-ante Evaluation, tuberculosis, leishmaniasis, HIV/AIDS, Chagas' disease were increasing. There are still some regions where dengue fever, leishmaniasis and HIV/AIDS are increasing. The Basic Design Study found that effective diseases control was hindered by degraded equipment in the laboratories, inaccurate data, inadequate transfer of samples, etc.

(3) Relevance with Japan's ODA Policy

In the 1999 political discussions with the Honduran government, one of the priority areas in Japan's assistance was the health sector. After a series of the discussions with the ODA Task Force, "health and water" has continued to be a priority area, and one of the important issues in this area is "control of the infectious diseases," according to the ODA Data Book 2005.

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

All the equipment was procured for the central and 8 regional laboratories as planned—the inspection equipment and of training of personnel at the central laboratory, and the inspection equipment at 8 regional laboratories.

(2) Project Period (Project Inputs)

The planned period was 11 months. In fact, it took 8 months to complete the Project, shorter than planned (72%). The equipment was installed efficiently by dividing the work into 3 groups.

(3) Project Cost (Project Inputs)

The planned cost was 146 million yen. The actual cost was 145 million yen, slightly lower than planned (99%).

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

3 Effectiveness / Impact

(1) Quantitative Effects

The objective of the Project was to increase the number of examinations at the Central Laboratory and 8 Regional Laboratories from the pre-project number (102,279 examinations at the Central Laboratory and 81,312 at the Regional Laboratories). A quantitative target had not been established. In 2009, the number was 88,822 and 571,646 examinations, respectively. The Regional Laboratories achieved the objective by a large amount. The reasons why the examinations decreased at the Central Laboratory were not available. Most Regional Laboratories do not have an examination record of their own, and so the relevant data was provided by the Ministry of Health. In case the data provided by a regional laboratory and that by the Ministry of Health was not in agreement, the latter was adapted in this evaluation study. This shows that the data is not shared in an accurate way among the Central and Regional Laboratories.

Another objective was to implement 11 training courses (77 weeks) for the Regional Laboratory technicians and 13 courses (545 trainees) for the Central Laboratory personnel. The results in 2009 were, respectively, 1 year-round course (about 30 trainees) and 9 courses (458 trainees) and these did not reach the target. There was no identifiable reason why the training courses for the Regional Laboratory technicians were modified to a year-round course as a "course for laboratory technicians." However all the 7 Regional Laboratories who answered the questionnaire reported that the "training was useful." In addition, the reason that the training courses for the Central Laboratory personnel decreased was that the budget constraint for the purchase of test reagents.

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

It was estimated that the Central Laboratory's role would be strengthened in the surveillance system in the country. Basically the Central Laboratory provides training, standardization of the surveillance, quality control of the surveillance, technical support, as well as supplying test reagents and other equipment, etc. (However, this actually varies by the Regional Laboratory). In addition, communication frequency with the Central Laboratory depends on each Regional Laboratory and 3 laboratories did not regularly communicate with the Central Laboratory. Among 7 Regional Laboratories, 4 laboratories answered that they were satisfied with the Central Laboratory's role.

As other impacts, the Central Laboratory and all the Regional Laboratories reported that by using the procured equipment "surveillance data accuracy has improved". In addition, 4 laboratories answered that malaria, tuberculosis and Chagas' disease have been decreasing, even though quantitative data on the number of the diseases has not been compiled at the laboratory level.

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

4 Sustainability

(1) Structural Aspects of Operation Maintenance

Before the Project, it was supposed that Department of Services Network would be in charge of equipment maintenance at the Central Laboratory, but at present it has not received any support from that department. At the Central and Regional Laboratories, equipment users just manage the temperature of the refrigerator and clean the equipment. At most laboratories the technician in microbiology is usually in charge of the regular inspection. There is no direction and support from the Central Laboratory to the Regional Laboratories regarding operation and maintenance of the equipment.

(2) Technical Aspects of Operation Maintenance

There are not enough personnel who can maintain or repair the equipment at the Central Laboratory and 4 Regional Laboratories. Therefore, equipment maintenance is in reality just cleaning. The Central Laboratory and the Regional Laboratory of Cortes No. 5 reported that there are no agents nearby who sell spare parts. At all the laboratories, the operation manuals are accessible to all personnel except at the Regional Laboratory of Gracias a Dios.

(3) Financial Aspects of Operation Maintenance

Regarding the maintenance budget, since 2006 only the maintenance cost of the office equipment has been included at the Central Laboratory, but the costs for repair and spare parts are not assured even though these were included before the Project. As described earlier, the budget for training is insufficient. At the regional level, most laboratories do not need repairs, but only the budget for equipment purchase has been included, but no specific budget has been allocated for maintenance and operation of the equipment, which was the situation before the Project.

