Executive summary of evaluation

1. Project summary		
Country name：Republic of El Salvador		Project title: Supporting the small-scale farmers in the Eastern Region
Area：Agriculture		Cooperation scheme：Technical cooperation project
Office in charge：El Salvador office		Cooperation Amount：210,000,000YEN
Term of cooperation	(R/D): 26/03/2008～25/03/2012 (postpone): (F/U)： (E/N)（Grant）	Name of counterpart：MAG, CENTA Japanese cooperation institutions： Other related cooperation：

1-1. Cooperation background and narrative summary

In El Salvador, 43.7% of the rural population is in a condition of poverty according to the study of 2004. Coffee and sugar are the main export commodities for the Salvadoran economy; agriculture absorbs the 27% of the total labor force and occupies the 13% of total industrial GDP. On the other hand, small farmers not having any production technology have become a component of rural poverty. In the Eastern Region where the damages by the civil war were severe, an industry being able to assure steady income has not been developed, and many crops are mainly for subsistence. This region has become one of the poorest regions of the country.

Under these circumstances, JICA launched in March 2008 the "Supporting the small-scale farmer's project in the Eastern Region" with a four-year term, based on the results obtained from "The Project for Strengthening of Agricultural Technology Development and Transfer" which was implemented from 1999 to 2004.

This project has been implemented to strengthen support systems to cultivate vegetables in the Eastern Region, being the counterpart institution, the National Agricultural Forestry Research Center.

1-2. Project contents

(1) Overall Goal

Small farmers' income through vegetable cultivation is increased in the Eastern Region.

(2) Project Objective

The support system for vegetables cultivation services for small farmers is strengthened.

(3) Outputs

Output 1：A system to transfer applicable vegetables techniques for small farmers in the Eastern Region is established.

Output 2：A system to guide management improvement techniques for small farmers and vegetable production associations in the Eastern Region is established.

(4) Inputs（at the moment of evaluation）

Japanese side:

Japanese experts dispatch：

Akira Matsuda (Chief Advisor/ Agricultural Technology Extension), 06,2008～06,2010
Shin-ichi Kondo (Chief Advisor/ Agricultural Technology Extension), 08,2010～03,2012
Toshiaki Kurihara (Coordinator/ Improvement of Farm Management), 03,2008～03,2012
Satomi Sasaki (Wakamatsu) (Agricultural Information Access), 02,2010～03,2010

Equipment：Automobile, Motorcycle, Production Materials, Laptop, Photocopier, Promotion Materials, etc.

Local cost：287,320.22USD

Number of trainees：43（including third-country training）
El Salvador side：
Counterpart allocation：16
Project office, etc.
Local cost：505,900.98USD

2. Summary of evaluation mission team

Researcher	（Area in charge：Name, Position） Leader: Satoshi CHIKAMI, Senior Advisor (Fisheries Development/Rural Development), JICA Cooperation planner: Masaru OKAMOTO, Project Formulation Advisor, JICA El Salvador Evaluation Analysis: Tamayo ITO, Kaihatsu Management Consulting Inc.	
Research term	03/10/2011～14/10/2011	Type of evaluation：Terminal Evaluation

3. Summary of evaluation results

3-1. Achievement

(1) Output

The achievements corresponding to the output indicators are as follows.

Output 1: A system to transfer vegetables techniques applicable for small farmers in the Eastern Region is established.

Indicator	Scope
1-1 Teaching and extension materials about Agro-productive Techniques (use of organic material, introduction to new segments and others) are developed.	1,000 copies of the following 12 technical guidebooks were produced as the documents aimed at diffusing the agro-productive techniques: 1: Elaboration of Bokashi manure 2: Elaboration of nursery soil 3: Construction of seedling house 4: Reproduction of soil fungi 5: Elaboration of Bordeaux mixture 6: Double Transplantation technique 7: Hedge (separators) preparation for horticulture 8: Coverage by waste plants 9: Elaboration of EM-5 10: Seedling production 11: Green manure 12: Elaboration of calcium sulfate liquid manure 20 flip charts regarding agro-productive techniques were produced. Two types of pamphlets regarding agro-productive technique were edited and 2,000 copies of them were printed.
1-2 Extension workers' and agricultural association leaders' competences are improved through the implementation of the training courses regarding agro-productive techniques.	The following training courses abroad were implemented regarding the production techniques for extension workers and agricultural association leaders.

