

Country Name	Project for Maternal and Child Health in Quetzaltenango, Totonicapán and Sololá in the Republic of Guatemala
Republic of Guatemala	

### I. Project Outline

Background	<p>Among the Central American countries, Guatemala was behind in improving indicators related to reproductive health, such as maternal mortality rate, neonatal mortality rate, infant mortality rate and under-five mortality rate. Since the Ministry of Public Health and Social Assistance (MSPAS) identified that these were caused by limited technical skills and knowledge of the traditional birth attendants and poor access of expecting and nursing mothers to health facilities, MSPAS started programs for improving health services in rural areas. Under the program, selected health centers were upgraded to provide 24-hour services, and more health service providers were assigned in rural areas. JICA implemented the “Project for Child Health in Department of Quetzaltenango” (2005-2009) to decrease infants who got critically ill due to respiratory infection and diarrhea by strengthening prenatal care services and upgrading mothers’ knowledge. Based on this experience, further technical cooperation was requested to the Government of Japan in order to improve maternal and infant health services in the Departments of Quetzaltenango, Totonicapán and Sololá.</p>														
Objectives of the Project	<p>Through strengthened Health Areas’ health monitoring and supervision, trained health personnel and community activities for maternal health, the project aimed at upgrading the quality of health services for mothers and infants, thereby contributing to improvement of their health conditions in Quetzaltenango, Totonicapán and Sololá.</p> <p>Overall Goal: The health condition of women (expecting and nursing mothers) and under-five children is improved in the three target departments.</p> <p>Project Purpose: Women (expecting and nursing mothers) and infants receive health services in better quality in the three target departments.</p>														
Activities of the project	<p>Project site: 3 Departments of Quetzaltenango, Totonicapán and Sololá</p> <p>1. Main activities: Development monitoring and supervision tools, training of the health personnel (doctors, nurses, assistant nurses, and educators) and health volunteers and birth attendants for prenatal and postpartum services and nutrition, networking among the health facilities and hospitals, etc.</p> <p>2. Inputs (to carry out above activities)</p> <table border="0"> <tr> <td>Japanese Side</td> <td>Guatemalan Side</td> </tr> <tr> <td>1) Experts from Japan: 7 persons</td> <td>1) Staff allocated: 90 persons</td> </tr> <tr> <td>2) Experts from the third countries: 6 persons</td> <td>2) Land and facilities: Office space, etc.</td> </tr> <tr> <td>3) Training in the third countries: 105 persons</td> <td>3) Establishment of new Health Posts, operation cost for fuel and maintenance of vehicle, travel expenses of MSPAS personnel, electricity and water expenses of the project office, etc.</td> </tr> <tr> <td>4) Equipment: Vehicles, office equipment, medical equipment, etc.</td> <td></td> </tr> <tr> <td>5) Operation cost for medical equipment, hiring local staff, etc.</td> <td></td> </tr> </table>			Japanese Side	Guatemalan Side	1) Experts from Japan: 7 persons	1) Staff allocated: 90 persons	2) Experts from the third countries: 6 persons	2) Land and facilities: Office space, etc.	3) Training in the third countries: 105 persons	3) Establishment of new Health Posts, operation cost for fuel and maintenance of vehicle, travel expenses of MSPAS personnel, electricity and water expenses of the project office, etc.	4) Equipment: Vehicles, office equipment, medical equipment, etc.		5) Operation cost for medical equipment, hiring local staff, etc.	
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Project Period	March 2011 to March 2015	Project Cost	(ex-ante) 380 million yen, (actual) 378 million yen												
Implementing Agency	Ministry of Public Health and Social Assistance (MSPAS), Health Area Offices (Dirección de Area de Salud) of Quetzaltenango, Totonicapán and Sololá														
Cooperation Agency in Japan	None.														