(4) Current Status of Operation Maintenance

No problems have been reported from the Central Laboratory and most Regional Laboratories. At the Central Laboratory, all are functioning without recorded breakdowns, except one piece of equipment out of 58 principal ones. At the Regional Laboratory of Gracias a Dios, 2 of 7 equipments broke down but have not been repaired, and are not functioning.

Some problems have been observed in terms of both structural and technical aspects of equipment operation and maintenance, therefore sustainability of the project effect is fair.

Simplified Ex-Post Evaluation for Grant Aid Project

Evaluator, Affiliation	Akihiro Nakagome, Shiro Otomo Ernst & Young Advisory Co., Ltd.	Duration of Evaluation Study
Project Name	The Project for Improvement of Medical Equipment on South Regional and District Hospital of Albania in the Republic of Albania	February 2010 – December 2010

I Project Outline

Country Name	Republic of Albania	
Project Period	December 2004-December 2005	
Implementing Agency	Ministry of Health	
Project Cost	Grant Limit: 233 million yen	Actual Grant Amount: 175 million yen
Main Contractors	Ogawa Seiki Co., Ltd.	
Main Consultants	ICONS International Cooperation Inc.	
Basic Design	"The Basic Design Study on the Project for Improvement of Medical Equipment on South Regional and District Hospital of Albania", JICA, September 2004	
Related Projects (if any)	<Grant Aid> Project for Improvement of Medical Equipment for the Pediatric Hospital "Mother Teresa" of University Center of Tirana (2000), Assistance for the Educational Campaigns Program of AIDS Prevention by PSI (1998), Workshop on Production of Wheelchairs for Disabled People in Albania (1998)	
Project Background	Albania is one of the poorest nations in Europe, with the lowest levels of health and medical care among countries in its region. In May 2003, Albania decided on National Social Development Strategy. Based on the achievement of its medium-term development goals for the years 2003 through 2006, the Government would implement various measures to achieve the aims of the long-term development plan for the next 10 years. As part of these efforts, it has formulated a new health law and a new health strategy, including the goal of establishing a referral system. At the five hospitals, which is secondary level medical facilities, in the southern region of Albania covered by this project, most medical equipment had been in use for 10 or more years, which exceeded the average durable life of five years for medical equipment. Such old equipment hindered proper diagnosis and treatment. For this reason, these facilities were unable to provide proper diagnosis and treatment as secondary level medical facilities to patients referred or transferred from primary level medical facilities. Accordingly it led to bypassing these hospitals; therefore, patients were transferred to tertiary-level medical facilities in the capital city Tirana or they needed to visit tertiary-level medical facilities by themselves.	
Project Objective	The objective of this project is to improve medical services and strengthen the referral system in the region, and to reduce the number of patients referred to tertiary level hospitals in the capital city Tirana, by providing medical equipment to five hospitals in the southern region of Albania, with Gjirokaster Regional Hospital as the core,	
Output[s] (Japanese Side)	Procurement of medical equipment consisting of 61 kinds of products, 343 items in total, including; -Image diagnostic related equipment, -Medical electronics related equipment, -Laboratory related equipment -Operation room related equipment. -Technical assistance for improving maintenance system of medical equipment	

II Result of the Evaluation

Summary of the evaluation

This project provided the five target hospitals with basic diagnostic and treatment equipment. In general, the equipment procured has increased the number of tests and diagnoses conducted, and the number of patients has increased at each hospital. In addition, the number of patients referred from the five target hospitals to Tirana has decreased, and for this reason tertiary level medical institutions in the capital city Tirana now are able to specialize in advanced medical treatment; thus it can be said that the referral system in southern region of Albania have been strengthened.

While equipment maintenance managers were assigned to each of the target hospitals, some hospitals do not have enough maintenance technicians. Although some equipment appears to be used less frequently due to transfer of the staff members able to operate the equipment, for the most part the procured equipment is being utilized without problems.

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

<Recommendations>

As a recommendation for the target hospitals, it would be desirable to develop a structure to enhance staff's skills needed in maintenance and equipment operation. For example, by providing opportunities with staff to exchange information among maintenance personnel within each hospital and among the hospitals, and by making use of their experience of preparing Equipment Maintenance Sheets and other related documents in this project they can prepare equipment operating manuals in the Albanian language. Moreover, it is highly recommended to provide training on equipment to new personnel.

<Constraints of this evaluation study>
No data for 2004 were available from the executing agency on subjects such as the number of tests and diagnoses conducted with the procured equipment and the number of patients in each hospital. Also, no data were available on the number of tests and diagnoses for all procured equipment; thus, evaluation of the effectiveness which is quantitatively assessed was based on limited data.

