

Country Name	<b>the Project for Improvement of the Quality of Maternity and Child Attention Services in Departments of Lempira and El Paraiso</b>
Republic of Honduras	

**I. Project Outline**

Background	In Honduras, the under-five mortality ratio (21.4 per 1,000 live births, 2011) and the maternal mortality ratio (100 per 100,000 live births, 2010) were higher than the average for Latin American countries. The Government of Honduras had been promoting the introduction of the "national health model" as primary health care based on the family unit. However, it was difficult to provide adequate health services to residents at first-level health facilities, which were the hub of activities, due to aging facilities and a significant shortage of medical equipment.					
Objectives of the Project	To provide adequate health care services to residents by constructing facilities and procuring medical equipment in primary health care facilities (Lepaera Health Facility and Danlí Health Facility) in the Departments of Lempira and El Paraiso, thereby contributing to the improvement of health services including maternal and child health.					
Contents of the Project	<ol style="list-style-type: none"> <li>1. Project Site: Departments of Lempira and El Paraiso</li> <li>2. Japanese side: (1) Construction work: Health facility of Lepaera (polyclinic with functions at an intermediate level between health centers and Departments Hospitals), (2) Equipment: Medical equipment (general radiography X-ray equipment, diagnostic ultrasound equipment, high-pressure steam sterilizers, ultrasound nebulizers, etc.), (3) Consulting service.</li> <li>3. Honduran side: Securing of the project site, land preparation, infrastructure connection, etc.</li> </ol>					
Project Period	E/N Date	April 21, 2014 December 26, 2017 (Modified)	Completion Date (ex-ante)	January 2016 (23 months)	Completion Date (actual)	October 18, 2019 (63 months)
	G/A Date	April 21, 2014 September 16, 2015 (Modified 1) January 19, 2018 (Modified 2)				
Project Cost	E/N Grant Limit / G/A Grant Limit: 624 million yen, Actual Grant Amount: 517 million yen					
Executing Agency	Secretary of Health					
Contracted Agencies	Main Contractor(s): Yamashita Sekkei Inc., Fujita Planning Co., Ltd. Main Consultant(s): Tone Engineering Corporation					

**II. Result of the Evaluation**

<Special Perspectives Considered in the Ex-Post Evaluation>

- In the ex-ante evaluation, the target figures were set for 2019 (3 years after the project completion). However, the project was completed in 2019, and after the project completion, some equipment was not used during the rehabilitation work of the health facility in Danlí. Therefore, in the ex-post evaluation, the target year was reset for 2022, and the target figures were reset based on the calculation of the defect inspection survey.

<b>I Relevance/Coherence</b>
<p>[Relevance]</p> <p>&lt;Consistency with the Development Policy of Honduras at the Time of Ex-Ante Evaluation&gt;</p> <p>The "National Vision 2010-2038" and the "National Plan 2010- 2022" promoted the provision of health services to socially disadvantaged citizens, and the "National Health Plan" (2010-2014) promoted the introduction of the "National Health Model" based on the primary health care. The project was consistent with the development policy of Honduras at the time of ex-ante evaluation.</p> <p>&lt;Consistency with the Development Needs of Honduras at the Time of Ex-Ante Evaluation&gt;</p> <p>The aging facilities and lack of medical equipment in rural areas, especially in the Departments of Lempira and El Paraiso, were serious problems. The improvement of health facilities and equipment was an urgent issue. The project was consistent with the development needs of Honduras at the time of ex-ante evaluation.</p> <p>&lt;Appropriateness of Project Design/Approach&gt;</p> <p>No problem attributed to the project design/approach was confirmed.</p> <p>&lt;Evaluation Result&gt;</p> <p>In light of the above, the relevance of the project is ③<sup>1</sup>.</p>
<p>[Coherence]</p> <p>&lt;Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation&gt;</p> <p>In the "Country Assistance Policy for the Republic of Honduras" (2012), one of the two priority areas was regional development which included the health sector. The project was consistent with the Japan's ODA policy to Honduras at the time of ex-ante evaluation.</p> <p>&lt;Collaboration/Coordination with JICA's other interventions&gt;</p> <p>The collaboration/coordination between the project and the dispatch of volunteers and the "Project for Strengthening Primary Health Care System based on the National Health Model" (2013-2018) was planned during the project period and was partially</p>

