Summary of Evaluation Results

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<tr><td colspan="2">Country: Republic of Peru</td><td>Project title: Project for improving livelihood of small-scale farmers in Cajamarca</td></tr>
<tr><td colspan="2">Issue/Sector: Agriculture Development</td><td>Cooperation scheme: Technical cooperation project</td></tr>
<tr><td colspan="2">Division in charge：Team 2, Agricultural and Rural Development Group 1, Rural Development Department</td><td>Total cost: 503 million Yen</td></tr>
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1. Background and overview of the Project

The macro economy of the Republic of Peru is growing steadily. On the other hand, the GINI coefficient is as high as 0.48[1], and the gap between the rich and the poor is still large. Poverty reduction is an important issue of Peru, and when the project was formed, the Garcia administration in 2006-2011 aimed to reduce the poverty rate exceeding 50% nationwide average to 30% or less by 2011. The land of Peru is broadly divided into coastal areas “Costa”, mountainous areas “Sierra” and inland forest areas “Selva”, among which the poverty rate of mountainous areas “Sierra” is 67.6%. Poverty reduction in the “Sierra” region is the most urgent task. Under such circumstances, the Peruvian government has been implemented the various measures to overcome this issue, such as "Mountain Region Export Promotion Act" issued for the purpose of "Poverty reduction and regional economy revitalization through promotion of agriculture, forestry and livestock industry etc. in mountainous areas" in 2006.

Cajamarca Region is located in the mountainous areas “Sierra”, with a poverty rate of 64.5%[2]. Most of the population is engaged in agriculture. Especially, a lot of small scale farmers extensively produce traditional crops (corn, potatoes, etc.) under rain-fed conditions, for self-consumption and for sale in nearby markets. The average arable land of a household of the small-scale farmer is quite small, from 0.5 to 3.0 ha[3]. As a result, they have practically little cash income from agriculture. In order to improve such situations, it is requires to construct a new farming system including introduction of new products, which allow farmers to obtain higher incomes in such a small arable land.

Against such a background, the technical cooperation project “*Proyecto de Incremento de los*

[1] 2010, World Bank, http://datos.bancomundial.org/indicador/SI.POV.GINI
[2] 2007, INEI, http://desa.inei.gob.pe/Censos2007/Pobreza/
[3] 2007, INEI “Censo Agropecuario”

Ingresos Económicos de los Pequeños Productores Agrarios en la Región Cajamarca" (hereinafter referred to as "the Project") began, based on the request from the Government of Peru.

For the purpose of constructing a development model that contributes to the improvement of livelihoods of small-scale farmers in the selected model village of Cajamarca Region, various activities have been conducted in the Project to establish and strengthen farmers' organizations, to introduce new crops such as purple corn, garlic, peas and improve the cultivation technologies of these crops, to set up a agricultural production chain, and to promote soil conservation of soil in the selected villages.

It is expected to create synergy between the model developed in the Project and the past loan program of "Proyecto de Mitigación de la Pobreza y Conservación Ambiental en la Sierra (I), (II) y (III)" and the ongoing "Programa de Pequeña y Mediana Infraestructura de Riego en la Sierra del Perú ".

2. Project Overview

In the Project, INIA aims to construct a model for improving the livelihood of small-scale farmers through various activities for small-scale farmers (improvement of agricultural technology, improvement of production chain of agricultural products and promotion of soil conservation by communities) in collaboration with related organizations (AGRORURAL, Regional government, provincial municipality government, district government) etc., in villages selected from provicial municipalities of Cajabamba, Cajamarca, San Marcos, San Miguel and San Pablo of Cajamarca Region.

(1) Overall Goal

a) To improve the livelihood of small-scale farmers in the target area[4].

b) The practical use of the established model by the Project in the enlightenment area[5].

(2) Project Purpose

A model is created to improve the income of small farmers in the target area.

(3) Outputs

Output 1: To establish and strengthen the sysytem for implementing the activities provided through the Project in the farmer's organizations in the model communities.

Output 2: To improve agricultural productivity and quality of the target crops[6] with farmers in the model communities..

Output 3: To set up the production chain of the target crops by the farmers organizations of the model communities.

[4] The target areas are Provincial Municipality of Cajabamba, Cajamarca, San Marcos, San Miguel and San Pablo of the Cajamarca Region.

[5] The enlightenment areas are the communities expect for the model communities in the target area, the other Municipalities of the Cajamarca Region and eight other regions (Amazonas Ancash, Aycucho, Huancavelica, Huanuco, Junin, La Libertad and Piura.

