

Lao P.D.R.

The Forest Management and Community Support Project (FORCOM)

External evaluator: Hideyuki Takagi,
Ernst & Young Sustainability Co., Ltd.

0. Summary

This project was implemented for the purpose of the creation and improvement of alternative livelihoods for shifting cultivation farmers, and the control of deforestation by reducing dependence on shifting cultivation in the poorest districts in the Lao PDR. Its relevance is high and it conforms well to the development policies and development needs of the Lao PDR as well as the aid policies of Japan. The achievement of project objective is fair because although this project objective has contributed to the creation and improvement of alternative livelihoods for shifting cultivation farmers at the project sites, some of indicators haven't been achieved yet and also these project activities haven't expanded. Although the prevalence and state of development after completion of the project is limited, the activities of the shifting cultivation farmers at the project sites have continued at some level. On the other hand, there is no sufficient data showing a reduction in deforestation, and it is observed that the project needs more time and further efforts for contributing to a reduction in deforestation. Comprehensively considering these facts, its effectiveness and impact are considered to be fair. The efficiency is considered to be high because the inputs were appropriate for the outputs of the achievements, and there was no problem with the period of the project and the amount of funds. The sustainability is considered to be low because, although the activities of the villages at the project sites have continued to some extent, there are problems in the implementation system and financing by the local government to extend the effects of the project to the neighboring regions. In light of the above, this project is evaluated to be partially satisfactory.

1. Project Description



(Project location map: 9 districts in 6 provinces in the North)



(Developing an action plan mainly by the residents)

1.1. Background

The Lao PDR is a country with abundant forest resources, where the agriculture and forestry sectors account for half of the gross domestic product, and about 80% of its population make their living from agriculture and forestry. Although the mountainous areas conventionally depended on dry-land rice production from traditional shifting cultivation and agroforestry in the shifting cultivation fields, a sufficient fallow period cannot be secured as part of shifting cultivation to maintain this form of livelihood due to population growth and land-use limitations. Shifting cultivation without securing a sufficient fallow period degrades the land capability, and the secondary forest cannot recover, which is one of the causes of deforestation, and the rate of forest cover has dropped to 41.5% in 2002 from 70% in 1940. The Lao government is therefore working on forest protection activities through the preservation of the natural environment and poverty reduction measures in the mountainous areas together with the local residents and international cooperation organizations. Although a Forest Law was established in 1996, and a Ministerial Ordinance on Village Forest Management was established in 2001, the forest management activities in villages were not sufficient due to the lack of skills of the responsible officers of the local governments and the budget.

In order to address these issues, the Lao government implemented a “Forest Conservation and Afforestation Project” (hereinafter called “FORCAP”) in Vientiane province from 1996 to 2003 in cooperation with the Japanese government. In the project, after developing the basic concept and the action plan for creating a forest conservation and afforestation model based on participation by the residents, forest conservation including agroforestry and profit-sharing forestry¹ and activities including weaving for improving livelihoods have been implemented as well as the development of a village forest management planning model and human resources at the provincial level.

This project was implemented from February 2004 for the purpose of the creation and improvement of alternative livelihoods for shifting cultivation farmers, and the control of deforestation through a reduction in dependence on shifting cultivation in the poorest districts by extending the achievements of FORCAP to six provinces in the North.

¹ A forest where the landowner of the forest and those who plant and tend the trees, or three parties if those who pay the expenses are included, conclude a contract to plant and tend the trees and to share the profits after cutting the trees at a certain rate.

