4.1 ミニッツ（ホンジュラス）（英文）

MINUTES OF MEETINGS
BETWEEN
JAPANESE FINAL EVALUATION TEAM
AND
THE SECRETARIAT OF HEALTH OF THE REPUBLIC OF HONDURAS
ON
JAPANESE TECHNICAL COOPERATION
FOR
CHAGAS DISEASE CONTROL PROJECT

The Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Final Evaluation Team (hereinafter referred to as "Japanese Team"), headed by Mr. Fumio KIKUCHI, to the Republic of Honduras from April 15 to May 3, 2007, for the purpose of conducting the joint final evaluation for the Chagas Disease Control Project (hereinafter referred to as "the Project").

The Joint Evaluation Team (hereinafter referred to as "the Team"), which consists of members from Japanese Team and members from the Secretariat of Health, was jointly organized for the purpose of conducting the final evaluation and preparation of necessary recommendations to the respective governments.

After intensive study and analysis of the activities and achievements of the Project, the Team prepared the Final Evaluation Report (hereinafter referred to as "the Report") and presented it to the Joint Coordinating Committee.

The Joint Coordinating Committee discussed the major issues pointed out in the Report, and agreed to recommend to their respective governments the matters referred to in the document attached hereto.

Done in duplicate in English and Spanish languages, each text is equally authentic. In case of any divergence of interpretation, the English text shall be prevail.

Tegucigalpa, May 3, 2007

Mr. Fumio KIKUCHI
Leader
Japanese Final Evaluation Team
Japan International Cooperation Agency
Japan

Dr. Jenny Meza
Minister
Secretariat of Health
The Republic of Honduras

Honorable Witness

Dr. Lilian Reneau-Vernon
Representative of Pan American Health Organization/
World Health Organization (PAHO/WHO) in Honduras

ATTACHMENT

FINAL EVALUATION REPORT
ON
THE CHAGAS DISEASE CONTROL PROJECT
IN
THE REPUBLIC OF HONDURAS

Tegucigalpa

May 3, 2007

JOINT EVALUATION TEAM

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1. Introduction and Outline of the Project

1.1 Objectives of the Evaluation

The evaluation study was conducted with the purpose of:

(1) To verify the level of achievements and performance of the Project based on the Record of Discussions (R/D), Plan of Operations (P/O), and Project Design Matrix (PDM),

(2) To evaluate the Project in terms of the five evaluation criteria, and

(3) To draw useful recommendations to the Project and lessons learned from the Project.

1.2 Members of the Joint Evaluation Team

(1) Japanese Evaluation Team

	Field in Charge	Name	Position/ Organization
1)	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, SENSHU 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	Training Coordinator; Japan International Cooperation Center (JICE)

(2) Honduran Evaluation Team

	Field in Charge	Name	Position/ Organization
1)	Leader	Dr. Concepcion Zuniga Valeriano	Coordinator for the National Chagas Program, General Direction of Environmental Health, Secretariat of Health
2)	Member	Dr. Carlos Ponce	Chief of Chagas and Leishmaniasis Laboratory, Central Laboratory, Secretariat of Health
3)	Member	Ms. Elisa Ponce	Assistant of Chagas and Leishmaniasis Laboratory, Central Laboratory, Secretariat of Health

1.3 Schedule of the Evaluation

From April 15 to May 3, 2007

1.4 Background of the Project

Chagas disease is called a "neglected disease" or an "illness of the poor stratum". The insect vectors (*Triatominae*) thrive in houses with mud walls and thatch roofs feeding on humans and transmit *Trypanosoma cruzi* – 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.

Chagas disease is considered to be one of the serious tropical diseases following 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 2,440,000 people are infected, which is

about 9% of the total population. In case of Honduras, it is assumed that about 300,000 people (7% of population) are infected.

It is technically feasible to control Chagas disease unlike other insect vector-borne diseases such as malaria and dengue fever. Central American populations of *Triatominae* 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.

The Project in Honduras was started as a technical cooperation for four years from September 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.

1.5 Summary of the Project

1.5.1 Objectives of the Project

(1) Overall Goal

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

(2) Project Purpose

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

1.5.2 Outputs of the Project

(1) *R. prolixus* is eliminated in 4 departments.
(2) *T. dimidiata* is reduced in 4 departments.
(3) Vector Surveillance System 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

(For the detail refer to the PDM1 (revised version) in Annex 1.)

2. Methodology of Evaluation

2.1 Methodology of Evaluation

The evaluation study is conducted by the Joint Evaluation Team consisting of Honduran and Japanese members. The Honduran members were nominated by the Secretariat of Health and the Japanese members were nominated by JICA. The evaluation is conducted based on the "JICA's Guideline for Project Evaluation: revised version of March 2004". The evaluation activities include documents analysis, field survey, interviews to persons concerned, and discussions with official staff concerned to the Project based on the five evaluation criteria listed below:

2.2 Criteria of Evaluation

The Team reviewed activities and achievements of the Project, and evaluated them based on the following five criteria:

(1) Relevance

Relevance refers to the validity of the Project Purpose and the Overall Goal in connection with the development policy of Honduras Government as well as the needs of beneficiaries.

(2) Effectiveness

Effectiveness refers to the extent to which the expected benefits of the Project have been achieved as planned, and examines if the benefit was brought about as a result of the Project (not as that of external factors).

(3) Efficiency

Efficiency refers to the productivity of the implementation process, and examines if the Inputs of the Project was efficiently converted into the Outputs.

(4) Impact

Impact refers to direct and indirect, positive and negative impact caused by implementing the Project, including the extent to which the Overall Goal has been attained.

(5) Sustainability

Sustainability refers to the extent to which the Honduran side can further develop the Project, and the benefits generated by the Project can be sustained under Honduras' policies, technologies, systems and financial state of the Honduran side.

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3. Performance of the Project

3.1 Inputs to the Project

3.1.1 Inputs by the Japanese side

(1) Dispatch of experts

1) Long-term experts

Field of assignment	Name	Period of assignment
Chagas disease control	Mr. Michio Kojima	Apr. 21, 2003 – Aug. 31, 2007
Management and administration advisor for JICA regional project	Mr. Jun Nakagawa	Sep. 13, 2004 – Sep. 12, 2007

2) Short-term experts

Eight (8) short-term experts were dispatched in total. (See Annex 2)

3) Japanese Overseas Cooperation Volunteers (JOCVs)

Ten (10) JOCVs were dispatched in total. (See Annex 2)

(2) Regional training of counterpart personnel

The regional trainings on medical entomology were conducted twice in El Salvador and 13 Honduran counterparts participated. (See Annex 4)

(3) Provision of equipment

Japanese side has provided insecticide sprayers, insecticide, serological reagent, vehicles, computers and computer related equipment and others. Total amount of expenses for equipment is 799 thousand US$. (See Annex 5)

(4) Local operation expenses borne by the Japanese side

Total amount of local operation expenses born by the Japanese side is 490 thousand US$. Expenses by year are as follows. (See Annex 6)

Year	JFY2003	JFY2004	JFY2005	JFY2006	JFY2007	Total
Local operation expenses (Unit: thousand US$)	41	72	109	223	45	490

JFY: Japanese Fiscal Year (from April to March of the next year)

3.1.2 Inputs by the Honduran side

(1) Assignment of counterpart personnel

38 counterparts are assigned on the political, administrative and department (field) level of the Secretariat of Health. (See Annex 3)

(2) Provision of land, buildings and facilities

The Honduran side provided necessary facilities, such as office space for Japanese experts and JOCVs, storage and space for machinery, equipment and materials.

(3) Allocation of Budget by the Honduran side

Budget allocated by the Honduran side is as follows.

Year	2003	2004	2005	2006	2007	Total
Budget (Unit: thousand US$)	33	83	193	88	383	780

3.2 Progress of Activities of the Project

See Annex 8

3.3 Achievements by the Project

3.3.1 Achievement of the Overall Goal

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
1. Transmission of Chagas disease is interrupted in Central America by the end of 2010.	Seroprevalence	Report of serological investigation	Chagas Disease continues to be a priority of the Secretariat of Health
2. Transmission of Chagas disease is interrupted in Honduras by the end of 2010.			

1) The Overall Goal would not be achieved by the end of the year 2010, although the Secretariat of Health of Honduras makes various and extensive efforts to control Chagas disease.
2) The elimination of *R. prolixus* is still targeted to be realized by the year 2010,
3) It is required to revise the strategies, indicators, methods, and intervention levels for reduction of domestic infestation of *T. dimidiata*.
4) While these Overall Goals are derived from the goals set by IPCA, PAHO/WHO is expanding its view beyond the year 2010 with the new global Chagas disease control initiative.

3.3.2 Achievement of the Project Purpose

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
Transmission of Chagas disease by vectors is interrupted in 4 selected departments in Honduras.	Index of dispersion (R.p: 0%) Index of infestation (T.d: lower than 5%) Seroprevalence Established Surveillance System	Report of serological and entomological investigations Report of PAHO Evaluation	Maintain 100% screening on all blood banks Prevent congenital transmission through the National Program

1) Attack phase against *R. prolixus* is completed except three (3) municipalities in Lempira.
2) Dispersion indices of *R. prolixus* are declined to be nearly 0% as shown in the table below.
3) The Project Purpose in terms of *R. prolixus* is therefore can be evaluated to be fulfilled.
4) Insecticide spraying is also completed in Lempira department, and it is assumed that *R. prolixus* is eliminated same as other three departments. But the evaluation survey to verify the elimination of vectors in Lempira is not conducted yet, therefore the data are excluded from the table.

Departments	Baseline Survey (2004-2006)			Evaluation Survey (2006-2007)			Actual Situation (April 2007)		
	Number of villages surveyed	Number of villages infested with *R. prolixus*	Dispersion index (%)	Number of previously infested villages surveyed	Number of villages infested with *R. prolixus*	Dispersion index (%)	Number of villages surveyed	Number of villages infested with *R. prolixus*	Dispersion index (%)
Intibuca	218	38	17.4%	34	2	5.9%	218	2	0.9%
Copan	363	25	6.9%	24	1	4.2%	363	1	0.3%
Lempira	372	33	8.9%	–	–	–	–	–	–
Ocotepeque	174	6	3.4%	6	1	16.7%	174	1	0.6%
Total	1,127	102	9.1%	64	4	6.3%	755	4	0.5%

Excluding Lempira

Evaluation survey for 20 villages in Lempira department is not conducted yet.

5) Seroprevalence evaluation survey was conducted in March 2007 in *R. prolixus* previously infested area of ten (10) villages in two departments of Intibuca and Copan, and identified thirty one (31) positive inhabitants. Results of the seroprevalence survey is shown in the table below. These 31 inhabitants were already identified to be positive by the baseline survey conducted in 2003 to 2004. This indicates that no incidence took place after 2004 in these 10 villages.
6) 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.

as of March 2007

Departments	Baseline Survey (2003-2004)			Evaluation Survey (2007)		
	Number of inhabitants surveyed	Number of positive inhabitants	Seroprevalence rate (%)	Number of inhabitants surveyed	Number of positive inhabitants	Seroprevalence rate (%)
Intibuca	757	175	23.1%	683	15	2.2%
Copan	683	78	11.4%	695	16	2.3%
Total	1,440	253	17.6%	1,378	31	2.2%

7) 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*.
8) It is therefore difficult to attain the indicator of the Project Purpose, which requires the

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infestation index of *T. dimidiata* to be less than 5%.

9) It must be noted though, that the indicator of the Project Purpose, requires the infestation index 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%. It implies that the indicator of the Project Purpose applied Brazilian empirical figure without verifying its conformity to Honduras. A question is posed on the scientific relevance of this indicator, because *Triatominae* in Brazil (*Triatoma infestans*) is different from ones in Honduras and their infection capacity is not identical. It is desirable to use seroprevalence, rather than vector infestation index, as an indicator to measure the effects of Chagas disease control.

3.3.3 Achievement of Output

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
1. R. prolixus is eliminated in 4 departments	% of coverage of spraying at the localities positive for R.p	Report of Spaying of Health Areas	Other Triatomine species infests fumigated areas Reinfestation of T.d does not rise drastically
2. *T. dimidiata is reduced in 4 departments*	Index of infestation for T.d	Report of Spaying of Health Areas	
3. Vector Surveillance System are established with community participation	Number of Units of Surveillance System installed	Reports of quarterly review meeting of Health Areas	
4. An Information System of the Chagas Disease is implemented in 4 departments and at the National level	Established Information System	Reports of quarterly review meeting of Health Areas	
5. Diagnostic testing and treatment of patients younger than 15 years old identified by the project is completed with responsibility of the National Program	Number of patients treated Number of patients who come to be negative	Reports of Health Areas and the Secretariat of Health	

(1) Achievement of Output 1

Output 1 "*R. prolixus* is eliminated in 4 departments"

Indicator "% of coverage of spraying at the localities positive for *R.p*"

1) Output 1 is fully achieved.
2) The first cycle of residual spraying is completed and the second cycle in reinfested villages is expected to be completed within the Project implementation period.

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Coverage of residual spraying in localities infested with *R. prolixus* As of 03. 2007

	Number of villages targeted	Number of villages sprayed		Number of villages unsprayed	
		Number of villages	% of villages	Number of villages	% of villages
Insecticide spraying (first cycle)	797	797	100%	0	0%
Insecticide spraying (second cycle)	4	2	50%	2	50%

(2) Achievement of Output 2

Output 2 "*T. dimidiata* is reduced in 4 departments"

Indicator "Index of infestation for *T.d*"

1) Output 2 is not achieved.
2) As far as the indicator concerns, it may be able to judge the Output 2 is achieved since the infestation index is reduced as shown in the table below. However, the Project Purpose targets the infestation index of *T dimidiata* to be less than 5%, and this in not attained. In this respect, the Output 2 should not be evaluated to be achieved.

Municipality	Baseline Survey (2004)			Evaluation Survey (2005-06)		
	Number of houses surveyed	Number of houses infested	Infestation index	Number of houses surveyed	Number of houses infested	Infestation index
San Francisco de Valle (Ocotepeque)	285	102	36%	232	38	16%
San Marcos (Ocotepeque)	536	131	24%	426	72	17%
Nueva Ocotepeque (Ocotepeque)	103	25	24%	115	7	6%
Corquin (Copan)	426	165	39%	300	17	6%
San Agustin (Copan)	128	37	29%	131	5	4%
Total	1,478	460	31%	1,204	139	12%

(3) Achievement of Output 3

Output 3 "Vector Surveillance System are established with community participation"

Indicator "Number of Units of Surveillance System installed"

1) Output 3 is partly achieved.
2) Vector surveillance systems were formulated and started their activities in collaboration with local governments and communities in six (6) pilot areas in four (4) targeted departments.