[6] The target crops are garlic, peas and purple corn.

Output 4: To promote the soil conservation in the model communities.
Output 5: To deepen understanding about the project activities realized in the model communities throughout the enlightenment area.

(4) Inputs (as of March 2016)

Japanese side:

Expert: 10 persons in total of 149.30 person months
Equipment: Approx. 384,500 US$
Local cost: Approx. 1,665,000 US$
Trainees received: 18 persons

Peruvian side:

Counterpart personnel: 35 persons
Local Cost: Approx. 679,000 US$
Land and Facilities: Offices, meeting rooms, experimental farming plots, and others

II. Evaluation Team

Members of Evaluation Team	<Japanese side>		
	Narihide Nagayo	Leader	Senior Advisor, JICA
	Yoshihisa Masanaga	Cooperation Planning	Agricultural and Rural Development Group 1, Rural Development Department, JICA
	Toyomitsu Terao	Evaluation Analysis	Fisheries Engineering Co., Ltd.
	Hiromi Higashionna	Interpreter	
	<Peruvian side>		
	Maria Carolina Gina Israel Palacios	Leader	Specialist in Public Investment Projects, AGRO RURAL
	Athenas Castello-Branco Hurtado	member	Specialist, International Cooperation Office, MINAGRI
	Tulio Antenor Velásquez Camacho	member	Soil specialist. INIA
	Maritza Pilar Paz Ramos	member	Specialist in Knowledge Management, AGRO RURA
	Eduardo Mendoza Sarmiento	member	Specialist, Office of Planning and Budget , AGRO RURAL
	Ubelser Lezama Abanto.	member	Specialist in Economic Development Promotion, GORECAJ
	Teresa Angélina Nieto López	member	Project Supervisor, APCI
Period of Evaluation	17 February 2016 to 13 March 2016		Type of Evaluation : Terminal evaluation

III. Results of Evaluation

1. Summary of Evaluation Results

(1) **Relevance: high**

Aspect of the policies:

The second strategic objective for the development of agriculture in "Plan Estratégico Sectorial Multianual de Agricultura 2015-2021 (PESEM)" of MINAGRI is to strengthen competitiveness and market access with particular emphasis on small-scale farmers. To achieve this objective, thirteen strategic actions are formulated, which include the following actions: No. 3. Improving agricultural technologies; No. 10. Facilitating farmers' access to financial services, and No.11. Encouraging the establishment of business organizations of agricultural farmers.

Aspect of the technical needs:

As far as members of farmers' organizations are concerned to the Project, they were used to their traditional extensive cultivation techniques largely different from techniques introduced in the Project which require appropriate fertilizer and management. The area of cultivation per farmer covered by the project activities was limited to 0.25 ha for purple corn and 0.10 ha for pea, and the rule was decided that the proportion of cost incurred by farmers for agricultural materials were escalated.

The reason why the area of cultivation was limited is to minimize the following risks: 1) the quite new farming technology for small-scale farmers was introduced through the Project, so that the farmers' acquisition situation of the technology greatly might affect the yield, 2) the economic loss of farmers might be serious when the farmers cultivated the new crop introduced through the Project as a priority in the their limited land and failed, 3) the cost for agricultural materials incurred by the farmers might exceed the range that farmers can bear if the cultivated area for the new crops becomes large. In addition, it is considered that the introduced technology was appropriate for the farmers, because their cultivation techniques has been improving year by year.As explained above, the cultivation technology introduced by the project is quite different from the traditional agriculture, but it can be said that the level of the introduced technology is appropriates and fits the needs of farmers.

(2) **Effectiveness: high**

Based on the activities in the 5 districts "the Guideline for the Establishment of Commercial Agriculture for Small-scale Farmers" (draft) was prepared as a document that summarizes the methodology and technology theory for improving the livelihood of small-scale farmers, and it is under finalization in the Project. The project goal is expected to be achieved.

The model described in the guideline has been highly evaluated at enlightenment seminars for agricultural officials in 9 regions. Especially, the farmers' organizations highly evaluated the model because of raising the yield of target crops (purple corn or peas) and actually creating cash income opportunities through joint sales. The model does not encourage small-scale farmers to change their overall farming but succeeds in showing one option for improving livelihood. Based on the model, farmers are easy to try and can practice immediately because of limiting cultivation areas and

reducing risks. This is one of important reason for the success of the model. The effectiveness of the Project has been increased by actually establishing a livelihood improvement model.