### II. Result of the Evaluation

[Special Perspectives Considered in the Ex-post evaluation]

- In the Project Design Matrix (PDM), indicators on maternal mortality, neonatal mortality and infant mortality were set for both the Project Purpose and Overall Goal. Since these are indicators to assess changes brought by improved health services for maternal and infant health (Project Purpose), these indicators were used to verify the Overall Goal at the ex-post evaluation.

1 Relevance
<p>&lt;Consistency with the Development Policy of Guatemala at the time of ex-ante evaluation and project completion&gt;</p> <p>The project was consistent with Guatemala’s development policy on improving the health situations in the rural area including maternal and infant health and nutrition, as set forth in the “National Health Plan 2008-2012” and “National Health Policy 2014-2019.”</p> <p>&lt;Consistency with the Development Needs of Guatemala at the time of ex-ante evaluation and project completion &gt;</p> <p>The project was consistent with Guatemala’s development needs on improving maternal and infant health especially in the western region in the country, at the times of both ex-ante and ex-post evaluation.</p> <p>&lt;Consistency with Japan’s ODA Policy at the time of ex-ante evaluation&gt;</p> <p>Based on the policy dialogue between the government of Guatemala and the Government of Japan in 2008, “sustainable economic development” was selected one of the priority areas, and related to this area, efforts would be made for the purpose of “improvement of the livelihood in the rural areas”<sup>1</sup>.</p> <p>&lt;Evaluation Result&gt;</p> <p>In light of the above, the relevance of the project is high.</p>
2 Effectiveness/Impact

<sup>1</sup> Ministry of Foreign Affairs (2011), “ODA Databook 2010.”

<Status of Achievement for the Project Purpose at the time of Project Completion>

It is judged that the Project Purpose was partially achieved. The facility-based delivery rate increased (Indicator 1) in the three target departments, and the percentage of the under-weight babies at the birth by the facility-based delivery decreased in one department (Indicator 2), but not attained the target value. On the other hand, according to the Terminal Evaluation Report of the project, the Health Area Offices improved their capacity for data collection and analysis which resulted in improvement of the data accuracy, and therefore it was difficult to simply compare the data at the project completion with those at the project commencement. The report also pointed out that the target had been ambitious.

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have partially continued. Since the project completion, health services strengthened by the project including the medical examination for infants, prenatal consultation, follow-up of postpartum mothers and follow-up for the under-weight babies have been sustained as they were during the project period. First, the facility-based delivery rate has been increasing in the three target departments (Indicator 1). According to MSPAS and the Health Area Offices in the target departments, this is attributed to health facilities' efforts for facility-based delivery, improvement of the geographical access to the health facilities, timely detection of high risk pregnant women for referral to the health facilities due to good coordination with traditional birth attendants, and so on. Pregnant Women's Clubs also promoted expecting mothers' knowledge on prenatal care. Second, the percentage of the under-weight babies at the birth has been on a decreasing trend in Totonicapán and Sololá (Indicator 2), while the percentage has increased in Quetzaltenango. In Totonicapán and Sololá, mothers are provided with free nutritious food by most Health Centers or Posts and they exchange information on how to take nutrition in the Pregnant Women's Club. Third, users' satisfaction against the health facilities has been improved only in Totonicapán (Indicator 3).

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been partially achieved. In Quetzaltenango and Totonicapán, almost all the indicators has reached the target, indicating improvement compared to the time of the project completion. However, in Sololá, although the neonatal mortality ratio has decreased as planned, situations have been worsened regarding other three indicators of maternal and child mortality. As reasons for the increase in the maternal mortality, cultural factors including preferring the birth at home were pointed out by MSPAS.

<Other Impacts at the time of Ex-post Evaluation>

All of the three target Health Area Offices answered that husbands have shown more understanding toward maternal health. For example, some husbands who participated in the Pregnant Women's Club's activities, unlike before, permit or even accompany their wives' visiting health facilities and show more understandings towards contraception<sup>2</sup>.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is fair.