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3) Various actors such as a director of Health Department Office, TSA[1] coordinators, TSAs and health volunteers built up a vector surveillance system, and implementing activities for long-term domestic surveillance including insecticide spraying and patient monitoring.
4) However, these activities have started shortly after the midterm evaluation selecting pilot areas in August 2006. With working experiences less than one year, it is too early to evaluate their stability and sustainability.

(4) Achievement of Output 4

Output 4 "An Information System of the Chagas Disease is implemented in 4 departments and at the National level"

Indicator "Established Information System"

1) Output 4 is partly achieved.
2) 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.
3) Information control formats for maintenance phase such as for vector surveillance and evaluation are still under preparation.
4) Semiannual evaluation meeting on Chagas disease control is functioning effectively as an information control means. The meeting was started by the Project, and central and department level reporting system was organized. In this semiannual meeting, each Health Department Office reports its progress and lessens learned obtained from its activities, and share the information, skills and knowledge with colleagues from other departments. Only the representatives from the Project's target areas participated meetings at the beginning, but representatives from other departments currently join the meetings.
5) Bottom-up information flow from health volunteers in villages to health centers in localities, from health centers to Health Department Offices, from departments to the Secretary of Health is organized and functioning to some extent. But the information feedback flow from top to the bottom, particularly at levels lower than departments, is not yet established.

(5) Achievement of Output 5

Output 5 "Diagnostic testing and treatment of patients younger than 15 years old identified by the project is completed with responsibility of the National Program"

Indicator "Number of patients treated"
"Number of patients who come to be negative"

1) Output 5 is partly achieved.
2) The results of seroprevalence survey conducted in the Project's target areas are as follows shown in the table. Survey was conducted in three (3) departments excluding Lempira

[1] TSA: Environmental Health Technician

department. Patients' treatment is undergoing by the Secretary of Health with the responsibility of the National Program.

3) It must be appreciated that the Honduran Secretary of Health has conducted treatment of positive children nearly 100% despite the high infection rate in the country.
4) In Lempira department, although the rapid serological test was applied, seroprevalance survey by the ELISA method is not started yet.

Department	Number of Municipality	Number of children tested	Number of children positive		Number of children treated	
		(persons)	(persons)	(%)	(persons)	(%)
Copan	4	6,005	136	2.3%	130	95.6%
Intibuca	6	9,048	680	7.5%	627	92.2%
Lempira	-	-	-	-	-	-
Ocotepeque	4	1,685	28	1.7%	26	92.9%
Total	14	16,738	844	5.0%	783	92.8%

(Data: The Chargas Disease Control Progarm 2003-2006)

3.4 Implementation process

Implementation process characterized by the following features was detailed in the "Midterm Evaluation Report (6.2006)" of the Project.

Characteristic features of the Project

(1) Donor coordination and collaboration particularly with PAHO/WHO, Canadian CIDA, CARE International, and World Vision.
(2) Application of various cooperation schemes of Japanese ODA such as bilateral technical cooperation project, regional cooperation, non-project counterpart fund, grant aid assistance, and JOCV.
(3) Integral approach of vector control, diagnosis and treatment.
(4) Cross-sectoral cooperation involving municipalities and schools.
(5) Coordination of house improvement activities involving vector control actors such as the Honduran Secretariat of Health, JICA, CIDA, NGOs and house improvement actors such as FHIS[2] and NGOs.
(6) Participatory approach involving communities and ethnic groups.
(7) Aligning with the national poverty reduction plan (PRSP)

Avoiding the repetition of descriptions with the Midterm Evaluation Report, vector control

[2] FHIS: Social Investment Fund of Honduras

methodology and JOCV's activities are picked up and elaborated here as a distinguished implementation process observed after the midterm evaluation.

3.4.1 Establishment of intervention methodology

1) The Project has developed and is monitoring the effectiveness of the specific intervention methodology for Chagas disease suited to the situation in Honduras.
2) In Honduras, where ETV[3] was integrated into TSA due to the health sector decentralization, the Project started its activities with a few information or data concerning methodologies applied in the past.
3) Since the number of TSA was limited and engaged in a wide variety of activities covering health, sanitation and environment, the Project sought for cooperation from communities particularly from health volunteers. The Project thus started its activities involving health volunteers even from the beginning of the attack phase.
4) As a result, health volunteers became very important actors, who are involved in almost all the process of Chagas disease control, involved in entomological survey, seroprevalence survey, identification of risky houses and localities, residual house spraying planning, insecticide spraying and long-term epidemiological surveillance. This is a specific intervention strategy unique to Honduras developed by the Project.
5) It is only Honduras in Central America, in which community sprayers are engaged in residual house spraying for Chagas disease control.

3.4.2 Activities of JOCVs

Ten (10) JOCVs in total were sent since the beginning of the Project, assigned to department offices or COTEDIH[4]. Their activities significantly contributed to the Project at local level facilitating communication between communities and related organizations including government agencies.

Their activities were categorized as follows by the midterm evaluation.

1) Promotion of educational activities
   A wide variety of educational activities were carried out by JOCVs along with development of educational materials such as booklets, video clips, vector T-shirts, vector key holders, etc.
2) Facilitation of communication between the Chagas Programme and Health Department Offices
   Assigned to Health Department Offices and working with the Chagas Programme of the Secretariat of Health, JOCVs have been facilitating communication between these two main administrative levels in collaboration with JICA experts.
3) Promotion of cooperation among multiple sectors
   JOCVs have facilitated multi-sectoral cooperation involving schools, municipalities, NGOs and private companies.
4) Multilateral activities
   With flexible and creative approaches, JOCV's have carried out various activities such as

[3] ETV: Vector Transmitted Disease Programme
[4] COTEDIH: Technical Council for the Integral Development of Honduras (NGO)

animation video clips, nutrition improvement for infected children, house cleaning campaign, and promotion drama.

Followings are some of the noteworthy activities conducted by JOCVs after the midterm evaluation.

(1) House visit in communities

A JOCV assigned in Copan Department visited all of the 84 households in the community of Carrizalón, Copán Ruinas Municipality. Visiting each house with health volunteers, they explained about Chagas disease and vectors, confirmed infestation of *Triatominae*, and investigated the situation of families and houses.

Visiting houses talking with householders and their families, this activity opened the mind of local people who used to be closed in extreme poverty, and made them accept the Project activities in the community.

(2) Bugs collection campaign

A JOCV assigned in Copan Department is working in Corquín Municipality on "Chagas vector collection campaign" with a local TSA. The campaign calls widely to local people through health volunteers and schools for colleting Chagas vectors. Collected bugs are registered to identify vector distribution and insecticide spraying is carried out according to the infestation index. This is the first "Chagas vector collection campaign" systematically held in Honduras.

(3) Bugs collection box

A JOCV assigned in Intibuca Department asked a local technical high school to make "Chagas vector collection boxes" and installed them in health centers, so that local people can easily find the place to leave vectors collected at home. Effect of boxes can be estimated from the fact that the amount of bugs collected in this area is more than the other area.

(4) IEC activities

JOCVs have introduced a wide variety of IEC (Information, Education, Communication) activities such as large-scale school visits meeting more than 2,000 school teachers, introduction and guidance of geographic analysis using GIS[5], comical but educational drama on Chagas disease, and appearance on mass-media such as radio programme.

Through these creative but immeasurable activities, JOCVs have significantly contributed to the Project.

[5] GIS: Geographic Information System

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4. Evaluation Results

4.1 Relevance

Relevance of the Project is evaluated "Very High" from the following perspective.

Relevance of the Project was evaluated very high at the time of midterm evaluation from the following viewpoints. Since the situation is not changed to date of this final evaluation, the relevance of the Project can be evaluated very high.

(1) Consistency with national plans of Honduras
(2) Consistency with Japanese ODA policy in particular human security and poverty reduction
(3) Consistency with the regional/ global trend against neglected diseases
(4) Consistency with needs of targeted areas
(5) The approach and methodology of the Project
(6) Cooperation and coordination with other JICA projects and other donor agencies

In addition, the followings can be added to verify the relevance of the Project.

To (2) consistency with the ODA policy of Japan:

1) Chagas disease control project was selected as one of the regional cooperation projects for SICA[6] countries in the action plan of "Tokyo Declaration" adopted by the second Central American Summit Meeting in August 2005.
2) "Regional ODA Task Force Meeting" was held by the Japanese ODA related organizations in El Salvador in March 2007. The task force designated mathematics, disaster prevention and Chagas disease as themes of regional cooperation for Central America.

To (3) consistency with the regional/ global trend against neglected diseases:

1) Dr. Margaret Chan, Director General of WHO announced in a conference in Thailand in January 2007 that WHO was expanding the global effort to control neglected tropical diseases including Chagas disease.
2) 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."
3) The expanded programme of WHO is supported by Bayer Health Care, which manufactures a drug used to treat Chagas disease. Bayer HC provided funds to expand WHO's Chagas disease elimination efforts along with 2.5 million tablets of nifurtimox free of charge.

[6] SICA: Central American Integration System

4.2 Effectiveness

Effectiveness of the Project is evaluated "**High**" from the following perspective.

1) The evaluation team evaluated the effectiveness of the Project high even though the target concerning *T. dimidiata* is not attained. This is because the team weighed achievement of the targets concerning *R. prolixus* and seroprevalence heavier than that of *T. dimidiata*.
2) *R. prolixus* is far riskier species than *T. dimidiata* and its dispersion index is declined to be nearly 0%. Seroprevalence survey confirmed no incidence of Chagasic infection in 10 villages in Intibuca and Copan, and this is the first case in Central America. The team highly evaluated these achievements.
3) The target concerning *T. dimidiata* is not achieved since the number of communities where intervention was required was more than expected, and the Project placed higher priority on the control of *R. prolixus* than that of *T. dimidiata*.
4) The evaluation team evaluated this with less weight than that of *R. prolixus*, because *T. dimidiata* is less risky than *R. prolixus*, and a question is posed on the relevance of the indicator targeting the infestation index of *T. dimidiata* to be less than 5%.

4.3 Efficiency

Efficiency of the Project is evaluated "**High**" from the following perspective.

1) Inputs such as Japanese experts, Honduran counterparts, regional training courses on medical entomology and equipment provided were appropriate on the whole and contributed to the activities of the Project. However, the achievements of Outputs are partial as shown below.

   Output 1 (spraying against Rp) is fully achieved.
   Output 2 (infestation index of Td) is not achieved.
   Output 3 (surveillance system) is partly achieved.
   Output 4 (information system) is partly achieved
   Output 5 (treatment) is partly achieved.

2) Even though the achievements of Outputs are confined to be partial, the evaluation team evaluated the Efficiency high by weighing the achievement of Output 1 heavily. In addition, the team considers the target of *T. dimidiata* to be less than 5% is too high. The Japanese long-term experts and the Honduran Secretariat of Health have also considered it's too high, and have virtually targeted 20%. And in most areas in four departments, infestation index of *T. dimidiata* has become less than 20%.
3) Shortage of TSA is a challenge. 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

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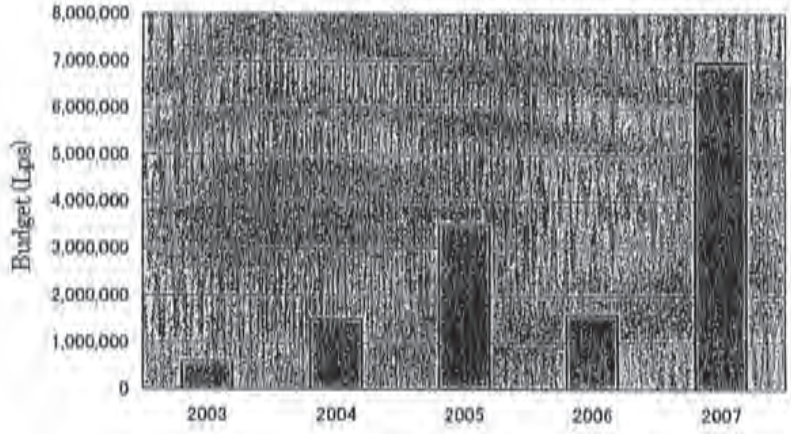
enough time for vector control.

4) But it is noteworthy that, under such difficult situation, the Project proceeded its activities providing education and trainings to TSAs and health volunteers, making community sprayers to execute residual spraying.

5) Financial input from Honduran side keeps increasing year by year. Though the budget preparation was delayed in 2006 due to the change of the government, 1.6 million lempira (US$ 88 thousand) was disbursed for the Project by the efforts of Honduras side at the recommendation made by the midterm evaluation team. The Secretariat of Heath prepares 6.95 million lempira (US$ 383 thousand) for 2007.

Budget prepared by the Secretariat of Health
for Chagas disease control (2003-2007)



4.4 Impact

Although the Overall Goal would not be achieved, Impact of the Project is evaluated "High" from the following perspective.

(1) Achievement of Overall Goal

1) The Overall Goal would not be achieved by the end of the year 2010, although the Secretariat of Health of Honduras makes various and extensive efforts to control Chagas disease.
2) The elimination of *R. prolixus* is still targeted to be realized by the year 2010,
3) It is required to revise the strategies, indicators, methods, and intervention levels for reduction of domestic infestation of *T. dimidiata*.
4) While these Overall Goals are derived from the goals set by IPCA, PAHO/WHO is expanding its view beyond the year 2010 with the new global Chagas disease control initiative.

F.

(2) Other impacts

1) Selective interventions for Chagas disease control is undergoing in eleven (11) departments on it own initiative of the Honduran Secretariat of Health with assistance from other donors. This is a national level impact the Project made. The methodology and strategies developed by the Project are well applied in these interventions.

2) 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.

3) Semiannual evaluation meeting for Chagas disease control was started by the Project, and department level reporting system was organized. While representatives from the Project's target areas participated meetings at the beginning, more than ten (10) departments including departments other than the target areas currently send representatives to the meeting.