(3) **Efficiency: moderate**

The Project has come to encounter several trials and errors. Efforts were made to form farmers organizations composed of a single community (community model), to create added value in order to raise the price per unit weight, and to introduce garlic as new crop. As a result of these efforts, the feasible methods was found, such as creation of farmers' organizations composed of several communities, improvement of income through joint sorting and shiping of crops and others. Although the approaches were corrected through these trials and errors as described above, at the same time, some inputs that did not result in the outcome occurred, such as creating detailed maps of communities that were initially selected.

(4) **Impacts: expected to be high**

As an attempt to improve livelihoods in the target area of the Project, the INIA Baños de Inka Laboratory, the Government of Cajamarca Region and AGRO RURAL, which are the project implementing agencies, declared that they would continue to monitor, to assign engineers and to provide agricultural materials. AGRO RURAL plans to implement subsequent projects under its own budget as an attempt to apply the model developed in the Project to other regions. Since this plan will be done as one of the public investment program (SNIP), the work plan (Plan de Trabajo) has been prepared and already approved by the Planning and Investment Office of MINAGRI. It is currently in the stage of a pre-investment study to make a profile (Estudio de Pre inversion Univel Perfil). The study includes desk studies and field studies in the three target regions (Cajamarca, La Libertad and Amazonas), and is expected to be completed in June or July 2016. It is expected that the outcomes of the study will be registered in the Bank of the Projects of the Ministry of Economy and Finance prior to the inspection and evaluation of the Investment Planning Office of MINAGRI, and also that approval of this project will take place before the institutional budget for 2017 is approved. For the reasons stated above, the Overall Goal will be achieved.

In San Pablo District, the municipality began to support farmers by its own budget in 2015, using the cultivation technique recommended in the Project. In the period of 2016, the area supported by the municipality will be expanded to total 6 ha for purple corn and total 2 ha for peas, and the municipality will support the farmers in the aspect of not only the cultivation technology but also the joint marketing with utilizing the model developed in the Project. Many companies related to agricultural products made inquiries on purple corn production and came to the purple corn fields supported by the Project. This is due to the increase of the name recognition as purple corn production site of Cajamarca Region by the implementation of the Project and can be regarded as one of ripple effects.

(5) **Sustainability: expected to be high**

Institutional aspect:

"Guidelines for the Establishment of a Commercial Agriculture for Small-scale Farmers" has been developed as documentation of the model. Currently the coordination with MINAGRI is being made so that the guideline be incorporated and issued in the 0121 Budget Program of MINAGRI ("Improved articulation of small-scale farmers to market"). As the Budget Program links all projects that aim to incorporate small-scale farmers in the market, the model can be used in wider area and in continuous manner.

Financial aspect:

There are activities with budget approved at present such as the plan "Activities for the production and dissemination of purple corn" for which INIA engineers applied to “the grant funds for technology transfer” of “National Agricultural Innovation Program” (PNIA), as well as the plans of the Government of Cajamarca Region, provincial municipalities and district governments.

apreparation by AGRO RURAL for the implementation of Phase II of IEPARC. All these are activities that relate to the continuation of IEPARC project. As for the projects subsequent to the Project under its own budget that AGRO RURAL plans to implement, AGRO RURAL is conducting field studies and will finalized the plan document. The budget for the projects is expected to be distributed after being evaluated and approved by MINAGRI.

Technical Aspects:

Many of the technologies introduced in the Project are fundamental and therefore it is possible for farmers to continue the activities themselves. Moreover, it is possible for the counterparts of the Project to continue activities for dissemination with using the manuals and guidelines prepared in the Project.

2. Factors that promoted materialization of effects

(1) The farmers' earnings increased by clarifying respective expected roles of material manufacturers, farmers’ organizations, transport service providers and wholesale dealers through joint purchase of agricultural materials, bulk joint transportation / joint sales of agricultural products of equal quality by farmers’ organizations, rather than excluding these actors of production chains other than farmers who are final beneficiaries and thus reducing risks.

(2) The farmers can easily try and practice immediately introducing the new crops and cultivation technology because of limiting the cultivation area and reducing the risk based on their economic and mental burden. Furthermore, as farmers’ burden was requested from the beginning of the Project, the farmers has deeply understood the Project and actively participated in the activities of the Project.