<sup>1</sup> ④ : very high, ③ : high, ② : moderately low, ① : low

implemented, and the positive effect was partially confirmed at the time of ex-post evaluation. Volunteers in obstetrics and nursing were assigned to the project facilities, whose activities were facilitated by the procured equipment. On the other hand, synergy effects between the technical cooperation project and this project could not be confirmed, as the technical cooperation project was completed while the facility was being constructed.

<Cooperation with other institutions/ Coordination with international framework>

The cooperation/coordination with the Inter-American Development Bank (IDB) was planned at the time of ex-ante evaluation and was implemented as planned, and the positive effect was confirmed at the time of ex-post evaluation. The project facility was constructed adjacent to the Maternal and Child Clinic Center in the Lepaera Health Facility in the Department of Lempira, which was financed by IDB. The facility is equipped with a laboratory that can conduct analyses necessary for the diagnostics and control of the patients of the two facilities, thereby enabling the provision of more comprehensive health care to the population.

<Evaluation Result>

In light of the above, the coherence of the project is ③.

[Evaluation Result of Relevance/Coherence]

In the light above, the relevance/coherence of the project is ③.

## 2 Effectiveness/Impact

<Effectiveness>

It is judged that the project objectives were mostly achieved as planned, considering the impact of COVID-19 which far exceeded the expectations in the Department of El Paraiso. At the Lepaera Health Facility in the Department of Lempira, the number of births and outpatients in 2022 went beyond the target. Less pregnant women took antenatal check-ups than planned in 2022 than targeted, but the ultrasound device was used much more than planned because the device has been frequently used in the internal medicine, surgery departments and others. At the Gabriela Alvarado Hospital in Danlí in the Department of El Paraiso, the numbers of antenatal check-ups, births, outpatients, and uses of the ultrasound device all did not reach the target. This is supposedly because the pandemic of COVID-19 was very significant in the Department of El Paraiso. In fact, there were 4,926 cases of the infection and 122 deaths in the Department of Lempira (Population: approximately 382 thousand), while 1,357 infection cases and 51 deaths were reported in the Department of Lempira (Population: approximately 518 thousand). The Gabriela Alvarado Hospital, as the core hospital in the region, strategically received only patients of emergency and COVID-19 during the pandemic. The general outpatient department was closed until 2022. Pregnant women were hesitant to visit the hospital and many of them had probably had antenatal check-ups at other health centers located in the same Network.

As for the qualitative effects, the collaboration among the outpatient, obstetric, and emergency departments has been improved, according to both facilities. Procured equipment, especially, the ultrasound device has been used in various departments. At the Lepaera Health Facility, the improved service has caused an increase in the patient's demand, and the burden on the health staff has been increasing because no new staff has been employed.

<Impact>

Table 1 shows the maternal and child health conditions in the Departments of Lempira and El Paraiso, where the target facilities are located. In the Department of Lempira, which has faced issues of the risky adolescent pregnancy and births, the maternal mortality ratio decreased by half<sup>2</sup>, because the burden on the health centers has been reduced due to the constructed polyclinic which has resulted in careful attention to pregnant women. It is also because specialized and timely care has been provided to pregnant women who need advanced care. In the Department of El Paraiso, the under-five mortality ratio has been significantly improved<sup>3</sup>.

In addition, the procured equipment has contributed to the improved attention in other departments. For example, at the Lepaera Health Facility, the use of the x-ray device has been utilized for dental, internal medicine, or psychological evaluation. Due to this improvement, the Lepaera Health Facility has received more patients from other municipalities bordering the Departments of not only Lempira but also Santa Bárbara.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is ③.