4) 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.

5) 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[7] 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.

4.5 Sustainability

Sustainability of the Project's effects is evaluated "**Fair**" from the following perspective.

(1) Political aspect

1) For the next term, the Secretariat of Health is preparing the "Strategic National Plan for Chagas, 2007-2015" collaborating with donors. Political backup for Chagas disease control is expected to be sustained with this newly issued national plan.

(2) Organizational aspect

1) Vector surveillance systems are formulated and in the process of implementation in all pilot areas. However, these activities have started only about a half a year ago, and with working experiences less than one year, it is too early to evaluate its stability and sustainability.

2) But the actors of surveillance systems such as Health Department Offices, TSA coordinators, 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 support for their activities.

3) In spite of the change of the government took place in 2006, the Secretariat of Health has

[7] CABEI: Central American Bank for Economic Integration

maintained the organizational structure for Chagas disease control. The sustainability of Honduran counterparts was thus secured.

4) Shortage of TSA is a challenge. It is a positive signal that the Secretariat of Health established a "TSA training school" in order to supply human resource to the field level.

5) Further efforts and commitment by the Secretariat of Health for securing human resource is highly expected.

(3) Financial aspect

1) Financial input from Honduras side has kept increasing except the year 2006 the year of the change of the government. Budget for the Project in 2007 reached 6,950 thousand lempira (US$ 383 thousand). This indicates the administrative high priority of Chagas disease control.

2) Chagas disease control is carried out not only by the Secretariat of Health but 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

1) 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.

4.6 Establishment of entomological surveillance system

1) After the midterm evaluation, the Project started vector surveillance activities with community participation, formulating structures composed of the Secretariat of Heath, Health Department Offices, TSA coordinators, TSAs and health volunteers. Activities are carried out systematically with stratified plans and strategic monitoring and evaluation.

2) Health volunteers play very important roles in the surveillance system, involved in almost all the process, namely, entomological survey, seroprevalence survey, identification of risky houses and localities, insecticide spraying and long-term epidemiological surveillance.

3) Other actors such as municipalities and Education Department Offices extend their supports, which create cross-sectoral collaborative system.

4) However, these activities started only about a half a year ago, it is too early to evaluate effects they made.

5) In order to make the system stable and sustainable, further development of capacity with adequate resources will be required, along with stakeholders' high motivation and initiative. In addition to this, mid-term and long-term monitoring and evaluation of the system will be indispensable.

4.7 Contribution of Regional Advisor

1) Since Chagas disease is a regional issue, the regional cooperation is indispensable. And the JICA's regional advisor's contribution is highly evaluated. By strengthening human resource networks and providing meeting occasions for personnel related to Chagas disease control, the advisor has facilitated regional and interagency cooperation. The advisor is engaged in region-wide coordination and information activities covering Central American countries such as Honduras, El Salvador, Guatemala and Panama.
2) Coordination and information activities implies 1) creation of meeting occasions, 2) network formation, 3) occasional steering of Projects, and 4) knowledge management. These are intangible but significant foundation consolidation works.
3) In order to create regional meeting occasions, the advisor organized a regional workshop collaborating with ECLAT[8] and PAHO/WHO, and suggested to hold a sub-workshop in IPCA's annual meeting. Inviting JICA related personnel including experts, counterparts, JOCVs to these meetings, the advisor facilitated information exchange and knowledge sharing among them.
4) The advisor strengthened human resource networks connecting various stakeholders such as JICA related personnel in four countries, Ministry of Health of respective country, PAHO/WHO[9], WHO, researchers, and research institutions[10]. The network provided considerable and broad-ranging human resources to the Projects in Honduras and in El Salvador.
5) The advisor provided meeting occasions with individuals such as long-term experts and JOCVs in four countries whenever they are in need of discussion concerning steering of their activities.
6) As knowledge management, the advisor realized 1) sharing of good practices, 2) networking of expertise, 3) accumulation of intellectual capital. Setting up a mailing list on the web, for example, the advisor deepened the discussion about good practices and methodologies of Chagas disease control.
7) The regional advisor is assigned to the Honduran Secretariat of Health stationed in PAHO/WHO-Honduras, and facilitated regional cooperation in coordination with PAHO/WHO. This implies that the Honduran Secretariat of Health has contributed to the regional cooperation in Central America by means of the JICA's regional advisor through IPCA.
8) Also, PAHO/WHO has highly evaluated the existence of the post of JICA regional advisor and his performance.

5. Conclusion

[8] ECLAT: European Community - Latin American Network for Research on the Biology and Control of Triatominae
[9] PAHO/WHO-Wahington, PAHO/WHO in Central and South American countries
[10] London Univ., Harvard Univ., universities in Guatemala, Argentine and Brazil

	Relevance	Effectiveness	Efficiency	Impact	Sustainability
Results	Very High	High	High	High	Fair

1) It is highly evaluated that the attack phase against *R. prolixus* is closely completed, and dispersion indices are declined to be nearly 0%.
2) 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.
3) Although the Project Purpose concerning *T. dimidiata* is not achieved, this is evaluated with less weight than the achievement of *R. prolixus* control. This is because that *T. dimidiata* is less risky than *R. prolixus*, and a question is posed on the relevance of the indicator targeting the infestation index of *T. dimidiata* to be less than 5%.
4) 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, it is too early to evaluate their stability and sustainability.
5) By creating human resource networks and providing meeting occasions for personnel related to Chagas disease control, the regional advisor facilitates regional and interagency cooperation. And by means of the advisor through IPCA, the Honduran Secretariat of Health contributed to the regional cooperation in Central America.

6. Recommendations and Lessons Learned

6.1 Recommendations

6.1.1 Recommendations for remaining term

1) It is recommended to complete the attack phase against *R. prolixus* as soon as possible.
2) Since the community based vector surveillance systems are formulated and started implementation in all pilot areas about a half a year ago, 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.

6.1.2 Recommendations to the 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.

F-1

4) Regional cooperation is required 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.
6) The collaboration with PAHO/WHO and other donors (particularly CIDA) will be indispensable for effective and efficient implementation of these activities.

6.2 Lessons Learned

1) For applying experience learned in previous similar projects, preliminary survey or ex-ante evaluation must be conducted in order to confirm the applicability of them.
   Without the preliminary survey, the Project was planned and started following the experience of the Chagas disease control project implemented in Guatemala.
   However, the Honduran entomological and administrative situation was quite different from that of Guatemala, and considerable time was consumed to know the situation in Honduras prior to the commencement of activities.
2) When a large-scale administrative rearrangement such as decentralization is ongoing, even more extensive and thorough preliminary survey is required.

Annex 1 Project Design Matrix (PDM) original and revised version

PDM (original version)

September 2003

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
OVERALL GOAL Transmission of Chagas disease will be interrupted in Central America by the end of 2010 Transmission of Chagas disease will be interrupted in Honduras by the end of 2010	Seroprevalence	Report of serological investigation	Chagas Disease continues to be a priority of the Secretariat of Health
PROJECT PURPOSE Transmission of Chagas disease by vectors will be interrupted in 4 selected departments in Honduras by the end of 2007	Index of dispersion (R.p: 0%) Index of infestation (T.d: lower than 5%) Seroprevalence Established Information System	Report of serological and entomological investigations Report of PAHO Evaluation	Maintain 100% screening on all blood banks Prevent congenital transmission through the National Program
OUTPUTS 1. R. prolixus will be eliminated in 4 departments	% of coverage of spraying at the localities positive for R.p	Report of Spaying of Health Areas	Other Triatomine species infests fumigated areas Reinfestation of T.d dose not rise drastically
2. T. dimidiata will be reduced in 4 departments	% of coverage of spraying at the houses positive for T.d	Report of Spaying of Health Areas	
3. A Vector Surveillance System will be established with community participation	Number of Units of Surveillance System installed	Reports of quarterly review meeting of Health Areas	
4. An Information System of the Chagas Disease will be implemented in 4 departments and at the National level	Established Information System	Reports of quarterly review meeting of Health Areas	
5. Diagnostic testing and treatment of patients younger than 15 years old identified by the project will be completed with responsibility of the National Program	Number of patients treated Number of patients who come to be negative	Reports of Health Areas and the Secretariat of Health	

ACTIVITIES	INPUTS		
	HONDURAS	JAPAN	
1.1 To execute serological investigation in R.p endemic area 1.2 To execute entomological investigation of R.p 1.3 To execute one cycle of spraying with insecticides in 100% of the houses at the localities positive for R.p and the second cycle for localities which continue to be positive 1.4 To evaluate results of interventions using epidemiological and entomological investigations 1.5 To mobilize local governments, NGOs and other institutions for improvement of the houses 2.1 To execute serological investigation in T.d endemic area 2.2 To execute entomological investigation of T.d 2.3 To make stratification of intervention according to the index of infestation of T.d 2.4 In the localities positive for T.d, to implement one or two cycles of spraying according to index of infestation 2.5 To evaluate results of interventions using epidemiological and entomological investigation 2.6 To mobilize local governments, NGOs and other institutions assistance for improvement of the houses 3.1 To produce materials and manuals for promotion of chagas disease control 3.2 To execute promotion of Chagas disease control through health centers, schools, and collaborated volunteers 3.3. To establish a Vector Surveillance system in each municipality with community participation 4.1 To identify information required in different levels for the control of Chagas disease 4.2 To create and implement data forms required at different levels 4.3 To establish information system connect Area level to the central level 5.1 To apply treatment to recently infected cases of T. cruzi according to the regulation and responsibility of National Program 5.2 To apply control examination 18 months after the treatment	<u>Materials</u> Medicines Operation Cost Fuel of Vehicles Insurance for Vehicles <u>Human Resources</u> Representative of Vector Transmitted Disease Unit National Program Coordinator on Chagas Chief of Chagas Disease Laboratory TSA Coordinators in 4 Departments TSA teams in 4 departments Epidemiologists in 4 departments Temporarily Employed sprayers	Insecticides Manual Sprayers Reagent for Blood Screening Materials for promotion of Chagas Computers Long-term Experts Short-term Experts Sub-regional experts Third Country Experts Japanese Volunteers <u>Others</u> Training in Japan or other countries	Trained personnel continue to work in the same post. Outbreak of other diseases dose not diminish resources for Chagas control.
	PAHO		**PRECONDITIONS**
	Cooperation on evaluation of the project Technical Assistance Coordination with Central American Initiative		Local authorities and technical personnel recognize the importance of controlling Chagas disease.

PDM (revised version)

Project name: Chagas Disease Control Project in Honduras
Target area: Copan, Lempira, Ocotepeque and Intibuca Departments
Implementation Agency of Honduran side: Secretariat of Health
Implementation Agency of Japanese side: Japan International Cooperation Agency
Date of revision of PDM: June 20, 2006

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATIONS	IMPORTANT ASSUMPTIONS
OVERALL GOAL Transmission of Chagas disease is interrupted in Central America by the end of 2010 Transmission of Chagas disease is interrupted in Honduras by the end of 2010	Seroprevalence	Report of serological investigation	Chagas Disease continues to be a priority of the Secretariat of Health
PROJECT PURPOSE Transmission of Chagas disease by vectors is interrupted in 4 selected departments in Honduras	Index of dispersion (R.p: 0%) Index of infestation (T.d: lower than 5%) Seroprevalence Established Surveillance System	Report of serological and entomological investigations Report of PAHO Evaluation	Maintain 100% screening on all blood banks Prevent congenital transmission through the National Program
OUTPUTS 1. R. prolixus is eliminated in 4 departments	% of coverage of spraying at the localities positive for R.p	Report of Spaying of Health Areas	Other Triatomine species infests fumigated areas Reinfestation of T.d does not rise drastically
2. T. dimidiata is reduced in 4 departments	Index of infestation for T.d	Report of Spaying of Health Areas	
3. Vector Surveillance System are established with community participation	Number of Units of Surveillance System installed	Reports of quarterly review meeting of Health Areas	
4. An Information System of the Chagas Disease is implemented in 4 departments and at the National level	Established Information System	Reports of quarterly review meeting of Health Areas	
5. Diagnostic testing and treatment of patients younger than 15 years old identified by the project is completed with responsibility of the National Program	Number of patients treated Number of patients who come to be negative	Reports of Health Areas and the Secretariat of Health	

ACTIVITIES	INPUTS		
	HONDURAS	JAPAN	
1.1 To execute serological investigation in R.p endemic area 1.2 To execute entomological investigation of R.p 1.3 To execute one cycle of spraying with insecticides in 100% of the houses at the localities positive for R.p and the second cycle for localities which continue to be positive 1.4 To evaluate results of interventions using epidemiological and entomological investigations 1.5 To mobilize local governments, NGOs and other institutions for improvement of the houses 2.1 To execute serological investigation in T.d endemic area 2.2 To execute entomological investigation of T.d 2.3 To make stratification of intervention according to the index of infestation of T.d 2.4 In the localities positive for T.d, to implement one or two cycles of spraying according to index of infestation 2.5 To evaluate results of interventions using epidemiological and entomological investigation 2.6 To mobilize local governments, NGOs and other institutions assistance for improvement of the houses 3.1 To produce materials and manuals for promotion of chagas disease control 3.2 To execute promotion of Chagas disease control through health centers, schools, and collaborated volunteers 3.3. To establish a Vector Surveillance system in each municipality with community participation 4.1 To identify information required in different levels for the control of Chagas disease 4.2 To create and implement data forms required at different levels 4.3 To establish information system connect Area level to the central level 5.1 To apply treatment to recently infected cases of T. cruzi according to the regulation and responsibility of National Program 5.2 To apply control examination 18 months after the treatment	Materials Medicines Operation Cost Fuel of Vehicles Insurance for Vehicles Human Resources Representative of Vector Transmitted Disease Unit National Program Coordinator on Chagas Chief of Chagas Disease Laboratory TSA Coordinators in 4 Departments TSA teams in 4 departments Epidemiologists in 4 departments Temporarily Employed sprayers	Insecticides Manual Sprayers Reagent for Blood Screening Materials for promotion of Chagas Computers Long-term Experts Short-term Experts Sub-regional experts Third Country Experts Japanese Volunteers Others Training in Japan or other countries	Trained personnel continue to work in the same post. Outbreak of other diseases dose not diminish resources for Chagas control.
	PAHO		**PRECONDITIONS**
	Cooperation on evaluation of the project Technical Assistance Coordination with Central American Initiative		Local authorities and technical personnel recognize the importance of controlling Chagas disease.