Name of the Training Course	Country	Number of Trainees
Organic Agriculture Extension Techniques to support Small Scale Farmers	Costa Rica and Japan	2
Vegetable production	Japan	1
Organic Agriculture for Small Scale Farmers in Costa Rica (Production and Agricultural Management) (*)	Costa Rica	15
Organic Agriculture Techniques to support	Costa	14

	<table><tr><td>Small Scale Farmers</td><td>Rica</td><td></td></tr><tr><td>Best practice on vegetable production and merchandising in conditions of high temperature (*)</td><td>Paraguay</td><td>4</td></tr><tr><td>Organic Agriculture Techniques to support Small Scale Farmers</td><td>Costa Rica and Japan</td><td>2</td></tr><tr><td>Vegetable Production Technique for Small Scale Farmers</td><td>Brazil</td><td>1</td></tr></table> (*) Same training course listed in the indicator 2-2. ・ Total of 43 persons were trained abroad in both production and management topics, during the Project implementation period. ・ 926 farmers received training courses held in El Salvador. ・ A total number of 640 persons received seminars held in El Salvador regarding vegetable production and management improvement.
1-3 Vegetable production model (model project) is established by agricultural associations in each of the CENTA agency.	・ The 10 CENTA agencies in the Eastern Region established 15 vegetable production models (model projects). ・ 2 farmers' markets were organized as a model for merchandizing technique. ・ 3 demonstrative farmland and 2 window farmland have established. The demonstrative farmland aims at experimentation and the window farmland aims at showing the succeeding cases of production techniques.
1-4 An agricultural information system to promote vegetable production is established in coordination with relevant institutions.	As the Agricultural Information Diffusion System in the Eastern Region (SIDIA-Oriente), the following mechanism was established. 1. Establishment of 11 CENTA Information Centers (API) in the Eastern Region (10 CENTA agencies and CEDAF-Morazan). 2. Publication of quarterly magazine "Friend of the Farmer's Family". 3. Creation of SIDIA digital information site in the CENTA web site. ・ The following services are offered by API: 1. Internet access for agricultural information. 2. Access to SIDIA-Oriente digital space. 3. Printed materials (guidebooks, pamphlets, books). 4. Training courses and Reading Circles. 5. Publication of quarterly magazine "Friend of the Farmer's Family". 6. Consultation to the extension workers. ・ 954 persons (650 male and 304 female) have already visited API by September 2011. ・ 7 editions of "Friend of the Farmer's Family" were published through printing of 5,000 copies in total.

Output 2: A system to teach management improvement techniques for small farmers and vegetable production associations in the Eastern Region is established.

2-1 Teaching and extension	・ The following seven guidebooks were edited as the teaching materials for agricultural management and printed 2,000

<table>
<tr><td>materials about Agricultural Management Improvement Techniques (associativity, marketing and others) are developed.</td><td>copies for each.
1. Creation of Agricultural Association
2. Establishment of the Farmer’s Market
3. Basic Accounting
4. Sales Management and Agricultural Marketing
5. Techniques for Associative Cooperation Activities
6. Production Planning
7. Cost and Benefit Analysis
・ Accounting Book and Sales Management Book were edited and 2,000 copies were printed out and distributed.
・ Pamphlets on farmer’s market in Usulutan and Morazan and pamphlets on the APOCAPANES Agricultural Association were printed out.</td></tr>
<tr><td>2-2
Extension workers’ and agricultural association leaders’ competences are improved through the implementation of the training courses regarding agricultural management improvement.</td><td>The following training courses abroad were implemented regarding agricultural management improvement techniques for extension workers and agricultural association leaders.
<table>
<tr><th>Name of the Training Course</th><th>Country</th><th>Number of Trainees</th></tr>
<tr><td>Enforcement of Female Leadership through Rural Life Improvement</td><td>Japan</td><td>1</td></tr>
<tr><td>Management of Participatory Rural Development Network</td><td>Japan, Panama and Costa Rica</td><td>1</td></tr>
<tr><td>Best Practices on Microcredit</td><td>Nicaragua</td><td>2</td></tr>
<tr><td>Organic Agriculture for Small Scale Farmers in Costa Rica (Production and Agricultural Management) (*)</td><td>Costa Rica</td><td>15</td></tr>
<tr><td>Best practice on vegetable production and merchandising in conditions of high temperature (*)</td><td>Paraguay</td><td>4</td></tr>
</table>
(*) Same training course listed in the indicator 1-2.

