

Country Name	Project for Rehabilitation of Infrastructure and Equipment of the Rosales National Hospital (El Proyecto de Rehabilitación de la Infraestructura y Equipamiento del Hospital Nacional Rosales)
El Salvador	

I. Project Outline

Project Cost	E/N Grant Limit: 630 million yen	Contract Amount: 590 million yen
E/N Date	August, 2005	
Completion Date	February, 2007	
Implementing Agency	Rosales National Hospital (Supervising Agency: Ministry of Health)	
Related Studies	Basic Design Study: January-July, 2005	
Contracted Agencies	Consultant(s)	Azusa Sekkei Co., Ltd.
	Contractor(s)	Fujita Corporation
	Supplier(s)	Mitsubishi Corporation
Related Projects (if any)	<p>Japanese Cooperations:</p> <ul style="list-style-type: none"> • Proyecto del Mejoramiento de Equipo Médico-Quirúrgicos para 4 Hospitales Generales, I Centro de Salud y Emergencia Hospital Rosales (Grant Aid,1993) • Proyecto de Mejoramiento de los Equipos de los Equipos de Invalidos (Grant Aid,1996) • El Proyecto de contramedida para enfermedad infantil (Grant Aid,1999) • Proyecto: "Remodelación y Equipamiento del Edificio de Especialidades del Hospital Nacional Rosales"(Counterpart Fund, 2010) 	
Background	<p>In El Salvador, Rosales National Hospital has been playing a leading role as the only tertiary hospital for both internal and surgical fields in the country. However, due to the two earthquakes that took place in 2001, total number of beds decreased from about 550 to about 400 and also the number of emergency operations decreased from 40 to 15. In addition, it became clear that old facilities/equipment and unplanned enlargement led to the ineffective medical activities at the hospital.</p>	
Project Objectives	<p>Outcome</p> <p>To improve medical services by the rehabilitation of operation building and provision of equipment at Rosales National Hospital in San Salvador.</p>	
	<p>Outputs(s)</p> <p>Japanese side</p> <ul style="list-style-type: none"> • Operation building at Rosales National Hospital:1,747 m² (RC2floors) and annex:45 m², total: 1,792 m² planned operating rooms : 5, emergency operating rooms : 3, ICU beds:6 (4 for emergency, 2 for ward) • Main equipment <p><u>Operation related</u> : defibrillator, movable x-ray photo equipment, shadow less lamp, anesthetic equipment, operation/surgery beds, patient monitor equipment, x-ray automatic developing equipment, electric scalpel, anesthetic gas analysis equipment, bio-spectrum analysis equipment, external pacemaker, peripheral nerve stimulation equipment, pulse oximeter, x-ray (fluoroscopy) arm photo equipment, operation/surgery equipment, etc.</p> <p><u>ICU related</u> : defibrillator, ECG, patient monitor equipment, respirators, ICU beds, etc.</p> <p><u>Sterilization related</u> : autoclave, etc.</p> <p><u>Others</u> : generator (Annex building)</p> <p>El Salvador side</p> <ul style="list-style-type: none"> • Removal of the existing facilities, preparation of the land for construction 	

II. Result of the Evaluation

Summary of the Evaluation
<p>In El Salvador, Rosales National Hospital has been playing a leading role as the only tertiary hospital in the country. However, due to the two earthquakes that took place in 2001, the entire hospital had a large damage including an operation building and could not respond to the needs of patients, in particular, those in stricken area. In addition, the hospital had a problem of ineffectiveness because of old buildings built more than 100 years ago and unplanned enlargement of them. This project has largely achieved its objectives of "establishment of referral system and improvement of medical services at Rosales National Hospital" since the functions of operation section were fully recovered even compared to before-earthquakes, while positive impact was recognized as the condition to accept referrals from all over the country has been prepared/enhanced.</p> <p>As for sustainability, there was no problem observed in the project in terms of structural/technical aspects. With regard to the financial aspect, the hospital continues to make an effort to steadily increase its budget every year despite the difficult financial situation. Some problems have been observed in terms of current status of operation and maintenance because five (5) artificial respirators are not currently used due to the lack of local agents that have appropriate skills to calibrate with them.</p> <p>For relevance, the project has been highly relevant with El Salvador's development policy, development needs as well as</p>

Japan's ODA policy at the time of both ex-ante and ex-post evaluation. For efficiency both the project cost and the project period were within the plan.
In the light of above, the project is evaluated to be highly satisfactory.