ANNEX 2 Dispatch of Japanese Experts and JOCVs

1) Long-term Japanese Experts

No.	Name of Expert	Field	Period of Assignment			2003	2004	2005	2006	2007
			From	To	MM					
1	Mr. Michio Kojima	Chagas disease control	(Apr. 20, 2003) Sep. 2, 2003	Aug. 31, 2007	48					
2	Mr. Jun Nakagawa	Management and Administration Advisor for JICA Regional Project	Sep. 13, 2004	Sep. 12, 2006	24					

2) Short-term Japanese Experts

No.	Name of Expert	Field	Period of Assignment			2003	2004	2005	2006	2007
			From	To	MM					
1	Mr. Jun Nakagawa	Chagas Disease Control	Oct. 7, 2003 Oct. 18, 2003	Oct. 12, 2003 Oct. 25, 2003	0.5					
2	Dr. Soichiro Tabaru	Medical Entomology	Jan. 25, 2004	Feb. 1, 2004	0.4					
3	Dr. Soichiro Tabaru	Medical Entomology	Mar. 3, 2004	Mar. 18, 2004	0.5					
4	Dr. Yoichi Yamagata	Regional Coordination on Chagas Disease Control	Apr. 24, 2003	May. 31, 2003	1.3					
5	Dr. Yoichi Yamagata	Regional Coordination on Chagas Disease Control	Jun. 7, 2005	Jul. 10, 2005	1.1					
6	Dr. Tomoyuki Hashimoto	Medical Entomology	Apr. 23, 2005	May 14, 2005	0.7					
7	Dr. Tomomi Kozaki	Cost Analysis on Chagas disease control	Jul. 30, 2005	Aug. 8, 2005	0.3					
8	Dr. Tomomi Kozaki	Cost Analysis on Chagas disease control	Sep. 3, 2006	Sep. 22, 2006	0.7					
9	Dr. Ken Hashimoto	Medical Entomology	Jan. 23, 2007	May 6, 2007	3.5					

3) JOCV (Japan Overseas Cooperation Volunteers)

No.	Name	Field	Period of Assignment			2003	2004	2005	2006	2007
			From	To	MM					
1	Ms. Naho Suzuki	Florida	Sep. 2, 2003	Mar. 7, 2005	18.0					
2	Mr. Takaaki Kugo	Lempira	Jul. 17, 2003	Sep.11, 2005	24.0					
3	Ms. Megumi Fujita	Intibuca	Jul. 17, 2003	Jul. 16, 2005	22.0					
4	Ms. Ryoko Kitagawa	Ocotepeque	Apr. 4, 2004	Apr. 3, 2006	24.0					
5	Mr. Tadasi Ogasawara	S.R. Copan	Jul. 11, 2004	Jul. 10, 2006	24.0					
6	Ms. Shino Yamauchi	Florida	Dec. 5, 2004	Dec. 4, 2006	24.0					
7	Mr. Yukihiro Matsuzaki	Intibuca	Jul. 11, 2005	Jul. 10, 2007	24.0					
8	Mr. Tetsuya Kimura	NGO: COTEDIH	Mar. 27, 2006	Mar. 26, 2008	17.0					
9	Ms. Yuki Yoshikuni	Cholteca	Jun, 2006	Jun, 2008	24.0					
10	Ms. Nobuko Tamari	Ocotepeque	Jun, 2006	Jun, 2008	24.0					
11	Mr. Tadasi Ogasawara	S.R. Copan	Jan, 2007	Jul, 2007	7.0					

Annex 3: Assignment of Counterpart Personnel

SH: Secretariat of Health

	No	Name	Title	Organization	Assignment				
					2003	2004	2005	2006	2007
SH, Administration Level	1	Dr. Concepción Zúniga	Chagas Program Coordinator	SH, Central Level					
	2	Dr. Carlos Ponce	Chief of Chagas Disease Laboratory	SH, Central Laboratory					
	3	Ms. Elilsa Ponce	Chief of Chagas Disease Laboratory	SH, Central Laboratory					
	4	Mr. Ramon Rosales	Technician, Chagas Program	SH, Central Level					
	5	Mr. Marco Trejo	Technician, Chagas Program	SH, Central Level					
SH, Political Level	6	Dr. Luis Medina	Director, General Health	SH, Central Level					
	7	Dr. Sandra Ramirez	Director, Direction de Promotion	SH, Central Level					
	8	Dr. Humberto Cocenza	Director of International Cooperation	SH, Central Level					
	9	Dr. Nicolas Handi	Director of International Cooperation	SH, Central Level					
	10	Dr. Funny Mejia	Vice minister	SH, Central Level					
	11	Dr. Jenny Meza	Vice minister to Minister	SH, Central Level					
	12	Mr. Elias Lizardo	Minister	SH, Central Level					
	13	Dr. Merlin Hernandez	Minister	SH, Central Level					
	14	Dr. Olison Verasquez	Minister	SH, Central Level					
SH, Department (Field) Level	15	Dr. Carlos Craudino	Director, Regional Departmental Office	SH, Department of Copán					
	16	Dr. Norma Aguillar	Director, Regional Departmental Office	SH, Department of Copán					
	17	Dr. Lourdes Bueso	Chief of Environmental Health	SH, Department of Copán					
	18	Mr. Emiliano Lopez	Coordinator, Environmental Health, Copán North	SH, Department of Copán					
	19	Mr. Elmer Romeo	Coordinator, Environmental Health, Copán South	SH, Department of Copán					
	20	Dr. Heman Chinchilla	Director, Regional Departmental Office	SH, Department of Ocotepeque					
	21	Mr. Orlando Pinto	Coordinator, Environmental Health	SH, Department of Ocotepeque					
	22	Dr. Yolani Batres	Director, Regional Departmental Office	SH, Department of Lempira					
	23	Mr. Abel Morina	Coordinator, Environmental Health	SH, Department of Lempira					
	24	Mr. Noel Guerra	Coordinator, Environmental Health	SH, Department of Lempira					
	25	Dr. Luis Girón	Director, Regional Departmental Office	SH, Department of Intibucá					
	26	Mr. Roger Reyes	Coordinator, Environmental Health	SH, Department of Intibucá					
Other Organizations	27	Dr. Gilles de Margerie	Coordinator, Health Sector Cooperation	Canada CIDA					
	28	Mr. Jose Gómez	Coordinator, Chagas Disease Project	Canada CIDA					
	29	Dr. Camille Promerleau	Coordinator, Program PRO-MESAS	Canada CIDA					
	30	Dr. Delmín Cury	Responsible for Communicable Diseases	PAHO Honduras					
	31	Dr. Marita Sanchez	Responsible for Communicable Diseases	PAHO Honduras					
	32	Dr. Tamara Mancero	Responsible for Communicable Diseases	PAHO Honduras					
	33	Dr. Fiusa Lima	Director	PAHO Honduras					
	34	Dra. Lilian Releau-Vernon	Director	PAHO Honduras					
	35	Mr. Lombardo Ardón	Coordinador of Chagas Disease Control Project	World Vision, Honduras					
	36	Ms. Carmen Hernández	Coordinador of Health Projects	CARE International					
	37	Ms. Fidelia Zúniga	Director, Project on House Construction	Local NGO, COTEDIH					
	38	Mr. Antonio Cruz	Coordinator of House Construction Project	FHIS, Honduran Social Investment Fund					

Annex 4: Regional training of counterpart personnel

No.	Name	Post and Organization	Field of training	Period of training	
				From	To
1	Emiliano López	TSA, Copán	Medical entomology on Chagas disease control	Sep. 19, 2005	Sep. 23, 2005
2	Orlando Pinto	TSA, Ocotepeque	Medical entomology on Chagas disease control	Sep. 19, 2005	Sep. 23, 2005
3	Elmer Romero	TSA, Copán	Medical entomology on Chagas disease control	Sep. 19, 2005	Sep. 23, 2005
4	Ramón Rosales	TSA Program Chagas, SH headquarters	Medical entomology on Chagas disease control	Sep. 19, 2005	Sep. 23, 2005
5	Marco Tulio Trejo	TSA Program Chagas, SH headquarters	Medical entomology on Chagas disease control	Sep. 19, 2005	Sep. 23, 2005
6	Dr. Concepción Zúniga	Coordinador del Programa, SH headquarters	Medical entomology on Chagas disease control	Sep. 19, 2005	Sep. 23, 2005
7	Emiliano López	TSA, Copán	Medical entomology on Chagas disease control	Feb. 20, 2006	Feb. 24, 2006
8	Orlando Pinto	TSA, Ocotepeque	Medical entomology on Chagas disease control	Feb. 20, 2006	Feb. 24, 2006
9	Elmer Romero	TSA, Copán	Medical entomology on Chagas disease control	Feb. 20, 2006	Feb. 24, 2006
10	Ramón Rosales	TSA, SH headquarters	Medical entomology on Chagas disease control	Feb. 20, 2006	Feb. 24, 2006
11	Roger Reyes	TSA, Intibuca	Medical entomology on Chagas disease control	Feb. 20, 2006	Feb. 24, 2006
12	Wilberto Montarrban	TSA, SH headquarters	Medical entomology on Chagas disease control	Feb. 20, 2006	Feb. 24, 2006
13	Oscar Urrutia	TSA, SH headquarters	Medical entomology on Chagas disease control	Feb. 20, 2006	Feb. 24, 2006

Annex 5 Provision of Equipment by Japanese side

Unit: Thousand Yen
Thousand US$

JFY	2003	2004	2005	2006	2007	Total
Provision of Equipment	¥27,157 ($232)	¥33,612 ($287)	¥29,324 ($251)	¥0 ($0)	¥0 ($0)	¥90,093 ($770)
Expert's Accompanied Equipment	¥700 ($6)	¥1,000 ($9)	¥0 ($0)	¥0 ($0)	¥0 ($0)	¥1,700 ($15)
Total	¥28,089 ($240)	¥34,899 ($298)	¥29,575 ($253)	¥0 ($0)	¥0 ($0)	¥92,563 ($791)

JFY: Japanese Fiscal Year (From April to March)

Chagas Disease Control Project; Honduras
Equipment Registration
Japanese Fiscal Year 2003

Type	Item	Product	Quantity	Unit Cost (Lps)	Cost (Lps)	Delivery	Installing Location	Purchase	Dispo	Exist	Usage	Mainte	Manage	Remark
Expert's accompanied equipment	Lap-top Computer	Toshiba dyabook	1	N/A	N/A	2003/4/24	Chagas Disease Programa, Secretariat of Health	Japan	0	1	A	A	A	
Expert's accompanied equipment	Portable Color Printer	Canon Flaus 50i	1	N/A	N/A	2003/4/24	Chagas Disease Programa, Secretariat of Health	Japan	0	1	A	A	A	
Expert's accompanied equipment	Digital Camera	Canon	1	N/A	N/A	2003/4/24	Chagas Disease Programa, Secretariat of Health	Japan	0	1	A	A	A	
Expert's accompanied equipment	Digital Vido Camera	Canon	1	N/A	N/A	2003/4/24	Chagas Disease Programa, Secretariat of Health	Japan	0	1	A	A	A	
Expert's accompanied equipment	Projector	Hp	1	N/A	N/A	2003/4/24	Chagas Disease Programa, Secretariat of Health	Japan	0	1	A	A	A	
Expert's accompanied equipment	Project Car	Mitsubishi	1	N/A	N/A	2003/8/1	Chagas Disease Programa, Secretariat of Health	Japan	0	1	A	A	A	
Local purchased equipment	Mobile Phone	Motorola	1	6,260.00	6,260.00	2003/7/22	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	USB Memory	Kingston	1	1,002.40	1,002.40	2003/8/7	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	Shelves for Maps		1	5,000.00	5,000.00	2003/8/15	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	Shelves for Books		1	5,297.60	5,297.60	2003/10/28	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	Stabilizers		4	1,650.00	6,600.00	2003/12/5	Regional Office (Intibuca, Lempira, Florida), Central Laboratory, Secretariat of Health	Local	0	4	A	A	A	
Local purchased equipment	Photocopy	Sharp AR-5220	1	25,990.00	25,990.00	2004/2/16	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	Laser Printer	Hp-1300	3	8,650.00	25,950.00	2004/2/17	Regional Office (Intibuca, Lempira, Florida), Secretariat of Health	Local	0	3	A	A	A	
Local purchased equipment	Desk for Computer		1	1,422.40	1,422.40	2004/2/21	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Provision equipment	Lap-top Computers	Toshiba	5	US$2,145.00	US$10,725.00	2003/12/8	Regional Office (Intibuca, Lempira, Florida), Central Laboratory, Chagas Disease Program, Secretariat of Health	Local	0	5	A	B	B	
Provision equipment	Field vehicule Pick Up	Mitsubishi Pick-up	4	US$19,800.00	US$79,200.00	2003/12/8	Regional Office (Intibuca, Lempira, Florida, Santa Rosa de Copan), Secretariat of Health	Local	0	4	A	B	A	
Provision equipment	Insecticide, (Deltamethrin 5WP) 1500gs	Bayer	1,500		US$79,500.00	2003/12/8	Chagas Disease Programa, Secretariat of Health	Local	0	0	A			all utilized
Provision equipment	Insecticide Sprayer	Hudson	40	US$350.00	US$14,000.00	2003/12/8	Chagas Disease Programa, Secretariat of Health	Local	0	40	A	A	A	
Provision equipment	Insecticide Sprayer Spare	Hudson	4	US$375.00	US$1,500.00	2003/12/8	Chagas Disease Programa, Secretariat of Health	Local	0	4	A	A	A	
Provision equipment	Diagnostic Test kit (Prueba Rapida)	Chembio Diagnostic	750	US$38.00	US$28,500.00	2003/12/8	Central Laboratory, Secretariat of Health	Local	0	0	A			all utilized
Provision equipment	Diagnosttical Test kit (ELISA)		140	US$92.00	US$12,880.00	2003/12/8	Central Laboratory, Secretariat of Health	Local	0	0	A			all utilized

Expert's accompanied equipment	0	
Local purchased equipment	77,522	Lps
Provision equipment	US$226,305.00	
Total		

