

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Guatemala Office: March, 2016

Country Name	Establishment of Mechanism for Agricultural Technology Diffusion and Application to Improve Living Condition of Indigenous and Non-indigenous Small-scale Farmers of Occidental Altiplano in Guatemala
Republic of Guatemala	

I. Project Outline

Background	<p>Nearly half of the total population in Guatemala lived at or below the poverty line and most of them were indigenous. The majority of the indigenous population were small-scale farmers who barely managed to live in a self-sufficient way with unproductive land in the mountainous highlands. Due to the abolition of directorates in charge of extension services in the Ministry of Agriculture, Livestock and Food (MAGA) in 1997 in accordance with the economic structural adjustment policy, agricultural techniques and information became almost inaccessible to the small-scale farmers. The productivity of their agricultural activities remained low because of the continuous use of low-yield seeds, crop disease and pestilence, and inappropriate fertilizer management.</p> <p>Based on the development study, JICA proposed a sustainable agricultural development plan with participatory development methods and the lessons learned. However, owing to the abolition of extension services, the outcomes of the study did not expand from the pilot areas to other areas. In this respect, it was necessary to reestablish an agricultural technology extension mechanism through capacity enhancement of public institutions and farmers' organizations in order to utilize public services effectively and to make effective linkage between them.</p>					
Objectives of the Project	<p>Through (i) enhancing capacity of MAGA departmental offices to prepare agricultural extension plans and to coordinate them, (ii) strengthening capacity of the Highland Research Center of the Institute of Agricultural Science and Technology (ICTA-CIAL) for development of appropriate agricultural technologies and also technical transfer (implementation of training) to the extension staff, (iii) technical capacity enhancement of municipal offices and capacity enhancement of farmers groups by extension staff at the eight pilot municipalities in Totonicapán, Sololá and Quetzaltenango, the project aimed that "extension plans of the target municipalities are established and carried out by the farmers groups (The diffusion mechanism of the agricultural techniques for small-scale farmers is established)" (Project purpose), and thereby contributing to improving the livelihoods of the small-scale farmers in target areas" (Overall goals). The project objectives set forth are as follows:</p> <ol style="list-style-type: none"> 1. Overall Goal: The livelihoods of the small-scale farmers in target areas are improved through the diffusion mechanism established by the Project. 2. Project Purpose: In target areas, the diffusion mechanism of the agricultural techniques for small-scale farmers is established. 					
Activities of the Project	<ol style="list-style-type: none"> 1. Project sites (Pilot municipalities) : Eight municipalities (Cantel, Concepción Chiquirichapa, San Andrés Semetabaj, San José Chacayá, Santa Lucía Utatlán, Momostenago, Santa María Chiquimula, Totonicapán) in three departments (Totonicapán, Sololá and Quetzaltenango) 2. Main activities: <ol style="list-style-type: none"> (1) Drawing up and implementation of agricultural extension plans of municipalities, (2) development and verification of appropriate agricultural technologies by ICTA-CIAL, planning and implementation of training to extension staff, and technology transfer to extension staff and farmers, (3) capacity enhancement of farmers groups by the extension staff. 3. Input <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"> <p>Japanese side</p> <ol style="list-style-type: none"> 1. Experts: 8 persons 2. Trainees accepted: 58 persons (Training in Japan: 15 persons, Third country training: 43 persons) 3. Facilities and equipment: cultivators, tractors, vehicles, and motorcycles </td> <td style="width: 50%;"> <p>Guatemala side</p> <ol style="list-style-type: none"> 1. Staff allocated: 48 persons 2. Land and facilities: Office space at MAGA Quetzaltenango Office, training rooms and experimental fields of ICTA-CIAL 3. Local cost: approximately 3.27 million Quetzals </td> </tr> </table> 				<p>Japanese side</p> <ol style="list-style-type: none"> 1. Experts: 8 persons 2. Trainees accepted: 58 persons (Training in Japan: 15 persons, Third country training: 43 persons) 3. Facilities and equipment: cultivators, tractors, vehicles, and motorcycles 	<p>Guatemala side</p> <ol style="list-style-type: none"> 1. Staff allocated: 48 persons 2. Land and facilities: Office space at MAGA Quetzaltenango Office, training rooms and experimental fields of ICTA-CIAL 3. Local cost: approximately 3.27 million Quetzals
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Ex-Ante Evaluation	2006	Project Period	October 2006– October 2011	Project Cost	425million yen	
Implementing Agency	Ministry of Agriculture, Livestock and Food (MAGA), Institute of Agricultural Science and Technology (ICTA)					
Cooperation Agency in Japan	Ministry of Agriculture, Forestry and Fisheries					