1.2. Project Outline

Overall goal		The rate of deforestation (by shifting cultivation) is reduced in the districts where the project sites are located.
Project Objective		The activities leading to the sustainable land and forest use begin to expand in the project site and its surrounding areas, initiated by villagers.
Outputs	Output 1	Activities based on appropriate land and forest use are demonstrated in the Initial Sites (IS) ² .
	Output 2	Extension staff gain extension skills and techniques through training.
	Output 3	Under the framework of Community Support Programme (CSP) ³ , activities based on appropriate land and forest use are implemented at the Pilot Sites (PS) ⁴ by villagers and extension staff.
	Output 4	Recommendations are made on sustainable land and forest use practices and on extension systems and methods.
Input		<p>Japan Side:</p> <ol style="list-style-type: none"> 1. Experts: 20 in total (11 for Long-term, 9 for Short-Term) 2. 25 Trainees received 3. No Trainees for Third-Country Training Programs 4. Equipment: 29.940 million yen (29 motorcycles, 3 vehicles, office equipment, etc.) 5. Local Cost: 114.31 million yen 6. Others: Baseline surveys and annual household budget monitoring of the project sites, and the analysis of satellite images in the targeted areas <p>Lao PDR Side:</p> <ol style="list-style-type: none"> 1. 43 Counterparts 2. Land and Facilities: project offices 3. Local cost: 46,000 US dollars
Total cost		688.6 million yen
Period of Cooperation		February 2004 - February 2009

² A village where the technology is transferred to the counterparts through the formulation and demonstration of activities based on the appropriate use of land and forests mainly by the residents.

³ Activities for forest management and livelihood improvement in country villages for the purpose of reducing the rate of deforestation.

⁴ Villages where the counterparts and the extension officers are central to the support for the residents to implement the extension of CSP.

Implementing Agency	Ministry of Agriculture and Forestry (MAF) and the National Agriculture and Forestry Extension Service (NAFES)
Cooperation Agency in Japan	Forestry Agency of the Ministry of Agriculture, Forestry and Fisheries of Japan
Related Projects	<p>(Technical cooperation from Japan)</p> <ul style="list-style-type: none"> • “Forest Conservation and Afforestation Project (FORCAP)” as a prior project • Collaboration with the “Lao PDR Aquaculture Improvement and Extension Project Phase II (AQUIP 2)” at some sites • “Participatory Land and Forest Management Project for Reducing Deforestation (PAREDD)” as a subsequent project <p>(Other international bodies, aid agencies, etc.)</p> <ul style="list-style-type: none"> • “Laos Extension for Agriculture Project (LEAP)” by the Swiss Agency for Development and Cooperation • “Northern Upland Development Program” by the Asian Development Bank • Support for villages by the international NGO World Vision, etc.

1.3. Outline of the Terminal Evaluation

1.3.1. Achievement of Overall Goal

In order to “reduce the rate of deforestation (by shifting cultivation) in the districts where the project sites are located” as the overall goal, the CSP should be implemented targeting about 20,000 households. It was pointed out that about 4.3 million US dollars in funding is needed in terms of finance, and further improvement of the extension system of the local governments (Provincial Agriculture and Forestry Office (PAFO) and District Agriculture and Forestry Office (DAFO)) is required in terms of establishing the level of organization to achieve this. The population increase (when the improvement of production per field is difficult, an increase in the population might expand the area of cropland) and the impact of commercial crop cultivation using foreign capital (a rapid development might hinder the orderly land use policies promoted by the government) were listed as hindering factors.

1.3.2. Achievement of Project Objective

It was likely that the project objective, “activities leading to the sustainable use of land and forests are extended mainly by the residents in and around the project sites,” would be achieved because three indicators (Indicators 3 to 5) out of the five indicators for the project objective have been achieved, and the two indicators (Indicators 1 and 2) not yet achieved have made good progress. Although the situation of Indicator 2 on the increase in income depends on the period required to achieve this, the effects and maintenance of the activities

by the participating farmers were confirmed. More than half of the participating farmers also recognized the effects of Indicator 5 on reducing their dependence on shifting cultivation.

1.3.3. Recommendations

Recommendations were made concerning the “institutionalization of the CSP,” “extension of the CSP at the field level,” and “improvement of land and forest management.” The institutionalization of the CSP was incorporated into the official Lao Extension Approach (LEA) by the Ministry of Agriculture and Forestry of the Lao PDR, and measures were taken including the establishment of the self-reliance and development committees to secure the budget of the provinces and districts to continue the CSP. Meanwhile, the adjustment of the CSP in light of a new extension system such as the cluster system⁵ was expected to be implemented in the subsequent project. Human resources development, the preparation of extension materials, improving the revolving system⁶ and analysis of the trends in shifting cultivation by the farmers were listed for the extension of the CSP at the field level, which was expected to be implemented in the subsequent project. The utilization plan for the land and forests, and an awareness-raising campaign among the residents and so forth were listed for the improvement of land and forest management, which was expected to be implemented in the subsequent project.