1 Relevance

(1) Relevance with the Development Plan of Albania
Albania's National Strategy for Socio-Economic Development (NSSED; established May 2003) and its National Strategy on Development and Integration (NSDI; established March 2008) call for improvements in medical services in the healthcare field and in medical-facility management capabilities. These are highly consistent with this project both at the time of planning and at the time of ex-post evaluation.
(2) Relevance with the Development Needs of Albania
As a means of realizing improvements in medical services in the healthcare field as called for in Albania's National Strategy, the Ministry of Health aimed to establish a referral system. Since economic development and, in particular, development in the medical sector were severely behind in the southern region of Albania, enhancement of the referral system through renovation and provision of medical equipment at secondary level medical facilities in the southern region through this project is consistent with Albania's development needs.
(3) Relevance with Japan's ODA Policy
Japan has provided aid for realizing socioeconomic reforms in Albania and stabilizing civil administration, with aid policies focused on the medical and educational fields and it can be said that aid for development of medical facilities was a subject of focus. Thus, improvement to medical facilities through this project was consistent with Japan's ODA policy.

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

2 Efficiency

(1) Project Outputs
Outputs on the Japan side were in accordance with plans for both procured equipment and the soft component.
(2) Project Period
The actual project period was 12 months, while the planned period was 10 months; therefore, the project period was slightly longer than planned (120% of the planned period). This increase was due to the fact that more time than planned was required for tasks related to setting up the equipment, such as long-distance transportation and installation. The soft component was implemented as planned (100% of the planned period).
(3) Project Cost
The actual project cost was 175 million yen, while the planned cost was 233 million yen; thus, the project cost was lower than planned (75% of planned cost).

Although the project period was slightly longer than planned, the project cost was lower than planned; therefore efficiency of the project is fair.

3 Effectiveness / Impact

(1) Quantitative Effects
According to data from the executing agency on the number of tests conducted with the equipment procured in this project, the number of X-ray images taken at Gjirokaster Regional Hospital, where X-ray units were installed, had risen from approximately 18,000 to approximately 24,000 (130%) over the period from 2005 through 2009. Regarding ultrasound diagnostic equipment, which was installed in all hospitals, the total number of ultrasound diagnoses at the four hospitals other than Delvina Hospital, for which no data was available, had risen from approximately 9,000 to approximately 14,000 (150%) over the same period. The number of patients at the five target hospitals also had increased from approximately 13,000 to 16,000 (120%) over the same period. The number of referrals to Tirana had decreased from approximately 2,600 to approximately 1,500 (57%) over the same period. However, it is thought that data in 2003 when the the basic design study was conducted is not suitable for baseline, as there is a considerable deviation between data in 2003 and one in 2005. Thus, in the ex-post evaluation, data in 2003 should be used for reference purposes only and data in this evaluation is conducted based on data since 2005..
(2) Qualitative Effects
According to the executing agency, the equipment procured enabled the target hospitals to handle medical treatment swiftly and to provide medical treatment for patients who had previously been referred to Tirana; thereby the burden on those patients had been reduced. Moreover, implementation of the soft component has improved maintenance of the existing as well as the procured equipment, resulting in a decrease in the waiting times for delivery of spare parts and supplies.
(3) Impacts (Impacts on the natural environment, Land Acquisition and Resettlement, Unintended Positive/Negative Impact)
According to the executing agency, as noted under (1) above tertiary-level medical facilities in Tirana now are able to concentrate on high level diagnostic and treatment medical services, as a result of the decrease in the number of patients transferred to Tirana.

This project has largely achieved its objectives; therefore its effectiveness is high.

4 Sustainability

(1) Structural Aspects of Operation Maintenance

Managers and other personnel handling maintenance and repairs have been assigned to each hospital as personnel responsible for everyday maintenance of medical equipment. Some hospitals face shortages of maintenance technicians.

(2) Technical Aspects of Operation Maintenance

Regarding operation maintenance for medical equipment, no special skills are required, and no particular technical problems have been reported. In the event of any technical problems that could not be handled at the individual hospital, inquiries are made to the National Biomedical Centre in Tirana. If even the technicians in the National Biomedical Centre are unable to handle the problem, the hospital contacts to private-sector vendors.

(3) Financial Aspects of Operation Maintenance

Each hospital covers its maintenance costs using its annual budget. While the executing agency did not supply any specific amounts, at present no problems have resulted from budget shortages despite the fact that there are shortages in budgets for maintenance.

(4) Current Status of Operation Maintenance

In general, the equipment procured is being put to use. However, the frequency of use of some equipment has decreased due to transfer of the medical personnel able to operate it. In addition, there is other equipment whose frequency of use has decreased due to a lack of personnel able to read the English-language operating manuals. Therefore, there are concerns that this could lead to problems in repair and maintenance as well.

Some problems have been observed in terms of structural aspects of the maintenance, therefore sustainability of the project effects is fair.