・ Total of 43 persons were trained abroad in both production and management topics, during the Project implementation period.
・ 893 farmers received training courses held in El Salvador.
・ A total number of 640 persons received seminars held in El Salvador regarding vegetable production and management improvement.</td></tr>
<tr><td>2-3
Agricultural management improvement model (model project) is established in each of the CENTA agency.</td><td>Agricultural management improvement model was introduced through 15 model projects, 2 farmer’s markets, 2 direct-sale stands, 3 demonstrative farmlands, and 2 show-window farmlands, promoting agricultural associations and in parallel with the vegetable production technique model.</td></tr>
<tr><td>2-4
Necessary agricultural information for small scale farmers is stored at the Agricultural Information Diffusion Center and informative brochures are published.</td><td>Same as 1-4.</td></tr>
</table>

(2) Project Objective

The results based on the indicators of the project are as follows. The two indicators for the project purpose have been achieved.

Project Objective: The support system for vegetable cultivation services for small farmers is strengthened.

Indicator	Level of Achievement
1. Applicable techniques for small farmers in the Eastern Region are indicated, and established as diffusion techniques in the small farmer support organizations such as CENTA.	The following 16 vegetable production techniques were selected as the applicable techniques for small farmers in the Eastern Region and they were established as the diffusion techniques among CENTA Agencies in the region. Soil Improvement Techniques: 1. Organic material using local microorganisms (bokashi, liquid fertilizers, etc.) 2. Green fertilizer 3. Crop rotation 4. Management of soil pH levels Production of high quality waiting-bed plants 5. Simple waiting-bed plant nurseries 6. Homemade substrate 7. Double transplanting 8. Drip irrigation method 9. Water saving techniques 10. Water saving tank Cultivation techniques: 11. Trimming and pruning techniques 12. Tunnel houses 13. House farming 14. Soil cover technique using crop residue 15. Vegetative barriers Introduction of new crops: 16. Introduction of new crops such as ayote (pumpkin), radish, onion, coriander, chipilin, etc. ・ 227 direct-beneficiary farmers of the Project are organizing 20 groups of agricultural association through Project Models, demonstrative farmland, show-window farmland, etc. ・ 195 out of 227 direct-beneficiary farmers are cultivating vegetables according to the survey implemented by the Project. ・ The number of farmers cultivating vegetables in the Eastern Region grew from 437 to 926 between before the implementation of the project and present, according to CENTA Eastern Region report 2008-2011.
2. Applicable means for small farmers to improve management in the Eastern Region are indicated, and established as diffusion techniques in the small farmer support organizations such as CENTA.	The following 7 management improvement topics were selected as the applicable means for small farmers in the Eastern Region and they were established as the diffusion techniques among CENTA Agencies in the region. 1. Organization of Agricultural Association 2. Establishment of Farmers Market 3. Basic Accounting 4. Direct Sale Method 5. Associative Cooperation Activities 6. Production Planning 7. Cost and Benefit Analysis

	・ 717 farmers finished the seven courses and obtained the certification. 244 farmers have finished more than four topics of them. In total, the number of farmers who assisted to the above training courses reached to 1,000. ・ Farmers associations were formed by the model project, and procedures for the constitution of agriculture association authorized by the Ministry of Agriculture were presented. As a result, three farmer associations became agriculture associations authorized by the Ministry.	

(3) Overall Goal

Overall Goal: Small farmers' income through vegetable cultivation is increased in the Eastern Region.

Income of the beneficiary farmers of the project shows an increasing tendency after 2013.	・ According to the survey implemented to 100 beneficiaries of the Project in September 2011, 91% of the respondents' income is in tendency to increase. 100% of the respondents answered that the production cost has decreased and 96% of the respondents' vegetable sales have increased. Such tendencies have been proved also through interviews held during the evaluation study mission. ・ In the abovementioned survey to 100 beneficiary farmers, the average annual income of the respondents has increased from US$673 before the inception of the Project to US$1,062 in September 2011, showing an approximately 58% increase.

3-2. Narrative summary of Evaluation

(1) Relevance

The relevance is qualified as high.

1) Consistence with national plans and agricultural policies in El Salvador

The Project is maintaining its consistency with national agricultural policy introduced by the new government despite the transfer of the governments in 2009 and the consequent change in its agricultural policy during the implementation of the Project. The project is highly consistent with the Program 1, "Food and Nutrition Security Program (PAN)", and the Program 2, "Family Agriculture Program for Production Chain (PAP)", of the "Family Agriculture Plan (PAF) 2011-2014" introduced by the present government in February 2011.