Chagas Disease Control Project, Honduras
Equipment Registration
Japanese Fiscal Year 2004

Type	Item	Product	Quantity	Unit Cost	Cost (Lps)	Delivery Schedule	Installing Location	Purchase	Dispo	Exist	Usage	Maint	Manage	Remark
Expert's accompanied equipment (Nakagawa)	Lap top Computer	DELL	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Accompaniment Amplyficalion	DELL	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Computer Adaptor	Tagax	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	USB Wide Memorry	IO data	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	USB 2.0 4ports HUB	SIGMA	2	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	2	A	A	A	
Expert's accompanied equipment (Nakagawa)	Stabilizar	MATSUNAGA	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Documentation Soft	Microsoft	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Project Management Soft	Microsoft	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Anti Virus Soft	Simantic	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Homepage Builder	Source Next	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Arc View Soft	Film Maker	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Documentation Soft	Adobe System	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Portable Printer	Canon	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Projector	DELL	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Digital Camera	Sony	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Memory Stick for Digital Camera	Sony	2	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	2	A	A	A	
Expert's accompanied equipment (Nakagawa)	Lens for Digital Camera	Sony	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Book: American	Kevin M. Tyler	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Expert's accompanied equipment (Nakagawa)	Book: Chagas' Disease and the Nervous System	PAHO	1	N/A	N/A	2004/9/17	PAHO Regional Expert Office	Japan	0	1	A	A	A	
Local purchased equipment	FAX machine	Sharp	1	2,234.40	2,234.40	2004/4/20	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	FAX machine	Sharp	1	2,234.40	2,234.40	2004/4/27	Administration, Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	Tape recorder for Promotion activities	Sony	10	533.12	5,331.20	2004/4/30	Promotion Section, Secretariat of Health	Local	0	10	A	A	A	
Local purchased equipment	Refrigerator	Avanti	1	4,020.80	4,020.80	2004/5/7	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	DVD Movie		10	850.00	8,500.00	2004/8/25	Regional Offices, Secretariat of Health	Local	0	10	A	A	A	
Local purchased equipment	Laser Printer for Regional Expert	Hp	1	7,271.60	7,271.60	2004/9/16	PAHO Regional Expert Office	Local	0	1	A	A	A	
Local purchased equipment	Shelves for Books		1	3,169.60	3,169.60	2004/11/2	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	Internet LAN modem		1	1,680.11	1,680.11	2005/1/18	PAHO Regional Expert Office	Local	0	1	A	A	A	
Local purchased equipment	Stabilizar		1	11,200.00	11,200.00	2005/1/18	Regional Office (Ocotepeque, Santa Rosa de Copan), Secretariat of Health	Local	0	2	A	A	A	
Local purchased equipment	Laser Printer	Hp-1300	1	34,950.00	34,950.00	2005/1/20	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Local purchased equipment	Books: Infectious Disease		3	1,673.52	5,020.55	2005/1/21	PAHO Regional Expert Office	Local	0	3	A	A	A	
Local purchased equipment	Chairs for Central Laboratory		2	2,016.00	4,032.00	2005/1/21	Central Laboratory, Secretariat of Health	Local	0	2	A	A	A	
Local purchased equipment	USB Memory Stick for Long Term Expert		1	1,995.00	1,995.00	2005/2/22	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Provision equipment	Field vehicuis Pick Up	Nissan Pick Up	2	US$1,785.00	US$3,570.00	2004/8/10	Regional Office(Ocotepeque), Chags Disease Program, Secretariat of Health	Local	0	2	A	A	A	
Provision equipment	Diagnostic Test kit (Prueba Rapida)	Chembio Diagnostic	450	US$36.00	US$16,200.00	2004/8/25	Central Laboratory, Secretariat of Health	Local	0	0	A			all utilized
Provision equipment	Insecticide Sprayer	Hudson	160	US$335.00	US$53,600.00	2004/10/12	Chagas Disease Programa, Secretariat of Health	Local	0	160	A	B	A	
Provision equipment	Insecticide Sprayer Spare parts	Hudson	10	US$360.00	US$3,600.00	2004/10/12	Chagas Disease Programa, Secretariat of Health	Local	0	10	A	A	A	
Provision equipment	Insecticide (Deltamethrine 5WP), 1000kg	Bayer	3000	US$50.00	US$150,000.00	2004/10/19	Chagas Disease Programa, Secretariat of Health	Local	0	0	A			all utilized
Provision equipment	Lap top Computer	Toshiba	3	US$35,900.00	US$10,700.00	2004/12/16	Regional Office (Ocotepeque, Santa Rosa de Copan) , Chagas Disease Program, Secretariat of Health	Local	0	3	A	B	A	
Provision equipment	Diagnostical Test kit (ELISA)	Wiener Lab.	250	US$79.00	US$19,750.00	2005/2/7	Central Laboratory, Secretariat of Health	Local	0	0	A			all utilized

Expert's accompanied equipment	0
Local purchased equipment	91,640 Lps
Provision equipment	US$257,420.00

Total

Chagas Disease Control Project, Honduras
Equipment Registration
Japanese Fiscal Year 2005

#######

Type	Item	Product	Quantity	Unit Cost (Lps)	Cost (Lps)	Delivery	Installing Location	Purchase	Dispo	Exist	Usage	Mainte	Manage	Remark
Local purchased	USB Memory Stick		1	1,384.55	1,384.55	2005/5/3	PAHO Regional Expert Office	Local	0	1	A	A	A	
Local purchased	Internet Cable Switch		1	567.84	567.84	2005/5/10	PAHO Regional Expert Office	Local	0	1	A	A	A	
Local purchased	Computer Battery Pck		1	1,999.00	1,999.00	2005/5/28	Chagas Disease Programa, Secretariat of	Local	0	1	A	A	A	
Local purchased	Color Printer for Maps	HP	1	9,830.00	9,830.00	2005/6/1	Chagas Disease Programa, Secretariat of	Local	0	1	A	A	A	
Local purchased	Shelves for Central		1	5,000.00	5,000.00	2005/7/11	Central Laboratory	Local	0	1	A	A	A	
Local purchased	PC Software (Proof Writing)	Microsoft	2	2,273.18	4,546.36	2005/9/27	PAHO Regional Expert Office	Local	0	2	A	A	A	
Local purchased	Keyboard for lap top		1	550.00	550.00	2005/10/18	Chagas Disease Programa, Secretariat of	Local	0	1	A	A	A	
Local purchased equipment	Mobile Phone for Long term expert	Motorola	1	1,172.10	1,172.10	2006/1/10	Chagas Disease Programa, Secretariat of Health	Local	0	1	A	A	A	
Provision equipment	Diagnostic Test kit (Prueba Rapida)		969	US$39.97	US$38,729.00	2005/9/11	Central Laboratory	Local	0	400	A			Utilizing
Provision equipment	Insecticdes (Deltametrina 5WP) 4980ka	Bayer	4,980	US$44.80	US$223,104.00	2005/10/20	Chagas Disease Programa, Secretariat of Health	Local	0	2500	A			Utilizing

Expert's accompanied equipment		
Local purchased equipment	63,779	Lps
Provision equipment	US$261,833.00	
Total		

Chagas Disease Control Project, Honduras
Equipment Registration
Japanese Fiscal Year 2006

12-Mar-07

Type	Item	Product	Quantity	Unit Cost (Lps.)	Cost (Lps.)	Delivery Schedule	Installing Location	Purchase	Dispo	Exist	Usage	Maints	Manage	Remark
Local purchased equipment	Maps (Panama)		1	491.40	491.40	2006/11/7	PAHO Panama	Local	0	1	A	A	A	
Local purchased equipment	PC Memory		1	1,848.19	1,848.19	2006/11/8	PAHO Panama	Local	0	1	A	A	A	
Local purchased equipment	Maps (Guatemala)		1	8,260.95	8,260.95	2006/11/9	Ministry of Health	Local	0	1	A	A	A	
Local purchased equipment	GPS for JICA Expert	Germy	1	5,316.50	5,316.50	2007/3/8	PAHO Regional Expert	Local	0	1	A	A	A	
Provision equipment	GIS for Secretaryiat	ESRI	1	US$1,500.00	US$1,500.00	2006/11/20	Chagas Disease Programa, Secretariat of	Local	0	1	A	A	A	
Provision equipment	GPS for Secretaryiat	Germi	6	US$219.00	US$1,314.00	2007/1/23	Chagas Disease Programa, Secretariat of	Local	0	1	A	A	A	
Provision equipment	Spare Kits for Sprayer	Hudson	Varios	Varios	US$7,117.50	2007/2/8	Chagas Disease Programa, Secretariat of	Local	0	1	A	A	A	
Provision equipment	Diagnostical Test kit (ELISA)	Wiener Lab.	100	US$84.00	US$8,400.00	2007/2/27	Central Laboratory, Secretariat of Health	Local	0	1	A	A	A	

Expert's accompanied equipment		
Local purchased equipment	15,917	Lps
Provision equipment	US$18,331.50	
Total		

ANNEX 6 Operation Expenses borne by Japanese Side

Local Activity Budget

Unit: Thousand Yen
(Thousand US$)

Category	Year					Total
	JFY 2003	JFY 2004	JFY 2005	JFY 2006	JFY 2007	
General Operation Expenses	¥4,800	¥8,500	¥12,800	¥26,200	¥5,300	¥57,600
	($41)	($72)	($109)	($223)	($45)	($491)

JFY: Japanese Fiscal Year (from April to March)

ANNEX 7 Expenses borne by Honduran Side (Secretariat of Health)

Unit: Thousand Lempira
(Thousand US$)

Category	Year					Total
	2003	2004	2005	2006	2007	
General Expenses	600	1,500	3,500	1,600	6,950	14,150
	($33)	($83)	($193)	($88)	($383)	($779)

Note: Personal expenses are not included.

Annex 8: Progress of Activities of the Project

Final Evaluation of the Chagas disease control Project in Honduras (March 28, 2007)

*) Evaluation criteria: judge the advance status of the activities and results in comparison with the operative plan of the proyect. (AAA: Finalized, AA: More advanced than planned, A: According to plan, B: Delayed, C: Very delayed and affecting the project, D: Not started and NA: Not clear or not possible to evaluate).

<table>
<tr><th>Output</th><th>Activities</th><th>Advance status (March, 2007)</th><th>Evaluation *)</th></tr>
<tr><td rowspan="2">Output 1
Rodonius prolixus (R.p.) is eliminated in 4 departments</td><td>1.1
Execute serological surveys in endemic areas for R.p.</td><td>Outcome of the serological surveys in 4 departments (2004 - March 2007)
<table>
<tr><th></th><th>Total</th><th colspan="2">Done</th><th colspan="2">Pending</th></tr>
<tr><th></th><th>(Number of objective localities)</th><th>(Number of localities)</th><th>(%)</th><th>(Number of localities)</th><th>(%)</th></tr>
<tr><td>Serological survey</td><td>600</td><td>372</td><td>62</td><td>229</td><td>38</td></tr>
</table>
Among the 3,000 existing localities in the 4 Departments of the Project, 1,000 where chosen for the serological survey of R.p y T.d. First, 60% of this localities (600) where selected as priority area for the control of R.p. As the survey advanced, many children where detected positive. Since the capacity for treatment was limited, it was decided to stop the survey. During the period of the project there is no plan to execute a big scale serological survey. From this point on, one serological survey will take place focused in the Department of Lempira, based on the outcome of the entomological survey for R.p.</td><td>B</td></tr>
<tr><td>1.2
Execute entomological survey for R.p.</td><td>Outcome of the entomological exploration of 4 departments (interview to primary school students) (2004 – March 2007)
<table>
<tr><th></th><th>Total</th><th colspan="2">Done</th><th colspan="2">Pending</th></tr>
<tr><th></th><th>(Number of objective localities)</th><th>(Number of localities)</th><th>(%)</th><th>(Number localities)</th><th>(%)</th></tr>
<tr><td>Exploration</td><td>1.000</td><td>848</td><td>85</td><td>152</td><td>15</td></tr>
</table>
Outcome of the Entomological survey of 4 departments (2004 – March 2007)
<table>
<tr><th></th><th>Total</th><th colspan="2">Done</th><th colspan="2">Pending</th></tr>
<tr><th></th><th>(Number of objective localities)</th><th>(Number of localities)</th><th>(%)</th><th>(Number of localities)</th><th>(%)</th></tr>
<tr><td>To confirm infestation</td><td>1.440</td><td>1.127</td><td>78</td><td>313</td><td>22</td></tr>
</table>
Due to the absence of vector technicians of the Ministry of Health of Honduras, it is not posible to carry out entomological survey by TSA staff of the MOH. For that reason, a entomological exploration was done to primary school student and a campaign for the capture of vectors at community level. With these activities the status of infestation of R.p. was estimated. The entomological survey was done based on this approximated estimation.
At the begining of the Project, it was planned to cover 1,000 villages (one third part of the total) for the entomological survey of R.p. However, a wide area of infestation of R.p. was detected in the Departament of Lempira. For this matter, it was decided to increase up to 1,440 localities the survey site. In the communities where a high rate of dispersion was estimated, an additional study was conducted of follow up during the spraying.
In total, the entomological survey covered almost 80 % of the study area. Remaining close to 20 % of localities of the Department of Lempira where there is possibility of infestation of R.p. It is estimated that the majority of study area will be covered before the end of the project in September.</td><td>B</td></tr>
</table>

<table>
<tr><th>Output</th><th>Activities</th><th>Advance status (March, 2007)</th><th>Evaluation *)</th></tr>
<tr><td></td><td></td><td>Entomological study of R.p. in 4 Departments and infested localities (2004 – March 2007)

<table>
<tr><th>Departament</th><th>Studied Localities</th><th>Localities infested with R.p. (2004 −2006)</th><th>Localities infested with R.p. (%)</th></tr>
<tr><td>Intibucá</td><td>218</td><td>37</td><td>17,0%</td></tr>
<tr><td>Copán</td><td>363</td><td>24</td><td>6,6%</td></tr>
<tr><td>Lempira</td><td>372</td><td>26</td><td>7,0%</td></tr>
<tr><td>Ocotepeque</td><td>174</td><td>6</td><td>3,4%</td></tr>
<tr><td>Total de 4 Departamentos</td><td>1.127</td><td>93</td><td>8,3%</td></tr>
</table>

It refers to the table mentioned above the number of localities infested with R.p. Infestation of R.p was detected in 93 communities in 4 departments.</td><td></td></tr>
<tr><td></td><td>1.3
Execute one cycle of spraying with insecticides in 100% of the houses at the localities positive for R.p and the second cycle for localities which continue to be positive.</td><td>Spraying done to Control R.p. in 4 Departaments (2004 – March 2007)

<table>
<tr><th></th><th>Total</th><th colspan="2">Done</th><th colspan="2">Pending</th></tr>
<tr><th></th><th>(Number of objective localities)</th><th>(Number of localities)</th><th>(%)</th><th>(Number of localities)</th><th>(%)</th></tr>
<tr><td>First spraying</td><td>797</td><td>797</td><td>100</td><td>0</td><td>0</td></tr>
<tr><td>Second spraying</td><td>4</td><td>2</td><td>50</td><td>2</td><td>50</td></tr>
</table>

The spraying to place in villages where the R.p vectors where detected, including peripheral zones where there was a high possibility of infestation. Up to the date, the totality (100%) of the infested localities with R.p including peripheral zones, where sprayed in 4 departments.