2. Outline of the Evaluation Survey

2.1. External evaluator

Hideyuki Takagi (Ernst & Young Sustainability Co., Ltd.)

2.2. Duration of the Evaluation Study

Duration of the Study: October 2011 – December 2012

Duration of the Field Study: January 8, 2012 – January 15, 2012 / March 18 – March 31, 2012

⁵ A system to enhance more effective government services by establishing a “village cluster” by bringing five to ten villages together. As a new extension system, extension staffs will be assigned to agricultural technology service center at cluster level. This is expected that extension staffs become providing careful supports for extension services by more frequent visits to the villages.

⁶ A system in which the achievements (such as the breeding of livestock) acquired through the activities by the farmers participating in the project are managed and operated by the responsible persons in the village to gradually extend them to the whole village.

3. Result of the Evaluation (Overall Rating: C⁷)

3.1. Relevance (Rating: ③⁸)

3.1.1. Relevance with the Development Plan of Lao PDR

(Relevance at the policy level)

Since the major causes of deforestation include expanding shifting cultivation due to the increase in population and poverty, the Lao government promotes poverty reduction policies, and the conversion from shifting cultivation to settled agriculture through the adoption of alternative means of livelihood (stabilization of shifting cultivation). During the project period, the national plan including the Five-year National Socio-economic Development Plan is aimed at reducing the number of poor households, reducing dependence on shifting cultivation, and improving the forest coverage.

“The Fifth Five-year National Socio-economic Development Plan” (2001 - 2005) at the start of the project is aimed at reducing the number of poor households and moving away from agriculture that is dependent on shifting cultivation. Regarding the stabilization of shifting cultivation, achieving basic stabilization by 2005, and completing stabilization by 2010 were defined as the goals. This stabilization should be carried out through conversion to alternative means of production such as settled agriculture, and development of the infrastructure required for this conversion and support including the introduction of commercial crop and new cultivation methods should be implemented. “The Sixth Five-year National Socio-economic Development Plan” (2006 - 2010) at the end of the project is also aimed to reduce the number of poor households (to less than 15% of all households) and to improve the forest coverage (to over 50%) as goals for the social environment sector. In addition, the agriculture sector development guidelines in the northern area in the regional development strategies should promote the ongoing stabilization of shifting cultivation through conversion to the cultivation of commercial crops and the rearing livestock and poultry, and so on. Another policy for poverty reduction, the “National Growth and Poverty Eradication Strategy” (2004) addresses improvement of the production methods, mainly with shifting cultivation and livelihood improvement as important issues.

(Relevance at the enforcement level)

The “Ministry of Agriculture and Forestry Five-year Development Plan” (2001 - 2005) at the start of the project aimed at the stabilization of shifting cultivation as one of the most important goals of the agriculture and forestry sector in the Lao PDR. The “Ministry of Agriculture and Forestry Five-year Development Plan” (2006 - 2010) at the end of the project also aimed at the stabilization of shifting cultivation as one of the most important

⁷ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁸ ③: High, ② Fair, ① Low

goals of the agriculture and forestry sector in the Lao PDR. The “Forest Strategy 2020” approved by the government in January 2004 also includes a plan to restore the forest cover to 70% by 2020. Both the “agriculture strategy” and the “forest strategy” are aimed at the improvement of the production methods mainly with shifting cultivation and livelihood improvements in the northern area as important policy issues.

3.1.2. Relevance with the Development Needs of Lao PDR

(Needs of the targeted areas and the target groups)

In the northern mountainous area, policies for the above-mentioned poverty reduction, the stabilization of shifting cultivation and the control of deforestation are the most important issues. In particular, seven districts out of the nine districts in the North as the project target areas are classified as the poorest districts in the “National Growth and Poverty Eradication Strategy,” and the needs of the targeted areas and the target groups of the project remain the same.