Table 1: MCH Conditions

Indicators	2014	2019	2020	2021
Department of Lempira				
Under-five mortality ratio (per 1,000 live births)	13.3	16.3	22.0	15.0
Maternal mortality ratio (per 100,000 live births)	70.8	35.8	0	35.40
Department of El Paraiso				
Under-five mortality ratio (per 1,000 live births)	22.1	13.3	15.2	14.4
Maternal mortality ratio (per 100,000 live births)	17.6	18.6	104.2	0

Source: Lepaera Health Facility, Danlí Health Facility.

Table 2: Quantitative Effects

Indicators	Baseline 2012	Target 2022 3 Years after Completion	Actual 2020 1 year after Completion	Actual 2021 2 years after Completion	Actual 2022 3 years after Completion	Actual 2023 (Until September)	Source
Lepaera							
1. Number of women who take the ante-natal check-up (person/year)	3,554	4,017	N.A.	N.A.	2,939	461	Lepaera Health Facility.

<sup>2</sup> in 2020, there was no maternal death, and it was presumed that pregnant women at high risk were referred to nearby, better equipped facilities or those in Tegucigalpa to deliver babies.

<sup>3</sup> The reason of the drastic increase in the maternal mortality ratio in 2020 was infection with COVID-19.

2. Number of the births (person/year)	384	434	403	442	449	259	Lepaera Health Facility.
3. Number of the outpatients (person/year)	16,100	18,193	N.A.	N.A.	19,786	16,846	Lepaera Health Facility.
4. Number of the use of the ultrasound device (time/year)	480	804	N.A.	N.A.	2,193	1,160	Lepaera Health Facility.
Danlí							
1. Number of women who take the ante-natal check-up (person/year)	6,693	7,697	5,397	5,648	5,827	2,538	Gabriela Alvarado Hospital
2. Number of the births (person/year)	0	6,575	5,428	5,708	5,880	2,548	Gabriela Alvarado Hospital.
3. Number of the outpatients (person/year)	65,711	75,568	44,947	48,502	51,606	29,509	Gabriela Alvarado Hospital.
4. Number of the use of the ultrasound device (person/year)	0	1,539	581	1,094	1,021	326	Gabriela Alvarado Hospital.

Note: The Gabriela Alvarado Hospital in Danlí is the core hospital in the region, while in Lepaera, the Health Facility is a polyclinic and there is a separate core hospital with the obstetrics and gynecology department nearby. This difference leads to the gap in the target number of births (Indicator 2).

### 3 Efficiency

Although the project cost was within the plan (the ratio against the plan: 83%), the project period considerably exceeded the plan (the ratio against the plan: 273%). The project cost was less than the plan, mainly because the construction of one health facility was canceled after the bidding failures. On the other hand, the project period exceeded the plan, because of the six failures of bidding.

	Project Cost (Japanese side only, yen)	Project Period (months)
Plan (ex-ante)	624	23
Actual	517	62
Ratio (%)	83%	270%

Regarding the outputs, the project components were partially modified, including the cancellation of the construction of the health facility of Danlí, after the bidding failures.

In the light above, the efficiency of the project is ②.

### 4 Sustainability

#### <Institutional/Organizational Aspect>

At the local level, health activities have been operated and coordinated with the regional manager, network coordinators, administrators, supervisors, and health care staff. Health services have been monitored by the Ministry of Health on a quarterly basis. In most part, according to the Lepaera Health Facility, it has been staffed adequately for medical services, however understaffed for maintenance/repair of equipment. At the Gabriela Alvarado Hospital, one staff has been assigned to the operation of the project equipment, while contracting more staff for medical services with a general budget and its own income from the medical service provision.

#### <Technical Aspect>

The Lepaera Health Facility has not assigned any staff to dedicate to the operation and maintenance of the facility and equipment and provided no training for the new staff assigned after the administrative change in 2022, due to the budget shortage. On the other hand, the Gabriela Alvarado Hospital answered that they have sustained sufficient skills for the operation and maintenance of the facility and equipment. The staff had received only the basic training but the manual for the operation and maintenance has been utilized.