The second cycle of spraying will be done, depending of the evaluation of the first intervention, as well as the notification of vectors by the habitants. In Honduras, due to the lack of human resource for vector control, 2 cycles for spraying are not executed for the infested communities with R.p., as it was done in Guatemala. Up to this date, infestation of R.p was detected in 4 localities. (1 in Ocotepeque, 1 in Copán and 2 in Intibucá) alter the first spraying. In two of these four localities the second cycle of spraying was done to all the houses. For the rest of 2 communities that are in the Department of Intibuca it is planned to make the second intervention.</td><td>A</td></tr>
</table>

Output	Activities	Advance status (March, 2007)	Evaluation *)
	1.4 Evaluate results of interventions using epidemiological and entomological surveys	Evaluation of the spraying effect (entomological survey) (2004 – March 2007)	B

	Total	Done		Pending	
	(Number of objective localities)	(Number of localities)	(%)	(Number of localities)	(%)
Evaluación	93	69	74	24	26

Started the evaluation of the spraying effect (entomological survey) in the infested zone with *R.p.* in February of 2007. It is referred to the detail of the entomological survey report. In this survey the spraying impact in mid term was evaluated to vectors of *R.p.*. Since the residual effect of the pesticide is limited (effective as maximum for 6 months), 68 localities chosen that where intervened in the first stage. (2004 and 2005).
Up to this date, the survey has finished in the department of Copan. In the rest of the 3 departments the survey will take place between the last week of march and the second week of April. The outcome could be obtained before the evaluation mission of JICA.

Evaluation of the spraying effect (Serological survey) (2004 – march 2007)

	Total	Done		Pending	
	(Number of objective localities)	(Number of localities)	(%)	(Number of localities)	(%)
Evaluation	100	11	11	89	89

B

The evaluation of the spraying effect (serological survey) took place in February 2007 in the localities that where infested with *R.p.* and close sites to the positive area that showed high seroprevalence rate with a high possibility of infestation in the past. In total 6 localities where evaluated in Intibuca and 5 in Copan.
Referring to the report of serological survey in detail. Among the 1.389 children evaluated, there was no case of infestation since 2004. Even though 34 children where positive, those where infected before 2004. In spite of the level of antibody of these children has been reduced by the treatment, they are still not negative. The positive children will be submitted to the serological exam 18 months after treatment. A post treatment plan will be prepared for those positive children.

Evaluation of spraying effect (Serological survey) (March 2007)

Dept.	2003-2004 (pre evaluation)			2007 (Evalution)									
				Total			With treatment (2005)			No treatment (2005)			Recent infection (2004-2007)
	N. Survey	N. Positive	Seroprevalence	N. Survey	N. Positive	Seroprevalence	N. Survey	N. Positive	%	N. Survey	N. Positive	%	
Intibucá	1022	270	26,4%	694	18	2,6%	119	16	13,4%	2	2	100%	0
Copán	1705	348	20,4%	695	16	2,3%	73	15	20,5%	1	1	100%	0
TOTAL	2.727	618	22,7%	1.389	34	2,4%	192	31	16,1%	3	3	100%	0

<table>
<tr><th>Output</th><th>Activities</th><th>Advance status (March, 2007)</th><th>Evaluation *)</th></tr>
<tr><td></td><td>1.5
Mobilize local governments, NGOs and other institutions for improvement of the houses</td><td>In Honduras there is coordination between the vector control and the improvement of houses to control the chagas disease. The Honduran Social Investment Fund (FHIS) is the executing organization of the House improvement project to control chagas disease. FHIS coordinates with the Ministry of Health and JICA project the Exchange of information and other activities. FHIS has got Contra-value fund project with the Embassy of Japan and financing with the Centro American bank of econoomical integration (BCIE) to improve houses. The next table indicates the number of houses that where improved for the chagas disease control by FHIS in 2006.

<table>
<tr><th>Departament</th><th>Municipality</th><th>Houses</th></tr>
<tr><td>Santa Bárbara</td><td>3</td><td>112</td></tr>
<tr><td>Copán</td><td>1</td><td>45</td></tr>
<tr><td>Yoro</td><td>1</td><td>220</td></tr>
<tr><td>Intibucá</td><td>3</td><td>830</td></tr>
<tr><td>Total</td><td>8</td><td>1207</td></tr>
</table>
</td><td>A</td></tr>
<tr><td>Resultado 2
T. dimidiata is reduced in 4 departments.</td><td>2.1
Execute serological survey in T.d. endemic area</td><td>Outcome of the serological survey of T.d. in 4 Departaments (2004 – March 2007)
<table>
<tr><th></th><th>Total</th><th colspan="2">Done</th><th colspan="2">Pending</th></tr>
<tr><th></th><th>(Number of objective localities)</th><th>(Number of localities)</th><th>(%)</th><th>(Number of localities)</th><th>(%)</th></tr>
<tr><td>serological survey</td><td>400</td><td>318</td><td>80</td><td>81</td><td>20</td></tr>
</table>

Due to the fact that the Ministry of Health doesn't have vector technicians, a big scale entomological survey cant be done by the TSA staff. For this matter, with the means to gather general information about the infestation status of R.p., simple surveys to primary school students have been executed and participatory campaigns to capture bugs. Based on the data obtained from these activities, a entomological survey of is been done.
At the beginning of the project, among 3,000 localities existing in 4 departments, 1,000 of them where chosen for serological exploration of R.p. and T.d. Of these 1,000 localities 400 (40%) where subject to control of T.d. serological survey was prioritized in localities infested with R.p., due to the fact that the vector provokes more positive cases.</td><td>B</td></tr>
</table>

<table>
<tr><th>Output</th><th>Activities</th><th>Advance status (March, 2007)</th><th>Evaluation *)</th></tr>
<tr><td></td><td>2.2
Execute entomological survey of T.d.</td><td>Outcome of the entomological exploration (Interview to primary students) in 4 Departaments (2004 – March 2007)
<table>
<tr><th></th><th>Total</th><th colspan="2">Done</th><th colspan="2">Pending</th></tr>
<tr><th></th><th>(Number of objective localities)</th><th>(Number of localities)</th><th>(%)</th><th>(Number of localities)</th><th>(%)</th></tr>
<tr><td>entomological exploration</td><td>1.000</td><td>848</td><td>85</td><td>152</td><td>15</td></tr>
</table>
In this moment, it not considered to continue the entomological exploration. Instead of doing simple surveys, campaigns to search for vectors are been done with community participation.

Outcome of entomological survey by TSA in 4 Departments (2004 – March 2007)
<table>
<tr><th></th><th>Total</th><th colspan="2">Done</th><th colspan="2">Pending</th></tr>
<tr><th></th><th>(Number of objective localities)</th><th>(Number of localities)</th><th>(%)</th><th>(Number of localities)</th><th>(%)</th></tr>
<tr><td>Encuesta entomológica</td><td>1.200</td><td>503</td><td>42</td><td>697</td><td>58</td></tr>
</table>
Due to the fact that the Ministry of Health doesn't have vector technicians, a entomological survey cant be done by TSA staff.. The general information has been gathered through primary school students and campaigns to capture bugs by the habitants. Having this data the entomological survey is been done.
At the beginning of the project, among the 3,000 existing localities in 4 Departments, 1.000 where chosen for the entomological exploration of R.p. and T.d. However the number of localities was increased up to 1.200 because more surface of infestation was detected. In spite that the survey has advanced considerably, there is no change in the coverage rate, this because the number of localities has increased in comparison with the moment of mid term evaluation.
In the department of Intibca the control of R.p. has been intensified instead of doing the survey for T.d. .However the spraying for R.p. is also effective for T.d. .</td><td>A

B</td></tr>
<tr><td></td><td>2.3
Stratification of intervention according to the index of infestation of T.d.</td><td>From 2003 the norm for the chagas disease control is been prepared with the Ministry of Health. Also the strategy for control of T. d was discussed. In the beginning, the following measures will be done. However it is not possible to establish a common norm, because each department has different capabilities. That is why the measures are flexible, attending cases by case.

Take the following measures based in the entomological survey.
1. Localities with more than 20% of infestation and close areas: Area of major priority. 100% of localities to spray. After doing geographic analysis, decide the needs and surface of intervention to neighbor areas.
2. Localities with more than 10% of infestation index: Area second priority. Decide the spraying according to the Departmental Region capacity. There is a possibility to make selective spraying to positive houses.
3. Localities with less than 5% of infestation index: Make IEC activities and establishment of a participatory surveillance system.</td><td>A</td></tr>
</table>

<table>
<tr><th>Output</th><th>Activities</th><th>Advance status (March, 2007)</th><th>Evaluation *)</th></tr>
<tr><td></td><td>2.4
In localities positive T.d., implement one or two cycles of spraying according to index of infestation.</td><td>Outcome of spraying in 4 departments (2004 - March 2007)
<table><tr><th></th><th>Total</th><th colspan="2">Done</th><th colspan="2">Pending</th></tr><tr><th></th><th>(Number of objective localities)</th><th>(Number of localities)</th><th>(%)</th><th>(Number of localities)</th><th>(%)</th></tr><tr><td>First Spraying</td><td>840</td><td>357</td><td>43</td><td>483</td><td>58</td></tr><tr><td>Second spraying</td><td></td><td></td><td></td><td></td><td></td></tr></table>
Before starting the project, almost half of the localities subject to the entomological survey of T. d. where already sprayed. So, 500 localities were estimated to be intervened. However, as the survey was Developer, many infested communities where detected. Even though the number increased up to 840 the estimated number of intervention localities, it is possible to modify this figure according to the outcome of the survey. Until this date 357 of 840 localities (43%) have been sprayed.
The need of making a second cycle of spraying will be studied based on the entomological evaluation. Up to this date, one part of department of Ocotepeque and Copan has been evaluated. Yet the second cycle to control T. d. hasn't been programmed.</td><td>B</td></tr>
<tr><td></td><td>2.5
Evaluate results of the intervention by serological and entomological survey.</td><td>Outcome of the entomological evaluation (Campaign) and serological evaluation (2004 – March 2007)
<table><tr><th></th><th>Total</th><th colspan="2">Done</th><th colspan="2">Pending</th></tr><tr><th></th><th>(Number of objective localities)</th><th>(Number of localities)</th><th>(%)</th><th>(Number of localities)</th><th>(%)</th></tr><tr><td>Entomological evaluation</td><td>840</td><td>64</td><td>15</td><td>776</td><td>92</td></tr><tr><td>Serological evaluation</td><td>50</td><td>0</td><td>0</td><td>50</td><td>100</td></tr></table>
The entomological evaluation of T. d. has limited to make one part of the Departments of Copán and Ocotepeque, giving priority to the control and evaluation of the R.p, vector, more dangerous species.
Up to this date, the serological survey has not been done in the infestation of T.d.</td><td>B</td></tr>
<tr><td></td><td>2.6
Mobilize local goverments, NGOs and other institutions assistance for improvements of the houses.</td><td>Refer to1.5.</td><td>A</td></tr>
<tr><td>Outcome 3
Vector Surveillance System are established with</td><td>3.1
Elaborate and produce materials for promotion of chagas disease control.</td><td>Different types of manuals and handbooks have been elaborated related with IEC and community participatory surveillance. Also a draft of the "Manual for Chagas Disease Control and Surveillance System" for health volunteers and actually this manual is been used at community level as a test. (For validation).</td><td>A</td></tr>
</table>

<table>
<tr><th>Output</th><th>Activities</th><th>Advance status (March, 2007)</th><th>Evaluation *)</th></tr>
<tr><td>community participation</td><td>3.2
Execute the promotion of the Chagas Disease Control through Health Units, schools and volunteers.</td><td>Up to this date, the following training courses have been done of IEC in 4 Departments. (Refer to Report No. 17 sent to JICA Tokio)
Proyecto de Control de la Enfermedad de Chagas en Honduras
Resultado 3: Establecimiento del sistema de vigilancia
Listado de cursos de capacitación para voluntarios y comunidades (junio 2003- marzo 2007)
<table><tr><th>No.</th><th>Departamento</th><th>No. Municipio</th><th>No. Capacitacion</th><th>Personas Capacitadas</th><th>No. Participantes</th><th>No. Comunidades</th></tr><tr><td>1</td><td>Ocotepeque</td><td>10</td><td>27</td><td>1), 3), 4), 5)</td><td>710</td><td>312</td></tr><tr><td>2-1</td><td>Copan Norte</td><td>10</td><td>38</td><td>1), 3), 4), 5)</td><td>1304</td><td>259</td></tr><tr><td>2-2</td><td>Copan Sur</td><td>8</td><td>21</td><td>1), 2), 3), 4), 5)</td><td>594</td><td>330</td></tr><tr><td>3</td><td>Lempira</td><td>16</td><td>19</td><td>1), 2), 3), 4), 5)</td><td>452</td><td>375</td></tr><tr><td>4</td><td>Intibucá</td><td>15</td><td>65</td><td>1), 2), 3), 4), 5)</td><td>2219</td><td>1030</td></tr><tr><td></td><td>TOTAL</td><td>59</td><td>170</td><td></td><td>5279</td><td>2306</td></tr></table>1.Periodo: de junio de 2003 a marzo de 2007
2.Los cursos de capacitaciones han sido realizados con la finalidad de establecer el sistema de vigilancia para:
1) Voluntario comunitario 2) Gobierno municipal y departamental 3) Jefe y líder de la comunidad
4) Maestro y estudiante de primaria 5) Reciador comunitario</td><td>B</td></tr>
<tr><td></td><td>3.3
Establish a vector surveillance system in each municipality with community participation.</td><td>Currently it is been done by concentration the Institutional surveillance system with community participation in the following pilot areas:

