

Summary of Final Evaluation

<HONDURAS>

I. Outline of the Project	
Country : Honduras	Project title : Chagas disease control project
Issue/Sector : Health- Infectious Disease Control	Cooperation scheme : Technical Cooperation Project
Division in charge : Infectious Disease Control Team, Group IV (Health II), Human Development Department	Total cost (estimated at completion of the Project) : Approximately 247 million Japanese Yen
Period of Cooperation	(R/D): From September 2, 2003 to September 1, 2007
	Partner Country's Implementing Organization : Secretariat of Health headquarters and its departmental offices in Copan, Lempira, Ocotepeque and Intibuca departments
	Supporting Organization in Japan : Technical Committee for Chagas Disease Control in Central America
	Other organization related: Pan American Health Organization of World Health Organization (PAHO/WHO)
1 Background of the Project	
<p>Chagas disease is called a “neglected disease” or an “illness of the poor stratum”. The insect vectors (<i>Triatominae</i>) thrive in houses with mud walls and thatch roofs feeding on humans and transmit <i>Trypanosoma cruzi</i> – causative agent of Chagas disease. There are treatment medicines for acute cases, but not for chronic cases leading death by heart problem a decade to two decades after infection.</p> <p>Chagas disease is considered to be one of the serious tropical diseases with malaria and dengue fever in Central and South America. The number of patients in the region is estimated more than 20 million. In Central America, it is supposed that about 2.44 million people are infected, which is about 9% of the total population. In case of Honduras, it is assumed that about 0.3 million people (7% of population) are infected.</p> <p>It is technically feasible to control Chagas disease unlike other insect vector-borne diseases such as malaria and dengue fever. Central American populations of <i>Triatominae</i> have no resistance to insecticide to date, and the possibility of development of tolerance in the near future is considered to be low. Therefore, in general terms, Chagas disease control in Central America can be seen as a highly advantageous intervention through 1) insecticide spraying, 2) information, education and communication (IEC) activities, 3) entomological surveillance with social participation, and 4) improvement of houses. Seven countries in Central America (Guatemala, Honduras, Belize, El Salvador, Nicaragua, Costa Rica and Panama) and PAHO/WHO, launching regional initiative against Chagas disease, are taking measures targeting the purpose of “Transmission of Chagas disease will be interrupted in Central America by the end of 2010”. And the Project was started to cooperate with this Initiative, following the preceding project carried out in Guatemala as a technical cooperation by the Japanese government from July 2000 to July 2005.</p> <p>The Project in Honduras was started as a technical cooperation for four years from September</p>	

2003 to September 2007. The project purpose is to interrupt the transmission of vector-borne Chagas disease in 4 selected departments (Copan, Lempira, Ocotepeque and Intibuca) border on Guatemala, applying lessons learned from the project in Guatemala.

The mid-term evaluation was conducted in June, 2006. In order to facilitate activities for establishing community based surveillance system (maintenance phase), 6 pilot areas were selected in the 4 targeted departments. No change was made concerning insecticide spraying (attack phase), continuing the activities in entire area of the 4 departments.

2 Project Overview

(1) Overall Goal

Transmission of Chagas disease is interrupted in Central America and in Honduras by the end of 2010.

(2) Project Purpose

Transmission of Chagas disease by vectors is interrupted in 4 selected departments in Honduras by September, 2007.

(3) Outputs

- 1) *R. prolixus* is eliminated in 4 departments.
- 2) *T. dimidiata* is reduced in 4 departments.
- 3) Vector Surveillance Systems are established with community participation.
- 4) An Information System of the Chagas Disease is implemented in 4 departments and at the National level.
- 5) Diagnostic testing and treatment of patients younger than 15 years old identified by the project is completed with responsibility of the National Program.

(4) Inputs

Japanese side :

Long-term Expert total: 2 persons, Short-term Experts: total 8 persons, JOCVS: total 10 persons
Provision of equipment: 799 thousand US dollars, Local cost expenditure: 490 thousand US dollars

Honduran side :

Counterpart personnel: total 38 persons, Local Cost 780 thousand US dollars
Provision of land and facilities: office spaces and spaces for storing equipment and materials