#### <Financial Aspect>

The Lepaera Health Facility has been part of the Integral Health Service Network (RISS)<sup>4</sup> of Lepaera, where the decentralized health service provision model has been adopted, and managed by the Municipality of Lepaera. This model has enabled the service provider to plan and execute the budget with a certain flexibility, allowing them to take into account the needs of the purchase of medicines and other consumables, and this contributing to the improvement of local health service provision. In practice, better service provision by Lepaera has resulted in attracting patients from areas covered by other RISS to the facility in Lepaera, and the Facility of Lepaera has undergone a budget shortage to cover all services including the operation and maintenance of the facility and equipment. As for the Gabriela Alvarado Hospital, it has received budget allocation from the Secretary of Health, in addition, and generated revenues from the service provision of the hospital and its external consulting unit.

#### <Environmental and Social Aspect>

No issue on environmental and social aspects has been observed, and it has not been necessary to take any countermeasures.

#### <Current Status of Operation and Maintenance>

The major procured equipment such as the general radiography X-ray equipment, diagnostic ultrasound equipment, and high-pressure steam sterilizers has been utilized without problems, while the nebulizer and some other equipment have been in need of repair because they had not been used to prevent the spread of infection during the pandemic of COVID-19. As of the time of

<sup>4</sup> RISS consists of family health teams, primary health care facilities, Department Hospitals, and the network coordination team. The Secretary of Health, with technical assistance of JICA, was implementing the Project for the Strengthening of Health Service Delivery of Integrated Health Service Network (2021-2026) at the time of ex-post evaluation.

ex-post evaluation, the Lepaera Health Facility has utilized external services, when urgent repair is needed for the broken equipment. Preventive maintenance was being performed by the supplier as part of the equipment warranty at the Gabriela Alvarado Hospital at the time of ex-post evaluation. After the warranty period, it would secure a necessary maintenance budget. In both cases, the Secretary of Health would plan the increase in the budget and maintenance personnel, and then the facilities would conduct maintenance based on the maintenance plan. There has been no major issue related to the purchase of the necessary spare parts and consumables so far for both facilities.

<Evaluation Result>

In light of the above, some problems have been observed in terms of the institutional/organizational, technical, and financial aspects, and slight problems in the current status of operation and maintenance. Therefore, the sustainability of the project effects is ②.

5 Summary of the Evaluation

The project mostly achieved the project objectives as planned. There have been more births, outpatients, and uses of the ultrasound device than targeted in the facility of Lepaera, although there have been fewer ante-natal check-ups. On the other hand, at the Gabriela Alvarado Hospital, these indicators have not been achieved. Regarding the project efficiency, the project period significantly exceeded the plan due to the bidding failures, although the project cost was within the plan. As for sustainability, there has been room for improvement in staffing for equipment maintenance at the Lepaera Health Facility, while no major issue was pointed out at the Gabriela Alvarado Hospital.

Considering all of the above points, this project is evaluated to be satisfactory.

**III. Recommendations & Lessons Learned**

Recommendations to Executing Agency:

- It is recommended to the Secretary of Health to conduct training for the new staff of the two facilities on the operation and preventive maintenance of the equipment. Lecturers could be ex-trainees of the JICA training on the operation and maintenance of the medical equipment held in Japan.
- It is recommended to the Secretary of Health to coordinate the dispatch of technical staff to ensure proper maintenance and repair of the equipment after the warranty period has expired.

Lessons Learned for JICA:

- The financial situations of the two target facilities were different because of the characteristics of budgetary centralization/decentralization. In case of the Gabriela Alvarado Hospital, the budget comes directly from the Secretary of Health and tends to be rigid with specific expenditure items and amounts pre-defined. On the other hand, the facility of Lepaera and its service provision has been decentralized and managed by the Municipality of Lepaera, which has been responsible for the health service delivery in the areas covered by RISS of Lepaera. In order to secure a sufficient budget regardless of the decentralization status, it is important to carefully investigate the decentralization situation of each target facility during the preparatory survey. It is necessary not only to calculate maintenance and repair fees and consumables expenses but also to discuss with the implementing agency how these budgets can be secured after the project completion, depending on the budgetary allocation system of each facility.



X-ray device installed in the Lepaera Health Facility.



Incubator in the newborn room in the Gabriela Alvarado Hospital.