Pilot Area of Surveillance system (intensified monitoring area)
<table><tr><th>No.</th><th>Depto.</th><th>Lugar</th><th>Vector Principal</th><th>Etnia</th><th>No. Localidad</th><th>No. Viviendas</th><th>Poblacion</th></tr><tr><td>1</td><td>Intibucá</td><td>Municipio de Dolores</td><td>Rp (Td)</td><td>Ladino+Indigena (Lenca)</td><td>17</td><td>909</td><td>3,797</td></tr><tr><td>2</td><td>Intibucá</td><td>Municipio de San Marcos de la Sierra</td><td>Rp, Td</td><td>Indigena (Chorties)</td><td>34</td><td>1,395</td><td>6,477</td></tr><tr><td>3</td><td>Copán</td><td>Carrizalón, municipio de Copan Ruina</td><td>Rp (Td)</td><td>Ladino+Indigena (Lenca)</td><td>1</td><td>107</td><td>561</td></tr><tr><td>4</td><td>Copán</td><td>Municipio de Concepción</td><td>Td</td><td>Ladino</td><td>37</td><td>2,366</td><td>10,675</td></tr><tr><td>5</td><td>Ocotepeque</td><td>San Jose de la Reunión, municipio de Ocotepeque</td><td>Rp (Td)</td><td>Ladino+Indigena (Chorties)</td><td>8</td><td>300</td><td>1,000</td></tr><tr><td>6</td><td>Lempira</td><td>Municipio de Santa Cruz</td><td>Rp (Td)</td><td>Ladino+Indigena (Lenca)</td><td>40</td><td>924</td><td>4,815</td></tr></table>
Refer to the "Report of Advances of Surveillance System" and the "Report of the Evaluation of Surveillance System (modified version)"

When the short term expert, Dr. Tomomi Kozaki, visited Honduras in September 2006, a framework of indicators was established to evaluate the surveillance system. In January 2007, with the support of Dr. Ken Hasimoto, short term expert, the indicators where modified to adjust them to the Honduran situation. Today, this indicators are been applied at a testing level. This is the first time that indicators are established from the point of view of sustainability and effectiveness. For this matter, is necessary to revise them based in test and outcome. Currently it is premature to use these indicators for the final evaluation of the project.</td><td>B</td></tr>
</table>

Output	Activities	Advance status (March, 2007)	Evaluation *)
Outcome 4 Information system of the chagas disease is implemented in 4 departments and Center level.	4.1 Identify information requiered in diferent levels for the control of chagas disease.	Selection of information through the elaboration of formats.	A
	4.2 Elaborate and implement the data forms required at the different levels.	• Elaboration and implementation of common formats for the Ministry of Health (entomological survey, serological survey, spraying and entomological evaluation). • Execution of training about the performance of information of Chagas disease and development of the capacity for TSA coordinators of each departmental region of the Ministry of Health. • Execution of the training for the use of each format and communication of the information for TSA staff. • The formats for evaluation and surveillance system are currently under study.	B
	4.3 Elaborate an Information system from Area level to Center level.	• Establishment of the information transmission mechanism and delivery of advance report from the Departmental Region to the National Chagas Program through a semester evaluation meeting. • Development of the capacity of the systems staff of the Chagas National Program, introduction to the GIS system and analysis of the national map according to the advance status. • Semester update of Information and elaboration of annual report. Work subjects related with the information performance • Effective use of the information for the analysis of map of the National Chagas Program to take actions in each department. • Feedback and use of the information of the Ministry of Health in the departmental and municipal level. • Improvement and efficient use of the information communication system between the Ministry of Health and departmental region.	B

<table>
<tr><th>Output</th><th>Activities</th><th>Advance status (March, 2007)</th><th>Evaluation *)</th></tr>
<tr><td>Resultado 5
Diagnostic testing and treatment of patients younger than 15 years old identified by the project is completed with responsability of the Nacional Program</td><td>5.1
Apply treatment to recently infected cases of T. cruzi according to the regulation and responsibility of National program.</td><td>The principal of the Ministry of Health is to make the etiological treatment to the children less than 15 years old infected with the chagas disease. For this matter, the positive children in the Project area will be attended respecting this principal. In this case the Ministry of Health is responsible to provide the treatment according to what is agreed in the PDM (Project Design Matrix) document. JICA has contributed in the diagnosis field through the donation of supplies for the serological test. The intention of doing this test is to make the etiological treatment; the objective is different to the serological survey to evaluate the effect of spraying. The following, describes the method of serological test and the process of treatment of the positive children under 15 years old.

1. A study site is chosen based in the local characteristic and the index of vectorial infestation and the serological exploration with quick test kit (for 30 students of primary school).
2. When a community with a high index of seroprevalence is detected (more than 10 %) with quick test, the ELISA test is done to all the children under 5 years after the in –house spray has been done.
3. The positive children by the ELISA test will be administrated with medication for 60 days. In the meanwhile the doctor makes diagnosis and monitoring.
4. The serological evaluation will be executed post treatment at the 18 month to evacuate the effect of the intervention.
5. If it is confirmed positive by this evaluation 18 month post-treatment, another test will be done 18 months later. If the result continues to be positive, it will be studied to continue the treatment.

Outcome of the ELISA serological evaluation and advance in treatment in 4 Departments. (National Chagas Program of the Ministry of Health 2003-2006)
<table>
<tr><th rowspan="2">Department</th><th rowspan="2">Number of Localities</th><th>Examined Children</th><th colspan="2">Positive Children</th><th colspan="2">Treated Children</th></tr>
<tr><th>(Number of Children)</th><th>Number</th><th>Seroprevalence (%)</th><th>(Number)</th><th>Treated (%)</th></tr>
<tr><td>Copán</td><td>4</td><td>6.005</td><td>136</td><td>2,3%</td><td>130</td><td>95,6%</td></tr>
<tr><td>Intibucá</td><td>6</td><td>9.048</td><td>680</td><td>7,5%</td><td>627</td><td>92,2%</td></tr>
<tr><td>Lempira</td><td>0</td><td>0</td><td>0</td><td>0,0%</td><td>0</td><td>0,0%</td></tr>
<tr><td>Ocotepeque</td><td>4</td><td>1.685</td><td>28</td><td>1,7%</td><td>26</td><td>92,9%</td></tr>
<tr><td>TOTAL</td><td>14</td><td>16.738</td><td>844</td><td>5,0%</td><td>783</td><td>92,8%</td></tr>
</table></td><td>B</td></tr>
</table>

<table>
<tr><th>Output</th><th>Activities</th><th>Advance status (March, 2007)</th><th>Evaluation *)</th></tr>
<tr><td></td><td>5.2
Apply control examination 18 months after treatment</td><td>Up to this date, the only positive cases detected where found in one part of the Departaments of Intibucá and Copán. This control will continue.
Outcome of the serological evaluation 18 month post-treatment (February 2007)

<table>
<tr><th rowspan="2">Departament</th><th colspan="3">Evaluation (2007)</th></tr>
<tr><th>Sample Number</th><th>Positive</th><th>%</th></tr>
<tr><td>Intibucá</td><td>119</td><td>16</td><td>13,4%</td></tr>
<tr><td>Copán</td><td>73</td><td>15</td><td>20,5%</td></tr>
<tr><td>Total</td><td>192</td><td>31</td><td>16,1%</td></tr>
</table>
Note: Index of the department of Copan is high, due to the fact 18 month after treatments still haven't past yet.</td><td>B</td></tr>
</table>

Annex data

Table 1: Calculation of accomplishment of Chagas disease control project in Honduras

Figure 1: Status of control advance of *R.prolixus* of Chagas disease control project in Honduras (March 2007)

Figure 2: Status of control advance of *T.dimidiata* of Chagas disease control project in Honduras (March de 2007)

Annex 9: Tangible Products of the Project

No.	Date	Products
1	2003/9/1	ChagaseDisease Pamphlet
2	2003/10/1	Triatominae (Chagas Disease Vector, Kissing Bug) Card
3	2004/2/1	Chagas Disease National Strategic Plan (2003-2007)
4	2004/2/20	Poster No. 1 Chagas Disease Control (for general use)
5	2004/4/20	Chagas Disease Control Project Report: Annual Report 2003
6	2004/6/1	Manual for community insecticide spraying volunteers
7	2004/6/1	Cap for community spraying volunteers
8	2004/9/20	Poster No. 2: Chagas Disease Control (for Health Centers and Hospitals)
9	2004/9/20	Triatominae (Kissing Bug) Sticker
10	2005/3/1	T-shirt of National Chagas Disease Program and Chagas Project
11	2005/4/1	National Chagas Disease Control Program Report: Annual Report 2004
12	2005/5/1	Pamphlet: Chagas Disease Control/Cooperation en Central America
13	2006/4/1	National Chagas Program Report: Annual Report 2005
14	2006/5/1	Standard for Chagas Disease Diagnostic and Control
15	2007/5/1	Chagas Disease Control Manual for Health Volunteers (under printing)
16	2007/5/1	Chagase Disease National Strategic Plan (2008-2015) (under printing)

Annex 10: Evaluation Grid

Final Evaluation of the Chagas Disease Project for Control in Honduras

*) Evaluation criteria: to judge on the advances of the activities and the results comparing it to the operation plan of the Project (AAA: Finished, AA: More advanced than what it was planned initially, A: According to what it was planned, B: Delayed, C: Very Delayed and is affecting the Project, D: Has not begin NA: Not clear impossible to evaluate)

Result	Activities	Information Source
Output 1: *Rodonius prolixus (Rp)* eliminated in four departments	1.1 Carry out the serologic survey in endemic areas of *R.p.*	Report of advances of the Project, documents and data elaborated by the Project and survey
	1.2 Carry out the entomologic survey of *R.p.*	The same
	1.3 Carry out the first spraying cycle to 100% of the houses in the places where there is a positive existence of *R.p* and a second cycle to the places where it keeps being positive.	The same
	1.4 Evaluate the results of the intervention through a serologic and entomologic survey.	The same
	1.5 Negotiate for the support of the municipal government, NGO's and other institutions for the improvement of the houses.	The same
Output 2: *Triatoma dimidiata (Td)* it decreased in four departments.	2.1 Carry out the serologic survey in endemic areas of *T.d.*	The same
	2.2 Carry out the entomologic survey of *T.d.*	The same
	2.3 Stratify the intervention according to the infestation rate of *T.d.*	The same
	2.4 In the places that are positive for *Td*, carry-out one or two cycles of spraying according to the infestation rate.	The same
	2.5 Evaluate the results of the intervention through a serologic and entomologic survey.	The same
	2.6 Negotiate for the support of the municipal government, NGO's and other institutions for the improvement of the houses.	The same
Output 3: The surveillance system is established with communitarian participation.	3.1 Elaborate and produce promotional material to promote the control of Chagas Disease.	The same
	3.2 Carry out promotion for the control of Chagas Disease throughout the health units, schools and voluntary collaborators.	The same
	3.3 Establish a surveillance system of vectors in every municipality with participation of the community.	The same
Output 4: 4. The Information System of Chagas disease is implemented in four departments and central level	4.1 Identify the required information at different levels for the control of Chagas Disease.	The same
	4.2 Elaborate and carry-out the forms of data required at different levels.	The same
	4.3 Elaborate an information system in a departmental and central level.	The same
Output 5: The Diagnose and etiologist treatment has been fulfilling to patients under 15 years of age that were found by the Project with responsibility of the National Program.	5.1. Give treatment to the recent infection cases of *T.cruzi* according to the norm and responsibility of the National Program.	The same
	5.2 Make a control test 18 months after the treatment.	The same

Item	Result	Indicators (information and necessary data)	Method to obtain indicators
Output	Output 1: *Rodonius prolixus (Rp)* is eliminate in four departments.	Coverage rate of spraying in the infested places with *Rp*.	Spraying Rate of the Health Area.
	Output 2: *Triatoma dimidiata (Td)* is decreased en four departments.	Infestation rate of *Td*.	Spraying Rate of the Health Area.
	Output 3: The surveillance system is established with communitarian participation.	Number of surveillance system established. (The evaluation of the surveillance system will be carried out separately) (refers to the annex)	Report of the trimester meeting of the Health Area. (List of the evaluation of the institutional surveillance system with communitarian participation)
	Output 4: 4. The Information System of Chagas disease is implemented in four departments and central level	Established information system.	Report of the trimester meeting of the Health Area.
	Output 5: The Diagnose and etiologist treatment has been fulfill to patients under 15 years of age that were found by the Project with responsibility of the National Program.	1) Number of treated patients.	Report of the Health Area and report of the Secretary of Health.
		2) Number of positive patients.	The same

Item	Evaluation		Necessary Data	Information Source	Method for recollecting data
	General Evaluation	Detail Evaluation			
Result Verification	The input of the Project have been given according to the plan?	The contribution from the Japanese part has been adequate?	Data of invested inputs	Report on the advances of the Project, documents and data made by the Project and other reports.	Data Check up
		The contribution from the Honduran part has been adequate?	The same	The same	Data Check up
Verification of the implementation process	The plans have been executed according to what it was planned?	Has there been problems in the advances of the Project? In the case of problems , what were the problems?	Data comparison between the original chronogram and the advance result.	The same	Data Check up
	The method of transferring technology has been appropriate?	In case of being problems, which method has been problematic and in which field has there been problems? Is there a way to solve the problems?	Existence and absence of delays in transferring technology. Level of learning and understanding of C/P.	Report on the advances of the Project, documents and data made by the Project, Interview and other reports.	Interview
	The system of managing the Project has been appropriate?	Has a monitor mechanism been established? Is the decision making process an appropriate one?	Method and frequency of monitoring. Decision making process.	The same	Data Check up
		Has there been a good communication between the parts involved?	Communication opportunity and problem solutions.	The same	Interview
		Has there been a good communication between JICA Tokyo and JICA Honduras?	Current state of communication and collaboration	The same	Interview
		Has there been a good communication with the Honduran part?	Current state of communication and collaboration.	The same	Interview
	The executing organization and C/P acknowledge the importance of the Project?	The General Director of Environmental Health (DGSA) of the SECRETARY OF HEALTH has worked by its own initiative?	Budget disposition, communication and collaboration.	The same	Interview
		The municipal offices involved have worked by its own initiative?	Assignment of C/P and the continuity of the first stage.	The same	Interview
	The groups that were benefited and the organization related have been actively involved in the Project? Have you recognize the importance of the Project?	Participation and the will of the people involved.	Participation and the will of the people involved.	The same	Interview
	¿Have problems emerge in the process of the execution of the Project? What are the causes?		Problems and causes in the execution process.	The same	Interview