Achievement of the Project Purpose and Overall Goal

Aim	Indicators	Results																																				
(Project Purpose) Women (expecting and nursing mothers) and infant receive health services in better quality in the three target departments.	1. Increase the facility-based delivery rate by Q: 10%, T: 15% and S: 25%.	<p>Status of achievement: <u>Not achieved (Continued)</u>. (Project Completion) - The ratio of facility-based delivery increased from 2010 to 2014 by 6%, 11% and 0.5% in Quetzaltenango, Totonicapán and Sololá, respectively, but not reached the target. (Ex-post Evaluation) - Since the project completion, the ratio of the birth at health facilities has been increasing in three departments.</p> <table border="1"> <thead> <tr> <th></th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> </thead> <tbody> <tr> <td>Quetzaltenango</td> <td>55%</td> <td>56%</td> <td>59%</td> <td>60%</td> <td>61%</td> <td>62%</td> <td>64%</td> <td>69%</td> </tr> <tr> <td>Totonicapán</td> <td>28%</td> <td>31%</td> <td>34%</td> <td>38%</td> <td>39%</td> <td>40%</td> <td>44%</td> <td>41%</td> </tr> <tr> <td>Sololá</td> <td>40%</td> <td>46%</td> <td>38%</td> <td>42%</td> <td>40%</td> <td>39%</td> <td>50%</td> <td>52%</td> </tr> </tbody> </table>		2010	2011	2012	2013	2014	2015	2016	2017	Quetzaltenango	55%	56%	59%	60%	61%	62%	64%	69%	Totonicapán	28%	31%	34%	38%	39%	40%	44%	41%	Sololá	40%	46%	38%	42%	40%	39%	50%	52%
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2. Decrease the percentage of the under-weight babies at the birth by facility-based delivery by: Q: 4%, T: 5% and S: 20%	<p>Status of achievement: <u>Not achieved (Partially continued)</u>. (Project Completion) -The percentage of the under-weight babies at the birth by the facility-based delivery decreased from 2010 to 2014 by 6% in Totonicapán, but not reached the target. The percentage increased by 1% and 3% in Quetzaltenango and Sololá, respectively. (Ex-post Evaluation) - Since the project completion, the percentage of the under-weight babies at the birth at health facilities has been on a decreasing trend in Totonicapán and Sololá.</p> <table border="1"> <thead> <tr> <th></th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> </thead> <tbody> <tr> <td>Quetzaltenango</td> <td>14%</td> <td>15%</td> <td>12%</td> <td>12%</td> <td>15%</td> <td>19%</td> <td>20%</td> <td>23%</td> </tr> <tr> <td>Totonicapán</td> <td>13%</td> <td>12%</td> <td>17%</td> <td>8%</td> <td>8%</td> <td>23%</td> <td>28%</td> <td>21%</td> </tr> <tr> <td>Sololá</td> <td>2%</td> <td>6%</td> <td>8.8%</td> <td>6%</td> <td>5%</td> <td>16%</td> <td>14%</td> <td>14%</td> </tr> </tbody> </table>		2010	2011	2012	2013	2014	2015	2016	2017	Quetzaltenango	14%	15%	12%	12%	15%	19%	20%	23%	Totonicapán	13%	12%	17%	8%	8%	23%	28%	21%	Sololá	2%	6%	8.8%	6%	5%	16%	14%	14%	
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3. Increase the satisfaction rate of the service users.	<p>Status of achievement: <u>Partially achieved (Partially continued)</u>. (Project Completion) - The percentage of the service users who answered "very good" or "good" increased in Totonicapán and Sololá, but not in Quetzaltenango. (Ex-post Evaluation) - Since the project completion, the percentage of the service users who answered "very good" or "good" increased in Totonicapán, but not in Sololá and Quetzaltenango.</p> <table border="1"> <thead> <tr> <th></th> <th>2011</th> <th>2014</th> <th>2018</th> </tr> </thead> <tbody> <tr> <td>Quetzaltenango</td> <td>86%</td> <td>79%</td> <td>76%</td> </tr> </tbody> </table>		2011	2014	2018	Quetzaltenango	86%	79%	76%																													
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<sup>2</sup> There were approximately 300 participants in the family planning consultations in the health center of Cajola Xetalbijoj in Quetzaltenango in 2017, though there had been no participants in the previous years.