II. Result of the Evaluation

1 Relevance
<p><Consistency with the Development Policy of Guatemala at the time of ex-ante and project completion></p> <p>The project was consistent with the development policies of Guatemala, as poverty reduction, supports for the disadvantaged farmers, increase of the agriculture production by small-medium producers groups and strengthening of agriculture and livestock extension services are prioritized under the policy documents such as Economic and Social Reactivation Program (Programa de Reactivación Económica y</p>

Social) 2004/2005”, “Hope Plan (Plan de la Esperanza = Plan de Gobierno 2008-2012)”, “Agricultural Policy (Política Agrícola) 2004-2007”, “Agricultural Policy (Política Agropecuaria) 2008-2012”.

<Consistency with the Development Needs of Guatemala at the time of ex-ante and project completion>

The project was consistent with the development needs of Guatemala both at the time of ex-ante evaluation and project completion in terms of poverty of indigenous people of Guatemala as well as poverty in the three target provinces as the project aimed at self-sufficiency in food and increase in agricultural revenue.

<Consistency with Japan’s ODA Policy at the time of ex-ante evaluation>

The project was consistent with Japan’s ODA policy, as “improvement of rural life (with attention to the indigenous people)” was included in the prioritized areas of the Japan’s ODA to Guatemala as agreed in the policy dialogue with the government of Guatemala in 2005.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

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

The project purpose “The diffusion mechanism of the agricultural techniques for small-scale farmers is established” was mostly achieved at the project completion. The indicator which measures the achievement of the project purpose set as “Municipal extension plans of the pilot municipalities are established and implemented in coordination of various actors” was interpreted as achieved because at each pilot municipality, (i) an organization which coordinates the stakeholders was established, (ii) an extension plan was drawn up, (iii) extension budget was secured, and (iv) farmers groups and municipal offices utilized the mechanism proposed by the project.

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

After the project completion, municipal extension services have continued to some extent at seven target municipalities among eight with the exceptional case of Santa Lucía Utatlán municipality. A municipal technical committee which coordinates stakeholders in extension services has continued at each of the five municipalities among the eight pilot municipalities (except Cantel, Santa Lucía Utatlán, and Santa María Chiquimula municipalities)¹. Municipal officers in charge, other key stakeholders as well as citizens take part in the committee in each of the five municipalities and the committees function well. Except Santa Lucía Utatlán municipality, each of the seven municipalities has continued drawing up and implementation of its extension plan. Extension staff has been continuously hired at all the municipalities. Even at Cantel and Santa María Chiquimula where the committees have not continued have maintained liaison with farmers groups and the extension activities have continued². Budget for extension activities has secured at seven municipalities (excluding Santa Lucía Utatlán where an extension plan does not exist), however, the size of the budget is different depending on municipalities and there are some cases that the size of the budget has not reached the level that the project used to have during its execution.

The farmers groups formed during the project implementation have continued its activities in seven municipalities where the extension plans are drawn up and implemented. Among them, three municipalities have experienced an increase in the number of groups and the scope of their activities has expanded. Extension services have been implemented based on the needs while the extension officers still continue the activities that the project used to do such as greenhouse tomato production, fertilizer production (bokashi), and other vegetable cultivation.

As to the agricultural extension mechanism in Guatemala, SNEA (Sistema Nacional de Extensión Agrícola) was established in 2010 during the project implementation, and currently the National Rural Extension System (Sistema Nacional de Extensión Rural: SNER), which was established in 2012 after the regime change, is the national mechanism for agriculture extension. Under SNER, extension teams of MAGA have been assigned to all the 338 municipalities in Guatemala. The knowledge and techniques are transferred in the following cascade way: from MAGA extension officers to leaders (promoters) of farmers groups organized nationwide, and then from the promoters to the farmer group members. In the framework of SNER, stakeholder such as local governments, farmers organizations, development partners, NGOs, private firms and academics are expected to be involved in the agricultural extension system. However, cooperation between MAGA extension officers and these actors is not quite so common yet, and therefore, the extension system by SNER is yet to be fully developed. Among the eight pilot municipalities, cooperation between MAGA extension officers and other local actors was observed at two pilot municipalities only. When SNEA was being established, some of the project sites were visited by SNEA related personnel and the experience of the project was used as reference together with other organizations such as the Food and Agriculture Organization (FAO). Although the project is not mentioned in the official documents of SNER, the project is regarded as one of the bases of the reconstruction of the agricultural extension mechanism abolished in 1997 (SNEA, 2010). The agriculture technologies of ICTA-CIAL were incorporated into extension activities of MAGA under SNEA by MAGA and SNER thereafter, and ICTA-CTAL has continued development, verification and transfer of agriculture technologies up until today. However, the training to extension staff which ICTA-CIAL used to conduct during the project execution has not continued and the training modules have not been updated either.