5 Evaluation points	Evaluation		Necessary Data	Source of Information	Methods of Data Recollection
	General Evaluation	Detailed Evaluation			
Relevance	The effect that the projects pretend to generate agrees with the politics of the Honduran government?	Relation between the Chagas Disease control and the national development plan of Honduras.	Relation with the national politic	National Health Plan 2021. National Health Politic 2006 - 2010. National Strategic Plan for Chagas Disease 2007－2015.	Data Check up
	Agrees with the cooperation policy of the Japanese government?	The Project is related with the proprietary areas of cooperation of the Japanese government?	Japan's primary cooperation areas for Honduras.	AOD policy for Honduras from the government of Japan (MOFA-Foreign Relation Secretary) .	Data Check up
		It agrees with the cooperation plan for Honduras from JICA?	It agrees with the cooperation plan for Honduras from JICA?	JICA'S cooperation Plan for Honduras (JICA).	Data Check up
	Agrees with the needs of the area of the Project and the society?	Agrees with the need for Chaga disease control of the area of the Project? (Departments of Copán, Lempira, Ocotepeque and Intibucá)	Needs and priorities of Chagas disease control. Opinion of people involved.	Related information. DGSA, health area, C/P, experts and JOCV voluntary.	Data Check up Interview
	Has the method of the Project been adequate? Ha Has the grasp of the Project been appropriate?)	Ha Has the grasp of the Project been appropriate? The established methods and the experience gained through the Project in Guatemala have been taken advantage properly?	Opinion of people involved.	DGSA, Health Area, C/P, experts and JOCV volunteers.	Interview
		Have you collaborate and coordinate adequately with other sponsors and other projects of JICA?	State, result and effect of the collaboration and coordination. Opinion of related people	Related information. DGSA, C/P, experts and JOCV voluniteers, OPS and ONGs.	Interview

5 evaluation points	Evaluation		Necessary Data	Sauce of the Information	Method for gathering data
	General evaluation	Detailed Evaluation			
Effectiveness	Has accomplished the results?		(According to the evaluation chart)	(According to the evaluation chart)	Data Check up
	Level of accomplishment of the objective of the Project: The transmission of chagas disease is interrupt in 4 selected departments in Honduras	1) Index of dispersion of *Rhodnius prolixus (Rp)* will be 0%.	Intra-house infestation Index of *Rhodnius prolixus (Rp)*.	Report of entomologic survey.	Data Check up Interview
		2) Index of infestation of *Triatoma dimidiate (Td)* will be more 5%.	Intra-house infestation Index of *Triatoma dimidiata (Td)*.	Report of entomologic survey.	Data Check up Interview
		3) Decreased seroprevalencia.	Seroprevalencia Index.	Report of sexology survey.	Data Check up Interview
		4) Established notification system.	Surveillance system and notification of chagas disease.	OPS evaluation report.	Data Check up Interview
	The results of the Project have contributed to accomplish the objective of the project?	The results of the Project adequate to accomplish the objective of the project? The concept of "if all the results are accomplish, the objective of the Project can be accomplish" has been right?	Opinion of people involved.	SECRETARY OF HEALTH, C/P y experts.	Interview
	Have favorable or unfavorable factors existed for the accomplishment of the objective of the Project?	The change or abandonment of the C/P post affected the Project?	Rate of post abandonment, cause of abandonment and number of C/P. Opinion of people involved.	Project Record. SECRETARY OF HEALTH, C/P, experts and JOCV volunteer.	Data Check up Interview
		Have you had other problems?	Opinion of people involved	Report of the advances of the Project SECRETARY OF HEALTH, C/P, experts and JOCV volunteer	Data Check up Interview

5 evaluation points	Evaluation		Necessary Data	Source of Information	Method of Gathering Data
	General Evaluation	Detailed Evaluation			
Efficiency	Have the results produce been adapt? (verification of the results)				
	Have the quality, volume and the chronogram of input investment been adapt, from the point of view of the results reached?	Have the number of experts fit to the field of their specialty, capability, period and time they were sent?	Dispatch Result. Opinion of people involved.	Documents and data of the Project. C/P, experts and JOCV volunteer.	Data Check up Interview
		Have the type, amount and time of the installation of the equipment given been the appropriate?		Have the type, amount and time of the installation of the equipment given been the appropriate?	Data Check up Interview
		Have been the number of people trained, the content of the trainings, period and time of the training adequate?	Training Result. Opinion of people involved.	Result of people trained. C/P, experts and JOCV volunteer.	Data Check up Interview
		Have the number of C/P, assignation period and capability of the C/P adapt?	C/P Assign. Opinion of people involved.	List of C/P assigned. C/P, experts and JOCV experts.	Data Check up Interview
		Have the quality, size and buildings facilities and or installations been adequate?	How the buildings and or installations are. Opinion of people involved.	How the buildings and or installations are. C/P, experts and JOCV experts.	Direct observation Interview
		Has the budget of the Honduran part been adequate?	Budget executed by the Honduran part. Opinion of people involved.	Data of covered costs by the Honduran part. SECRETARY OF HEALTH, C/P and experts.	Data Check up Interview
	Has the management of the Project been the adequate?	Has the Joint Coordination Committee worked adequately?	Opinion of people involved.	Report on the advances of the Project and other data. SECRETARY OF HEALTH, C/P and experts.	Data Check up Interview
		Has the periodic meeting worked appropriately?	Opinion of people involved.	SECRETARY OF HEALTH, C/P, experts and JOCV volunteer.	Interview
		Is there self initiative from the Honduran part?	Opinion of people involved.	SECRETARY OF HEALTH, C/P, experts and JOCV volunteer.	Interview
	Are there factors that promote and /or avoid the efficiency of the Project?	What effect has the collaboration with JOCV given from an efficiency point of view? Have there been problems working with volunteers?	Opinion of people involved.	SECRETARY OF HEALTH, C/P, experts and JOCV volunteer.	Interview
		What influence have the qualitative change occurred in the project for Chagas disease control for the de-centralization? What are the problems? What should be done?	Opinion of people involved.	SECRETARY OF HEALTH, C/P, experts and JOCV volunteer.	Interview
		Other positive and negative factors.	Opinion of people involved.	SECRETARY OF HEALTH, C/P, experts and JOCV volunteer.	Interview

5 evaluation points	Evaluation		Necessary Data	Source of information	Method for data recollection
	General evaluation	Detail Evaluation			
Impact	Can the higher objective be accomplished? Higher Objective: 1. The Chagas disease transmission will be stopped in Central America by the end of 2010. 2. The Chagas disease transmission will be stopped in Honduras by the end of 2010.	Evolvement of the number of patient detected through the serologic survey and inter-home infestation index (for the certification of the interruption of Chagas disease by OPS/OMS).	Result of the serologic survey.	Report of the serologic survey	Interview
		There are factors that prevent the reach of the higher objective?	Information of people involved.	SECRETARY OF HEALTH, C/P, experts and JOCV volunteer.	Interview
	The presumptions of the superior objective and the Project objective have not received changes? Can you hold the presumptions?		Information of people involved	SECRETARY OF HEALTH, C/P, experts and JOCV volunteer.	Interview
	Are there other conjugated effects?	Information of people involved	Information of people involved	SECRETARY OF HEALTH, C/P, experts and volunteers	Interview

5 evaluation points	Evaluation		Necessary Data	Source of Information	Method for gathering data
	General evaluation	Detail Evaluation			
Sustainability	Priority and policy of the Secretary of Health on the JICA Project. The Secretary of Health id going to keep supporting the activities of the Project?		Opinion of people related	SECRETARY OF HEALTH.	Interview
	The institutions related with the Project (including the Secretary of Health) have the capability to continue with the activities?	The Secretary of Health and the organizations involved have the organizational capacity (personal assignation and process of decision making) to carry-out activities in an effective way alter the Project ends?	Assignment and permanence of the staff. Opinion of people related.	Personal assignment. SECRETARY OF HEALTH, C/P, experts and JOCV volunteer.	Revision of data Interview
		Has the self initiative of the executing organizations (including the Secretary of Health) been assured to continue the activities?	Opinion of people related.	Secretary of Health, C/P, experts and JOCV volunteer.	Interview
		Has the budget been assured including gastos corrientes? Is the government of Honduras assigning the budget?	Financial status of every organization. Opinion of people related.	Registration of budget execution. Secretary of Health, C/P, experts and JOCV volunteer.	Data Check up Interview
		The Honduran government may assure the budget to make the same activities in other departments?	Opinion of people related.	Secretary of Health, C/P, experts and JOCV volunteer.	Interview
	Is the transferred technology going to be establish?	The C/P staff has enough capability to carry out activities related with the Chagas Disease control?	Opinion of people related.	Secretary of Health, C/P, experts and JOCV volunteer.	Interview
		The C/P staff is capable enough to transfer the acquired techniques to the technicians of Chagas control in other Departments?	Opinion of people related.	Secretary of Health, C/P, experts and JOCV volunteer.	Interview
		Can the equipment and materials be adequately maintained?	Opinion of people related.	C/P, experts and JOCV volunteer.	Interview
	Which are the positive and negative factors that affect the sustainability?		Opinion of people related.	Secretary of Health, C/P, experts and JOCV volunteer.	Interview

Annex 11: Interviewees List

Secretariat of Health (SS – Secretaría de Salud)

Jenny Meza	Minister
Nicolás Handy	Chief, External Cooperation Unit
Lina Bustillo	Assistant, Health Bureau
María Luisa Matute	Chief, Department of National Surveillance Laboratory
Carlos Ponce	Chief, Laboratory of Chagas & Leishmaniasis
Elisa de Ponce	Assistant, Laboratory of Chagas & Leishmaniasis
Concepción Zúniga	Chief, National Chagas Program
José Ramón Rosales	Technical staff, National Chagas Program

Secretariat of Health, Intibucá Department

Luís Israel Girón	Director, Intibucá Department
José Roger Reyes	TSA Coordinator

San Marcos de la Sierra Municipality, Intibucá Department

Eufracia Bautista	Deputy Mayor
Luis Alberto Berrios	Doctor, San Marcos de la Sierra Health Center
Godofredo Hernández	Health Volunteer, San Marcos de la Sierra Municipality
Camilo Bautista	Health Volunteer, San Marcos de la Sierra Municipality
José Amaya	Health Volunteer, San Marcos de la Sierra Municipality
Francisca Hernández	Health Volunteer, San Marcos de la Sierra Municipality

Secretariat of Health, Lempira Department

Noel Antonio Guerra	Environmental Risk Coordinator

Santa Cruz Municipality, Lempira Department

María Hernández	Health volunteer, Santa Cruz Municipality
Blas Jacinto	Health volunteer, Santa Cruz Municipality
Felicito Hemández	Health volunteer, Santa Cruz Municipality
Albina Vásquez	Health volunteer, Santa Cruz Municipality

Secretariat of Health, Ocotepeque Department

Hernán Chinchilla	Director, Ocotepeque Department
Orlando Pinto	Sanitary Regulation Coordinator

San José de La Reunión Municipality

Delia Ramírez	Health Volunteer, San José de La Reunión Municipality
Suyapa Ramos	Health Volunteer, San José de La Reunión Municipality
Catalina Monroy	Health Volunteer, San José de La Reunión Municipality

Secretariat of Health, Copán Department

Lourdes Bueso	Chief, Sanitary Regulation
Emiliano López	Coordinator, Area No. 4
Luís Tábara	Environmental Health Technician, Corquín Municipality

Antonio Zaldivar	TSA

Carrizalón, Copán Ruina Municipality, Copán Department

Faustino León	Coordinator of Chagas Surveillance Committee & Health Volunteer
Pilar Pascual	Member of Chagas Surveillance Committee & Health Volunteer
Florencio Resinoz	Member of Chagas Surveillance Committee
Raimunda Santos	Member of Chagas Surveillance Committee

Dolores Municipality, Departamento de Intibucá

Uvence Vásquez	Deputy mayor
Vicela Pineda	Doctor, Dolores Health Center

Pan American Health Organization (PAHO/WHO)

Steven K Ault	Regional Advisor in Communicable Diseases, PAHO HQ
Lilian Reneau-Vernon	Representative, PAHO/WHO Honduras
Tamara Mancera	Advisor, Communicable Disease Program, Honduras
Enrique Gil	Coordinator IPCA, POS Guatemala
Paulo Pinto	Short Term Consultant, Environmental Health and Sustainable Development
Nora Girón	Strategic Fund

Canadian International Development Agency (CIDA)

José Rubén Gómez	Technical Advisor, Health Sector

World Vision Honduras

Lombardo Ardón	Coordinator, Chagas Project

JICA Honduras

Tatsuo Suzuki	Resident Representative
Akiko Oda	Sub Director
Yuko Kanai	Project Formulation Advisor
Michio Kojima	Coordinator, Chagas Disease Control Project
Jun Nakagawa	Regional Advisor, JICA-PAHO/WHO, Chagas Disease Control Project
Ken Hashimoto	Short Term Expert, Chagas Disease Control Project
Satoru Iida	JOCV Coordinator
Yukihiro Matsuzaki	JOCV, Chagas Disease Control Project
Tadashi Ogasawara	JOCV, Chagas Disease Control Project
Yuki Yoshikuni	JOCV, Chagas Disease Control Project
Noriko Tamari	JOCV, Chagas Disease Control Project
Tetsuya Kimura	JOCV, Chagas Disease Control Project

JICA Panama

Yuko Hishida	JOCV Coordinator