		Totonicapán	82%	91%	94%
		Sololá	78%	87%	87%
(Overall goal) The health condition of women (expecting and nursing mothers) and children under 5 is improved in the three target departments.	1. Decrease the maternal mortality ratio (MMR) to: Q:90, T:153, S:98	Status of achievement: <u>Partially achieved.</u> (Ex-post Evaluation) - The maternal mortality ratio has decreased in Quetzaltenango and Totonicapán, mostly achieving the target.			
			2015	2016	2017
		Quetzaltenango	109	128	94
		Totonicapán	156	121	130
		Sololá	131	112	184
	2. Decrease the neonatal mortality ratio to: Q:9, T:8, S:10	Status of achievement: <u>Achieved.</u> (Ex-post Evaluation) - The neonatal mortality ratio has decreased in the three departments, reaching the target.			
			2015	2016	2017
		Quetzaltenango	5.37	4.27	3.30
		Totonicapán	10	9	5
		Sololá	9	11	10
		Note: Figures after the decimal point were not available for Totonicapán and Sololá.			
	3. Decrease the infant mortality ratio (IMR) to: Q:13, T:28.5, S:13	Status of achievement: <u>Partially achieved.</u> (Ex-post Evaluation) - IMR has decreased in Quetzaltenango and Totonicapán, reaching the target.			
			2015	2016	2017
		Quetzaltenango	13.42	10.85	7.87
		Totonicapán	22.62	22.74	15.02
		Sololá	19	23	22
		Note: Figures after the decimal point were not available for Sololá.			
	4. Decrease the under 5 mortality ratio (U5MR) to: Q:2.5, T:1.42, S:9	Status of achievement: <u>Not achieved.</u> (Ex-post Evaluation) - The under 5 mortality ratio has decreased in Quetzaltenango, reaching the target.			
			2015	2016	2017
		Quetzaltenango	1.08	1.18	0.73
		Totonicapán	0.95	1.12	1.63
		Sololá	20	23	27
		Note: Figures after the decimal point were not available for Sololá.			

Source: JICA documents, data provided by MSPAS and Health Area Offices of Quetzaltenango, Totonicapán and Sololá.

### 3 Efficiency

Both the project cost and period were within the plan (ratio against the plan: 99% and 100%, respectively). Therefore, the project efficiency is high.

### 4 Sustainability

#### <Policy Aspect>

The “National Plan for the Reduction of Maternal and Neonatal Mortality 2015-2020” and “Institutional Strategic Plan 2016-2020” of MSPAS hold policies and programs for reproductive health and strengthening of the health service networks. Services strengthened by the project are backed up by these policies at least until 2020.

#### <Institutional Aspect>

In the three departments in common, the organizational structure for providing health services for mothers and children is appropriate, but some Health Centers and Posts do not have a sufficient number of the health personnel. At the Health Area Office of Quetzaltenango, 20 staff are assigned: 3 epidemiologists, 4 staff in charge reproductive health, 2 staff in health promotion, 4 nurses, 2 nutritionists, and 5 administrative and other staff, but the number is not sufficient to cover the extensive territory. The staff number of the Health Area Offices of Totonicapán and Sololá (13 and 15, respectively) is sufficient. At the Health Center level, they have necessary professions such as doctors, nurses and rural health workers, but the staff number is not sufficient in two of the four visited Health Centers to provide services of medical treatment, follow-up and medical examinations. Also at the Health Post level, the organizational structure itself is appropriate with assigned professionals, but the staff number is not sufficient in two of the seven visited Health Posts for providing health services in the jurisdiction. One reason is that people live dispersedly in rural areas. In the three departments, case conferences are held among the hospital and Health Center or Post and referral/counter-referral<sup>3</sup> are conducted, according the Health Area Offices. However, in Sololá, referral/counter-referral has been used without sheets, because no copies were made due to the budget shortage.