II. Evaluation Team

Members of Evaluation Team	<ol style="list-style-type: none"> 1) Team Leader: Mr. Fumio KIKUCHI, Director General, Human Development Department, Japan International Cooperation Agency (JICA) 2) Public Health: Dr. Kyo HANADA, Senior Advisor (Public Health), Institute for International Cooperation, JICA 3) Socio-economic Analysis: Dr. Tomomi KOZAKI, Professor, Department of Economics, SENSU University 4) Cooperation Planning: Mr. Kohei TAKIMOTO, Infectious Disease Control Team, Group IV (Health II), Human Development Department, JICA 5) Evaluation Analysis: Mr. Masahiro OSEKO, Consultant, Nevka Co., Ltd. 6) Interpreter: Ms. Aki HIGUCHI, Japan International Cooperation Center (JICE) 	
Period of Evaluation	From April 15, 2007 to May 3, 2007	Type of Evaluation : Final Evaluation

III. Results of Evaluation

3-1 Achievement

(1) Achievement of the Project Purpose

- 1) Dispersion indices of *R. prolixus*, which are most important indicators of the Project, are declined to be nearly 0% (0.9~0.3%). While the dispersion index evaluation survey is ongoing, insecticide spraying is also completed in Lempira department, and it is assumed that *R. prolixus* is eliminated same as other three departments.
- 2) Seroprevalence survey confirmed no incidence of Chagasic infection in 10 villages in Intibuca and Copan department. Though it is confined for three years from 2004 to 2007 and limited in 10 villages, this is the first case of verified impact in Central America. This can be evaluated as big achievement of the Project Purpose.
- 3) Progress of activities concerning *T. dimidiata* is about 40 to 50 % of the plan. It is therefore difficult to attain the indicator of the Project Purpose, which requires the infestation index to be less than 5%. Since a question is posed on the scientific relevance of the target concerning *T. dimidiata*, a further study of strategies and indicators are required on *T. dimidiata*.

(2) Achievement of Outputs

- 1) Output 1: It is expected to be achieved by the end of the Project implementation period, since the first cycle of residual spraying is completed and the second cycle in reinfested villages is undone only for two villages.
- 2) Output 2: Progress of activities concerning *T. dimidiata* is about 40 to 50 % of the plan. This is because the number of houses and localities where intervention is required is more than expected, and the Project placed higher priority on *R. prolixus* which is far riskier than *T. dimidiata*.
- 3) Output 3: Vector surveillance systems were formulated and started their activities in collaboration with actors such as the Secretariat of Health, TSAs and health volunteers. However, these activities have started shortly after the midterm evaluation selecting pilot areas in August 2006. With working experiences less than one year, as predicted in the mid-term evaluation, it is too early to evaluate their stability and sustainability.
- 4) Output4: Information control formats for attack phase (ex. entomological survey, seroprevalence survey and residual house spraying) are prepared and utilized not only in the project target areas but also in other departments nation wide. Information control formats for maintenance phase such as for vector surveillance and evaluation are still under preparation.
- 5) Output5: Treatment for patients under fifteen years old, who were detected by the Project, is undergoing by the Secretary of Health with the responsibility of the National Program. The Project is supporting seroprevalence survey and treatment by means of provision of serological test kits, and implementation of training courses for the persons engaged in diagnostic test. In three departments out of four targeted departments of the Project, except Lempira department, 100% (92.2%~95.6%) patients were already cured. Treatment is not started yet in Lempira department, because seroprevalence survey by the ELISA method is not started yet, although the rapid serological test was applied.

3-2 Summary of Evaluation Results

(1) Relevance: Very High

1) Consistency with the national policy of Honduras

The Honduran government declared to interrupt the transmission of Chagas disease by the year 2010 under the “Central American Initiative for Chagas Disease Control.” The Secretariat of Health elaborated and executed the “Strategic National Plan for Chagas, 2003-2007,” and is preparing the following issue of the “Strategic National Plan for Chagas, 2007-2015” with her leadership in cooperation with PAHO/WHO, CIDA, JICA and others.

2) Consistency with the ODA policy of Japan

Chagas disease control project was selected as one of the regional cooperation projects for SICA countries in the action plan of “Tokyo Declaration” adopted by the second Central American Summit Meeting in August 2005.

3) Consistency with the regional/ global trend against neglected diseases

Director General of WHO announced in January 2007 that WHO was expanding the global effort to control neglected tropical diseases including Chagas disease. And it is planned that Director General of WHO and Director of PAHO/WHO will declare in July 2007 a new initiative “Revisiting Chagas Disease: from a Latin American health perspective to a global health perspective.”

4) Technical approach and methodology of the Project

The design of the Project was made based on the experience of the previous project implemented in Guatemala and created some inefficiency in Honduras due to the epidemiological and political differences between two countries. But the Project has been managing its operation flexible and minimized the negative effects.