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

As mentioned above, currently the agricultural extension is carried out in the framework of SNER and MAGA extension officers under SNER are assigned to all the 51 municipalities in the three target departments. In the meantime, it is not confirmed whether the extension mechanism by municipal office which was introduced by the project is applied at other municipalities than the target municipalities. Information on activities of MAGA extension officers (such as the number of farmers groups/farmers, the techniques being extended and others) was not obtained from MAGA under this ex-post evaluation. Therefore, although it is certain that the project had some impact on

¹ At Santa Lucía Utatlán and Santa María Chiquimula, change of mayors at election held every four years and organizational restructuring thereafter influenced the situation. At Cantel, counterparts were not involved with the extension services after the project completion, and the municipal technical committee has not been held since 2013.

² One staff member is hired as “extension officer” at Lucía Utatlán; however, that staff member is also responsible for other assignments and extension activities are not carried out.

the establishment of the current MAGA extension mechanism, it is unclear to what extent the project actually influenced the contents of the mechanism and its activities.

According to the interviews with farmers in Santa Lucía Utatlán municipality and San José Chacayá municipality, their livelihood and health conditions improved during the project implementation as a result of the diversification of the crops and self-consumption of the produced crops. The continuous improvement of livelihood has been limited at Santa Lucía Utatlán where the farmers groups have not continued activities. However, at San José Chacayá where the agriculture extension services have continued, improvements in livelihood, quality of life and health conditions have been observed after the project completion.

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

No land acquisition and resettlement occurred due to this project, and no negative impacts on natural environment were observed.

<Evaluation Result>

The project purpose was achieved at the time of project completion and the extension mechanism introduced by the project has continued at the pilot municipalities with some exceptions. As for the overall goal, the livelihood of the farmers has improved; however, it has not been confirmed that the extension mechanism was applied to other areas. Therefore, the effectiveness/impact is fair.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose) In target areas, the diffusion mechanism of the agricultural techniques for small-scale farmers is established.	Municipal extension plans of the pilot municipalities are established and implemented in coordination with various actors.	<u>Status of achievement: Achieved at the project completion</u> (Project Completion) At each of the eight pilot municipalities, (i) an organization which coordinates the stakeholders was established, (ii) an extension plan was drawn up, (iii) extension budget was secured, and (iv) farmers groups and municipal offices utilized the mechanism. (Ex-post evaluation) <ul style="list-style-type: none"> ● Municipal technical committees have continued at five municipalities among the eight pilot municipalities. ● Extension plans have been drawn up and implemented, and the extension budget is secured at seven municipalities among the eight pilot municipalities. ● Extension staff has been continuously assigned at all the eight municipalities.
(Overall Goal) The livelihoods of the small-scale farmers in target areas are improved through the diffusion mechanism established by the Project.	Municipalities recognize the efficiency and effectiveness of the mechanism established by the project to improve the quality of life of small-scale farmers and over 30% of the municipalities in the target departments will have an agricultural extension mechanism.	<u>Status of achievement: Not achieved at the project completion</u> (Ex-post evaluation) Agriculture extension by the municipal office has not been observed other areas than the pilot municipalities.
	Small-scale farmers in the pilot municipalities feel that quality of life has improved through the work of municipal agricultural extension.	<u>Status of achievement: Partially achieved</u> (Ex-post evaluation) Farmers interviewed feel that their livelihood, quality of life, and health conditions have improved.

Source : JICA internal document, questionnaire and interviews with the implementing agency, interviews with farmers.

3 Efficiency

Although the project finished within the planned schedule (ratio against the plan: 100%), the project cost slightly exceeded the plan (ratio against the plan: 108%). Therefore, efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

The poor and the indigenous people are prioritized targets of the agriculture development policy as stipulated in National Policy on Integrated Rural Development (Política Nacional de Desarrollo Rural Integral, PNDR I) drawn up in 2009, and the Family Farming Program to Strengthen the Peasant Economy (Programa de Agricultura Familiar para el Fortalecimiento de la Economía Campesina, PAFPEC) 2012-2015 under the Perez Molina regime (2012-2015) supports family-based small scale farmers. The regime promoted agriculture extension by SNER. However, cooperation/collaboration of the agriculture extension mechanism by municipality office, which was introduced by the project, and the extension under the SNER framework is yet to be established, and therefore prospect for the future is unknown.