1 Relevance

This project has been highly relevant with El Salvador's development policy "medical service improvement/effectiveness at the secondary and tertiary hospitals within the national medical system, specified in the health field of the Five Year Plan", development needs "medical service improvement and recovery from the earthquake damages at Rosales National Hospital" as well as Japan's ODA policy, at the time of both ex-ante and ex-post evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project has largely achieved its objectives of "medical service improvement at Rosales National Hospital" because the hospital overcame the negative impact caused by the earthquakes of 2001, and functions of operation section were fully recovered, as the increase in the number of planned operations shows. This project also contributed to the improvement of lines of flow at the hospital by the improvement of facilities and provision of equipment, as well as to enhanced effectiveness of medical activities. As for impact, according to the deputy director and managerial personnel, it was recognized that the condition to accept referrals from all part of the country has been enhanced by the rehabilitation of the hospital¹. No negative impact has been observed since medical wastes and sewage have been properly disposed. Therefore, effectiveness/impact of this project is high.



Operation building ICU

Quantitative effects

	Actual value 2004 (BD)	Target value Target year 2007	Actual value target year 2007	Actual value Ex-post evaluation 2012
Indicator 1 : number of planned operations	263	increase	775	665 (※)
Indicator 2 : number of beds ICU	-	-	16	29
Indicator 3 : number of patients	-	-	19,650	20,719
Indicator 4 : number of outpatients	-	-	233,010	254,460
Indicator 5 : number of references from lower medical inst tutes	-	-	28,348	46,616
Indicator 6 : number of emergent operations	-	-	3,906	5,869

Source: Rosales National Hospital

※Indicators 2- 6 are set, based on BD, as supplementary ones, although they are not described in the preliminary survey summary.

※Results of Indicator 1 are only the numbers of "planned operation". The number of planned operations decreased because minor operations are now conducted at the other wards.

3 Efficiency

The outputs of the project were produced as planned, and both the project cost and the project period were within the plan (ratio against plan: 92.54%, 98% respectively). Therefore, efficiency of this project is high.

4 Sustainability



Operation room (Operation

¹ Although Rosales National Hospital is obliged to accept patients from all over the country as the tertiary hospital for both internal and surgical fields, it gave priority, as the secondary hospital, to the residents of the central ward in San Salvador and could not fully accept patients from other wards and regions, which hindered the original functions as the tertiary hospital. As a result of rehabilitation/construction of national hospitals by the national government and improvement of facilities at Rosales National Hospital by this project, it has become easier for the hospital to respond to nationwide referral needs.

The facilities/equipment provided by this project are maintained by Rosales National Hospital, the implementing agency. Regarding structural aspect, staff of all departments/sections increased, and general shortage of doctors has been overcome by using temporary staff. Concerning technical aspect, the facilities/equipment are properly maintained by the hospital's maintenance staff, while relevant OJT is concurrently conducted. Therefore, there are no problems concerning these two aspects. Also with regard to financial aspect, no particular problem is observed, since, despite its not-abundant financial resource, the Ministry of Health has steadily been increasing the budget for Rosales National Hospital, and built additional operating rooms. As for maintenance, most equipment is maintained by the hospital's staff although part of the concerned activities is done by outside suppliers. In addition, the hospital has made its own effort to repair equipment by using substitutes, which largely solves the problem "shortage of parts", pointed out at the time of post observation study. Although it can be said that sustainability is generally maintained by the effort of the Rosales National Hospital, the project has some problems in the current status of operation and maintenance due to five (5) unused respirators because of the lack of local agents that have appropriate skills to calibrate with them. However, no problem has been observed in structural, technical and financial aspects of the executing agency. Therefore, sustainability of this project is fair.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency

It is recommended that measures to utilize currently unused respirators be considered by directly contacting the maker, besides local agents.

Lessons learned for JICA

It is necessary to confirm if there are agents, either in the recipient country or its neighboring countries, which are able to maintain equipment to be provided/introduced by the project. At the same time, in case of lack or closure of such agents, it is essential that the hospital directly contact the manufacturer after grasping the actual situation.