(2) Effectiveness: High

1) *R. prolixus* is far riskier species than *T. dimidiata* and its dispersion index is declined to be nearly 0% in three departments out of four targeted departments. Seroprevalence survey confirmed no incidence of Chagasic infection in 10 villages in Intibuca and Copan, and this is the first case in Central America. These achievements are highly evaluated.

2) While the target concerning *T. dimidiata* is not achieved, clear-cut evaluation under current situation is difficult. Because *T. dimidiata* is less risky than *R. prolixus* and further study is required for strategies and targets concerning *T. dimidiata*.

3) The indicator of the Project Purpose, requires the infestation index of *T. dimidiata* to be less than 5%, was derived from the experience in Brazil, in which the infection rate became zero when the infestation rate became less than 5%. A question is posed on the scientific relevance of this indicator, because *Triatominae* in Brazil is different from ones in Honduras and their infection capacity is not identical.

(3) Efficiency: High

1) Inputs such as Japanese experts, Honduran counterparts, training courses and equipment provided were appropriate on the whole and contributed to the activities of the Project.

2) While achievements of Outputs are varied as stated above, the Efficiency is evaluated high since the

elimination of riskier species *R. prolixus* is highly evaluated.

- 3) While TSAs play crucial roles in the intervention, the number of TSA is limited and engaged in a wide variety of activities covering health, sanitation and environment. It is therefore difficult for them to spare enough time for vector control. But it is noteworthy that the Project proceeded its activities providing education and trainings to TSAs and health volunteers, making community sprayers to execute residual spraying. It is only Honduras in Central America, in which community sprayers are engaged in residual house spraying for Chagas disease control.

(4) Impact: High

1) Achievement of Overall Goal

It would be difficult to meet the deadline of the year 2010.

2) Other Impacts

- Selective interventions for Chagas disease control is undergoing in eleven (11) departments on its own initiative of the Honduran Secretariat of Health with assistance from other donors. And the methodology and strategies developed by the Project are well applied in these interventions.
- The Secretariat of Health elaborated and executed the “Strategic National Plan for Chagas, 2003-2007” with her leadership and in cooperation with PAHO/WHO, CIDA, JICA and others. And the following issue of the “Strategic National Plan for Chagas, 2007-2015” is under preparation now.
- Semiannual evaluation meeting for Chagas disease control was started by the Project as a part of information system. While representatives from the Project’s target areas participated meetings at the beginning, more than ten departments currently send representatives to the meeting.
- Canadian CIDA together with the National Chagas Programme prepared a new 10-year cooperation plan for Honduras. The plan includes intervention for Chagas disease control assuming the collaboration with JICA’s activity.
- FHIS carries out a house improvement project as a means of Chagas disease control with the non-project counterpart fund from the Japanese embassy and fund from CABEI in collaboration with international NGOs such as Plan International, World Vision and CARE International. This activity has been planned in coordination with the Project and the National Chagas Programme.

(5) Sustainability: Fair

1) Political aspect

Political backup can be observed in the elaboration and publication of the technical standard “Norma” and the preparation of the 5-year strategic national plan for Chagas disease control.

2) Organizational aspect

- Activities for formulating vector surveillance systems have started only about a half a year ago, and it is too early to evaluate its stability and sustainability. But the actors of surveillance systems such as Health Department Offices, TSAs and health volunteers are highly motivated and continuing their efforts in a positive manner. Therefore, the systems have potential to be stable and sustainable if they receive appropriate financial and technical support for their activities.
- In spite of the change of the government that took place in 2006, the Secretariat of Health has maintained the organizational structure for Chagas disease control. The sustainability of Honduran counterparts was thus secured.

- While it is a positive signal that the Secretariat of Health, with the assistance from USAID, established a “TSA training school,” capacity development is one thing and the employment is another thing. Further efforts and commitment by the Secretariat of Health for securing human resource is highly expected.

3) Financial aspect

Financial input from Honduras side has kept increasing except the year 2006 the year of the change of the government. This indicates the administrative high commitment to Chagas disease control. Chagas disease control is carried out also with the support from local governments namely municipalities, some of which are allocated with Poverty Reduction Fund. It is required to keep these relationships with municipalities and their cooperation.

4) Technical aspect

Since the technical capacity of the Secretariat of Health concerning Chagas disease control is improved with the assistance of the Project and other donors, it is expected to further strengthen the capacity of quality control, information control and vector surveillance system.

3-3 Factors promoted realization of effects

(1) Factors concerning to Planning

There have been positive effects in applying experiences of the Guatemalan project as follows.