2) Relevance from the viewpoint of Japanese aid policies

Japanese aid priority areas for cooperation to El Salvador are: i) reactivation of the economy and the expansion of employment, ii) environmental conservation for sustainable development, and iii) social development. Within the first priority area mentioned above, lies the "Development of the Eastern Region Program" as one of the important cooperation program. This project aims to support small-scale farmers living in the region in order not to be left out from development. In this sense, this is a project that supports the basic stratum of society in the Eastern Region, which will lead Japanese efforts to support the development of this geographic area.

3) Relevance from the viewpoint of the beneficiaries

The agricultural techniques transferred through the project, especially the introduction of environment-friendly techniques and agricultural management advices were adequate and new for CENTA extension workers, and they have satisfied their needs.

For small scale farmers, the environment-friendly agricultural techniques transferred by the project have promoted the utilization of local materials with lower cost, and thus satisfied their needs for lower production cost, as their revenue has been affected by the high price of conventional chemical fertilizers and vermicides till then.

(2) Effectiveness

Effectiveness is qualified as high.

The project objective and outputs have been almost achieved as transfer of techniques from extension workers to the small scale farmers had accelerated during the last year of the implementation period of the project. Higher effectiveness of technique diffusion has been achieved as a series of diffusion mechanism such as model project, demonstrative farmland, show-window farmland, agricultural associations, community extension workers, teaching materials and agricultural information system introduced by the project took effect.

(3) Efficiency

Efficiency is evaluated as high.

Human resources, equipment and local cost of the project have been input efficiently and contributed to the output. The training courses also have been implemented appropriately in terms of their topics, contents and timing, thus contributing to the achievement of the output.

(4) Impact

The project is evaluated to have a high positive impact.

The possibility to achieve the overall goal of the project is considered high, and additionally the following positive impacts have been confirmed.

- Environment-friendly vegetable cultivation techniques had been highly appreciated by the small scale farmers in the Eastern region.
- The consciousness on associativity has been nourished thorough out the activities introduced by the project such as model projects, demonstrative farmland and community extension workers.
- The new concepts introduced to CENTA by the project such as the management improvement means and community extension workers have influenced in the formulation process of the national agricultural policy, and as a consequence these concepts have been introduced to the new policy (Family Agriculture Plan).
- The project contributed to the improvement of living conditions of the small scale farmers through healthier diet and participation of the whole family members to the cultivation and marketing of the vegetables by the introduction of the environment-friendly agriculture.
- The project attracted the interest of the local governments and activities such as farmers market and environment-friendly vegetable cultivation in schools have been carried out in coordination with the local governments.

(5) Sustainability

The sustainability is qualified as relatively high.

1) Political and institutional aspects

Technical counterparts of the project will be employed by the Family Agriculture Plan after the termination of the project, meaning that the knowledge, techniques and extension methodology acquired during the project would be applied and developed by them even after the conclusion of the project. Nevertheless, the actual implementation of the Family Agriculture Plan is still on its inception phase and it is premature to verify the continuity of the output of the project through the Family Agriculture Plan in present situation.

2) Organizational and Financial aspect

The human resources and the budget to carry out the output of the project are expected to be

implemented as part of the Family Agriculture Plan. Nevertheless, there are some components of the project that their continuity is not assured, such as the budget allocation by CENTA for activities of SIDIA-Oriente and API.

3) Technical aspect

Main activity of the project was centered on the transfer of techniques from Japanese experts to extension workers during the first three years of the project. From the last year of the project, transfer of techniques from extension workers to small scale farmers has been accelerated and community extension workers have been developed.

3-3. Factors which contribute to the outputs

- A better positioning of the project in the context of national agricultural policy by reacting smoothly and appropriately to the formulation process of the Family Agriculture Plan.
- The introduction of techniques and methodologies based on the actual situation and needs of the small scale farmers in the eastern region.
- The good combination of training courses in Japan and Latin American countries.

3-4. Factors that caused problem

- The replacement of almost half of the counterpart in the mid-term of the project.
- Insufficient communication by language differences in the inception period of the project.

3-5. Conclusion

Since the project activities have been carried out smoothly and the achievement level of PDM is high, the project objective and outputs have been almost achieved. Furthermore, the overall goal of the project is also highly expected to be achieved after the termination of the project. According to the evaluation based on 5 items, relevance, effectiveness, efficiency and impact have been qualified as "high". The sustainability has been evaluated as "relatively high".