#### <Technical Aspect>

No particular technical issues were raised. The Health Area Offices of the three departments answered that the personnel of the Health Centers and Posts mostly have sufficient knowledge on maternal and infant health, as the personnel had continuously training programs even after the project completion. In the three departments, training opportunities are provided to nurses, auxiliary nurses and midwives on prenatal care, partum/postpartum care, newborn care, nutrition, and so on. Materials developed by the project including flipcharts on risk signs, manual for prenatal control, referral/counter-referral sheets and DVD on maternal and infant health have been used in the three departments. Performance of the Health Centers and Posts are monitored by the Health Area Offices. In Quetzaltenango and Totonicapán, Health Centers and Posts are monitored bimonthly and monthly, respectively, with the monitoring checklist. If issues are raised, technical assistance or training is provided. In Sololá, the Health Posts are monitored by the Health Centers, and the Health

<sup>3</sup> Referral: Referral and transfer from the lower health facilities to the higher health facilities; Counter-referral: Referral and transfer from the higher health facilities to the lower health facilities.

Centers are supervised by the Health Area Office.

<Financial Aspect>

Budgets of the Health Area Offices of Quetzaltenango, Totonicapán and Sololá have increased for the last four years (56 million Guatemala Quetzals (GTQ) (2015) to 65 million GTQ (planned, 2018), 60 million GTQ (2015) to 84 million GTQ (planned, 2018), and 68 million GTQ (2015) to 84 million GTQ (planned, 2018), respectively), but according to the offices, they have not been sufficient to cover all necessary programs. The Health Area Office of Totonicapán receives financial support from donors, besides budgets assigned from MSPAS. Budget shortages were claimed also at the Centers and Posts, which cannot purchase necessary clinical laboratories, preventive maintenance of the medical equipment, and other medical supplies. No prospect for increase in budget distribution was confirmed by MSPAS and no particular solutions were showed by the Health Area Offices at the time ex-post evaluation survey.

<Evaluation Result>

Therefore, the sustainability of the effects is fair.

5 Summary of the Evaluation

The Project Purpose was partially achieved, and the effects have partially continued. Health services for mothers and infants were strengthened in the target departments, such as prenatal and partum/postpartum care and follow-up of under-weight babies, although they did not reach the target. As a result, situations related to mortality of mothers, newborn babies, infants and under 5 children have improved in the two departments. Regarding sustainability of these improved health services, the number of the personnel of some Health Centers and Posts and budgets are not sufficient to cover all of the needs for maternal and infant health services, the organizational structure itself has been appropriate, and the health personnel have sufficient knowledge on maternal and infant health, while

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

### III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- It is recommended to MSPAS to institutionalize the referral/counter-referral sheets and diffuse them to Health Centers and Posts. In Sololá, although the staff recognized their usefulness and effectiveness, they do not use them now because they lack budgets to reprint them. Printing and distribution of the sheets should be under MSPAS responsibility.

Lessons learned for JICA:

- The project promoted the Health Centers and Posts for establishing Pregnant Women's Clubs in the communities, and these clubs have played an important role for raising awareness of mothers. Mothers share knowledge and experience on prenatal care such as medical control and nutrition intake, which has resulted in the increase in the facility-based delivery and decrease in under-weight babies. Some activities involve their husbands, which raises their understanding on maternal health. It does not take any costs establish these clubs, and through these clubs Health Centers and Posts can easily organize related workshops and other activities. In maternal health projects, this kind of non-costly but effective organization are very recommended for awareness raising of pregnant women.



Husbands accompanying their wives at the Health Post  
(Nueva Candelaria, Totonicapán)



Interview with pregnant women at the ex-post evaluation survey  
(Santa Maria Visitación, Sololá)