3. Factors that impeded materialization of effects

(1) Concerning planning content

Many organizations such as INIA, the Government of Cajamarca Region, AGRO RURAL and other municipalities and district governments were set as implementation agencies of the Project. Since the flow and the timing of budget execution differed for every organization, it took a considerable amount of time to adjust among them and the activities of the Project sometimes stagnated.

(2) Concerning the implementation process

a) Among the counterpart staff members assigned to the Central Technology Team (ETC) and the Local Technology Team (ETL) for implementation of the Project, regular and non-regular personnel occupied 38% and 62% respectively. The non-regular staff mentioned here are experts in the field of agriculture (to give technical guidance to farmers' organizations) or field workers on INIA seed farm employed by the relevant government agencies on a fixed term contract for implementation of the project. Employment contracts of such non-regular staff will be stopped as the Project ends, and there is a possibility that the same activity can not be continued even after the Project is over. Therefore, even though such human resources are scattered, various devices are under consideration that will keep the effect of the Project as far as possible.

b) As for garlic, the dissemination of cultivation techniques and the seed production was not performed except the 1st cropping season due to problems such as lack of adaptation to environmental conditions of the areas covered by the Project. Currently only the basic research on cultivation techniques continues.

In addition, the plans to establish agricultural processing plants aiming for unit price increase (value added creation) per unit weight were aborted except Ichocán district. However, there was little negative impact by aborting the plans, because the operation and maintenance cost for the plants could become a heavy burden on the farmers' organizations if the organizations was not as well-organized as Ichocán district and because it was found that unit price increase (value added creation) per unit weight could achieved through planned production, the joint purchase of agricultural materials and joint sales of agricultural products without processing plants.

4. Conclusion

The result of analysis by the 5 criteria of evaluation was satisfactory as a whole. It can be concluded that a realistic and concrete model with high generality and sustainability has been developed by coordinated activities of implementation organizations through processes of trials and errors. Therefore, the objectives of the Project are almost achieved and it should be completed as scheduled.

Farmers' organizations that were founded and trained in the Project have started autonomous activities and the foundation has been made, but it is still in need of support for future sustainable development. Moreover, in order to ensure the achievement of the Overall goal of the Project that is diffusion of the model within Cajamarca Region and the other eight regions, it is strongly urged that measures in

accordance with the recommendations given below be taken by the Project and related organizations in Peru.

5. Recommendations

(1) Implementation organizations of the Project should continue the assistance for the further self-sustained development of farmers' organizations that were built in the Project.

(2) Measures for disseminating the model in the Cajamarca Region and other eight target regions:

a) The Government of Cajamarca Region will disseminate the model in the region in collaboration with municipal and district governments.

b) A successive project will be implemented by AGRO RURAL.

c) AGRO RURAL will promote understanding of agricultural engineers, extension officers and consultants involved in implementation of the ODA loan "Mejoramiento de la Pequeña y Mediana Infraestructura de Riego en la Sierra del Perú " so that the model may be applied to the ODA loan activities.

d) For disseminating the model, the Project should publish "Guidelines for the establishment of a commercial agriculture for small-scale farmers" through MINAGRI 0121 Budget Program.

(3) For disseminating the model efficiently, the Project should develop the abridged version, which mainly describes the model, of "Guidelines for the establishment of a commercial agriculture for small-scale farmers".

(4) According to the budget available to each government organizations, the model should be partially or fully applied with flexibly.

(5) For observing an extent of the achievement of the Overall goal of the Project, MINAGRI will record addresses for distribution of the "Guidelines for the establishment of a commercial agriculture for small-scale farmers" and monitor consequent activities for application of the model.

(6) The Project will verify whether the Asociación, which is a current form of the farmer organizations developed by the Project, can distribute its profits to the member farmers.

(7) The Government of Cajamarca Region will promote production of purple corn as one of prioritized crops of the Region.

6. Lessons learnt

(1) When several organizations are the executing agency of the Project, it is important to promote cooperation among them in order to effectively utilize the resources owned by the relevant organizations, but it takes substantial amount of time to coordinate them.

It is appropriate to concentrate budget and personnel assignment on one major organization and to have

other organizations playing supplementary roles as much as possible.

(2) Particularly in the case of promoting commercial agriculture, it is possible to select aggressive farmers with high motivation for investment and to sustain the activities by asking them for the reasonable financial burdens from the beginning of the activity.

(3) In order to promote commercial agriculture of small-scale farmers, it is not necessary to eliminate intervention by middlemen, and it is possible to maximize farmers' profits by linking farmers and consumers and limiting the role of middlemen it can.