3-6. Recommendations （Concrete measures, recommendations, advise for the project）

<For the Project before the termination of the Project>

(1) Packaging of training programs

The Project has elaborated a series of training and extension materials, which are supposed to be used by the CENTA even after the project termination and even outside the project target areas. Therefore, it is recommended for the Project to consolidate all the elaborated materials in the form of training curriculum, which can be used for training for the CENTA technical personnel, farmers and other institutions.

(2) Data collection and analysis on improvement of agricultural productivity and income.

It is remarkable that the productivity and income level of target farmers have increased as a result of the project interventions. It is suggested to collect more complete data set which shows scientifically and statistically such increases with the cooperation of the Biometric and Socioeconomic Unit.

(3) Promotion of community-based extension and networking of lead farmers.

According to the new project strategy, the Project has promoted the community extension workers who are selected among outstanding farmer beneficiaries. They are expected to teach other farmers organic farming, complementing extension services of the CENTA, which otherwise has limited extension capacity in terms of the number of extension officers and the coverage areas. Therefore, it is advisable for the Project to promote further such community-based extension system and to demonstrate its effectiveness.

(4) Market-oriented modeling of year-round production schedule.
Vegetable production tends to follow seasonal patterns, that is to say, many producers produce the same commodity in the same period due to natural conditions. And this often leads to a decrease in the market price that is determined by the law of demand and supply. Since the technology introduced by the Project allows the producers to opt different commodities to produce in any season of the year. Therefore, it is recommendable for the Project to consider production models in which the producers can enjoy better prices throughout the year by establishing the production calendars.

< For the MAG/CENTA after the termination of the Project>

(1) Expanding the Project outputs nationwide through CENTA network and MAG agencies.
The Project has unique features which have hardly been addressed by other projects. These include environment-friendly agriculture, integrated approach to production, organization and marketing, and provision of information services to the farmers among others. It is therefore for the MAG/CENTA to maintain all the project outputs in the oriental region and expand them to other areas in the country. Basically all the resources and outcomes developed by the Project should be managed by the CENTA. But for the area of marketing, it seems necessary for the MAG to coordinate with different offices concerned since the CENTA does not have direct mandate to the marketing.

(2) Sustaining the information dissemination system and establishment of national system.
As an agency mandated to agriculture extension, it is important to play a role of information dissemination to the farmers, for which the SIDIA has been developed by the Project. In this connection, it is suggested for CENTA and MAG to maintain and sustain the SIDIA, and establish a national information system in the near future.

(3) Technical verification of the effects of organic farming.
In order to convince as many producers as possible in the organic farming or environment-friendly practices, it is vital to have relevant scientific data. It is therefore for the CENTA to conduct technical verification tests and consolidate the data to prove advantages of the organic practices.

(4) Allocation of technical personnel of the Project to Family Agricultural Program for Production Chain (PAP) of the Family Agriculture Plan (PAF).
In order to make the most of the experience, development and output obtained by the project and to assure their diffusion and sustainability, it is recommendable that the technical personnel of the Project to be incorporated to the Family Agriculture Plan (PAF), preferably to PAP, Family Agricultural Program for Production Chain.

3-7. Lessons

(1) Incorporation of the project strategy into the national plan.
During the project period, the new national administration set an agriculture development policy called “Family Agriculture Plan” in February 2011. The Project has been one of the references for policy makers to formulate this new plan. This was due to not only good performance of the Project but also its vision, mission and strategy.

(2) Integrated approach of the project with production, organization and marketing.
The Project has adapted multi-discipline approach that integrates production, organization and marketing. This has led to remarkable outputs and contributes to the attainment of overall goal of increasing farmer’s income level.

(3) Effects of the organic agriculture practices to enrich the deteriorated soils.
Over the years the soils of oriental region has been damaged and deteriorated due to monoculture

practices and lack of technology to recover. The Project has proved and many extension officers have been convinced that the organic farming can in effect address this issue and contribute to sustainable agriculture.

(4) Importance of information dissemination system to the farmers.
A number of small-scale farmers encounter a set of problems including lack of or poor access to the knowledge and technology. The Project has successfully demonstrated through the SIDIA-Oriente cost-effective method of information dissemination. It involves not only conventional media such as pamphlets, technical guidebooks and newsletters but also use of internet and cellar phone services.