<Institutional Aspect>

As to MAGA, although SNER is yet to be developed, Directorate for Regional Coordination and Rural Extension (Dirección de Coordinación Regional y Extensión Rural, DICORER) is in charge of agriculture extension and assigned extension officers nationwide. However, the demarcation/cooperation between MAGA (SNER) extension officers and municipality offices is unclear. Although MAGA extension officers are allocated nationwide, its monitoring system is under construction and personnel distribution for the system is still insufficient. As to the eight pilot municipalities, municipal technical committees have continued at five municipalities and extension staff has been continuously assigned at all the eight municipalities; however, there are still many communities where the extension services are not delivered and the number of staff assigned is not sufficient in this regard. ICTA-CIAL is continuously responsible for development, verification and transfer of agriculture technologies and sufficient number of staff is allocated for its duties.

<Technical Aspect>

MAGA has training system to secure the technical level of extension officers to some extent; however, the actual knowledge and skills

of extension officers vary among them. ICTA-CIAL updates skills and experiences of staff by having them participate in internal and external training courses. As to the eight pilot municipalities, extension staff who has sufficient knowledge and skills for agriculture extension is hired with some exceptions.

<Financial Aspect>

Since three MAGA extension officers as a group are allocated to all the 338 municipalities across the country, it should be considered if the extension budget of MAGA needs to be increased. ICTA-CIAL does not secure a sufficient budget in the annual operation plan for the agricultural sector. As to the pilot municipalities, extension budget is secured at seven municipalities except Santa Lucía Uatlán to deliver minimum extension services. However, considering that there are still potential beneficiaries, it should be examined if the budget needs to be increased; however, the prospect for the future is unclear.

<Evaluation Result>

Thus, the project has challenges in policy, institutional, technical and financial aspects, and therefore the sustainability of the project effects is low.

5 Summary of the Evaluation

The project purpose “The diffusion mechanism of the agricultural techniques for small-scale farmers is established” was mostly achieved at the project completion, as the indicator which measures the achievement of the project purpose “Municipal extension plans of the pilot municipalities are established and implemented in coordination of different actors” was attained. After the project completion, municipal agricultural extension which was established by the project has continued at seven target municipalities out of eight. As for the overall goal, improvement of livelihood of the some of the target farmers have been observed; however, the application of extension mechanism of the project to other areas has not been confirmed. In respect of sustainability, the project faces challenges in policy, institutional, technical and financial aspects such as insufficient coordination among the municipal agriculture extension system and the national extension framework as well as insufficient staff allocation, techniques and extension budget. As for efficiency, the project cost exceeded the plan.

In light of the above, the project is evaluated to be unsatisfactory.

III. Recommendations & Lessons Learned

<Recommendation to MAGA>

As the level of knowledge and skills of MAGA extension officers varies, it is recommended to take actions to secure the quality of extension officers such as establishing clear selection criteria for recruitment or implementation of refresher training for the existing officers. In addition, currently, various actors on agricultural extension services implement activities separately without clear coordination, and therefore, MAGA, as a main actor in the agriculture sector, is recommended to take actions on how the coordination should be made.

<Lessons Learned for JICA>

The project was implemented to reconstruct the agriculture extension mechanism abolished in 1997. However, SNEA, the previous national agriculture extension mechanism, was established in 2010 before the project completion, and therefore, the position of the municipal extension system proposed by the project became unclear. While FAO contributed significantly to the establishment of SNEA, JICA was not fully involved with its process. Further, the project was not able to cooperate with SNEA because consensus was not reached between JICA and MAGA on the strategy on extension mechanism and there was constraint in the budget.

In such a project whose purpose is to contribute to the reconstruction of the national agriculture extension mechanism in a country, it is important to coordinate well with other development partners for cooperation/demarcation, be actively involved in the process of construction and clearly define the project role in the mechanism under construction in order to generate project effects properly and then make them sustainable.



Tomato production by a farmer group for which the extension staff provides guidance (Cantel municipality).



Fertilizer production technique transferred by the project is utilized at the municipal garbage collecting station (Santa Lucía Uatlán municipality).