- The experience of Guatemalan project suggested that two cycles of insecticide spraying was effective to reduce the infection rate of *T. dimidiata*.
- Guatemalan project made it clear that the establishment of community-based surveillance system was crucial along with the progress of insecticide spraying. (Activity for establishment of surveillance system should be started after the completion of insecticide spraying.)

(2) Factors concerning to Implementation Process

- While the Project was planned and implemented based on the experiences in Guatemala, there were some factors which could not be directly applied in Honduras because of the difference of administrative situations. Vector control officers (ETV), for example, played crucial roles in Guatemala, but in Honduras ETV was demolished and integrated into TSAs along with the movement of decentralization. Since the number of TSAs is limited, the Project trained community volunteers to implement residual spraying working with TSAs. Such flexible management and operation suited to the unique situation in Honduras has significantly contributed to produce the effects of the Project.
- Projects in Honduras, Guatemala and El Salvador shared knowledge and experiences through IPCA’s annual meeting and the regional training coordinated by the JICA’s regional advisor stationed in Honduras.
- Donor harmonization with PAHO/WHO, CIDA and NGOs, and combination of various cooperation schemes of Japanese ODA such as embassy’s counter fund and non-project grant aid significantly contributed to produce various impacts.
- Activities of ten JOCVs significantly contributed to the Project by improving information management and data analysis, and facilitating communication among related organizations such as schools, NGOs, municipalities, private companies, etc.

3-4 Factors that impeded realization of effects

(1) Factors concerning to Planning

As stated above, the design of the Project was made referring to the Chagas disease project implemented in Guatemala. However, limitations owing to the situational differences between Honduras and Guatemala such as availability of insecticide spraying staff and the progress of administrative decentralization were not duly considered for the project design. But these negative factors did not impede the realization of effects due to the flexible management and operation carried out by the Project.

(2) Factors concerning to the Implementation Process

Progress of activities concerning *T. dimidiata* is delayed. This is because the infestation rate of *T. dimidiata* is unexpectedly high, limited number of TSAs play leading roles in the intervention, and rough and long accesses to localities.

3-5 Conclusion

- 1) It is highly evaluated that the attack phase against *R. prolixus* is closely completed, and dispersion indices are declined to be nearly 0% in three departments out of targeted four departments. Particularly, the realization of no incidence of Chagasic infection in two *R. prolixus* previously infested areas is a noteworthy contribution, since this is the first experience in Central America.
- 2) Activities concerning *T. dimidiata* are ongoing. Since a question is posed on the scientific relevance of the target concerning *T. dimidiata*, further study of strategies and indicators are required on *T. dimidiata*.
- 3) Vector surveillance systems have started their activities in collaboration particularly with TSAs and health volunteers. But, since these activities have started only about a half a year ago, as predicted by the mid-term evaluation, it is too early to evaluate their stability and sustainability.
- 4) By creating human resource networks and providing meeting occasions for personnel related to Chagas disease control, the JICA's regional advisor facilitated regional and interagency cooperation, and highly evaluated by Health Ministries of related countries and donors such as PAHO/WHO.

3-6 Recommendations

(1) Recommendations for remaining term

- 1) It is recommended to complete the attack phase against *R. prolixus* in Lempira department.
- 2) Since the community based vector surveillance systems formulation is ongoing, it is recommended to complete at least one cycle of surveillance, which is composed of collection of bugs, information analysis, action planning and residual spraying.

(2) Recommendations to the Honduran Secretariat of Health

- 1) There are several *R. prolixus* infested areas other than the Project's target areas. In order to prevent reinfestation of the target areas, it is required to conduct intervention in those areas.
- 2) Since the development of intervention strategy against *T. dimidiata* suited to the situation in Honduras is on the way, it is recommended to further develop the methodology with the technical support by PAHO/WHO.
- 3) It is recommended to make the surveillance system stable and sustainable.
- 4) Synchronized interventions and information and knowledge sharing is expected to be realized in order

to continue and strengthen the extensive *R. prolixus* control on borders of Guatemala, El Salvador and Nicaragua.

- 5) For realizing above mentioned recommendations, the Honduran government is expected to prepare sufficient budget and human resources along with the administrative high-level commitment, maintaining the collaboration with PAHO/WHO and other donors (particularly CIDA).

3-7 Lessons Learned

- 1) When a large-scale administrative rearrangement such as decentralization is ongoing, it is important to carry out an extensive and thorough preliminary survey.
- 2) Although the design of the Project was made referring to the project implemented in Guatemala, the situation in Honduras was different since the centralized government system was change to be decentralized. Under such circumstance, it is important to flexibly change and modify the project strategies suited to the unique situation.