In particular, in the regions where measures to control the expansion of shifting cultivation cropland including the land and forest distribution project⁹ are promoted (such as Luang Prabang Province), a transition in the means of livelihood from a self-sufficient livelihood based on traditional shifting agriculture (dry-land rice cultivation) to the expansion of rice paddies (if there is suitable land), cultivating commercial crops and planting gum trees, and buying food with the proceeds from the sale of livestock, etc., is required. Therefore, if the measures to control the expansion of shifting cultivation are promoted without securing a means of livelihood as an alternative to dry-land rice cultivation, then the farmers who cannot adapt are unable to make a living and end up living in poverty. In a situation where shifting cultivation is restricted based on these policies, there is a high need to protect the life of poor farmers through securing an alternative means of livelihood.

(Needs of the counterparts)

The counterparts in this project are the extension officers of the Agriculture and forestry extension organizations of the national and local governments. In 2001, the National Agriculture and Forestry Extension Service (NAFES) was established, and the extension system was pursued by the extension officers of the provinces and districts led by NAFES when the organization’s activities just began, thus improvement of the capacity of the extension officers of NAFES, provinces and districts were the issues concerning the needs of the counterparts. Under the circumstances in which the government budget remained limited,

⁹ Land classification for the purpose of the promotion of agriculture and the protection of the forest. The land is classified into farmland, forest land, etc., and the forest land is subject to protection and preservation.

the need for technology transfer and support for extension activities by the project continued.

3.1.3. Relevance with Japan's ODA Policy

“JICA Country Program”

The aid priority areas in the Country Program for the Lao PDR include the agriculture and forestry sector, and the strategies for comprehensively and effectively addressing the improvement of rural development, the promotion and improvement of fishery and stockbreeding, and forest preservation are described.

Considering the above, this project has been highly relevant with the country's development plan, development needs, as well as Japan's ODA policy, therefore its relevance is high.

3.2. Effectiveness and Impact (Rating: ②)

3.2.1. Effectiveness

3.2.1.1. Relationship between the project design and the CSP extension system

As a method for extending the Community Support Program (CSP) to establish a means of livelihood without depending on shifting cultivation, this project adopted the approach of gradually extending the program to the northern mountainous areas by placing the project sites consisting of the Initial Sites (IS), Pilot Sites (PS) and Extension Spots at the center of the activities.

Although the extension of the CSP is the role of the extension officers of the local governments, farmer-to-farmer extension was also considered to be an important factor in the project in order to support the sustainable development of the project effects based on the low budget of the Lao government. Therefore, a resident-centered project was implemented, whereby the local government supported the development of action plans and implementation of the activities by the residents, and the maintenance and extension of these activities in the villages through a revolving system in order to lead to extension of the activities.

At the start of the project, technology transfer through the formulation and demonstration of the activities based on the appropriate use of land and forests mainly by the residents in IS was expected to be achieved by implementing training given by experts for the counterparts. The activities actually formulated and demonstrated in the IS are classified into the two types mentioned below. This project focused on the Type 2 activities with the aim of improving livelihoods as the focus of the activities. Therefore Type 2 activities account for a large proportion of the activities in the PDM.

(Type 1 activities)

These involve efforts by all the residents in the village to improve forest management. Activities include teak planting in the community forests and school afforestation for education (fruit gardens in the school premises).



(Mangos and bananas planted as part of the school afforestation activities)

(Type 2 activities)

These are production activities by individual households to create and improve alternative means of livelihood for shifting cultivation farmers. Suitable activities for mountainous areas such as stockbreeding, expansion of rice paddies, fruit cultivation, fish farming and weaving were implemented so that farmers could manage with affordable low-cost technologies. Gradual extension to the whole village is envisaged through a revolving system.



(Pig rearing activities are successful in many villages)



(Weaving activities also lead to valuable cash earnings)

The next step involves the activities in the PS, where it was envisaged that technology transfer would be implemented by the counterparts for the PAFO / DAFO extension officers and the key farmers¹, and that the counterparts and the PAFO / DAFO extension officers would become central to providing the resident support for the implementation of the extension of the CSP.

The final step in the CSP extension process that the project aimed at was the promotion of

¹ These are village mayors and the leaders of each activity group who are in charge of the extension of the activities in the village.

the extension of the CSP to the villages at the IS /PS and further extension to the neighboring villages (Extension Spots). The “farmer-to-farmer extension²” by the participating farmers to non-participating farmers was envisaged in the villages at the IS / PS and extension by the DAFO extension officers³ to the neighboring villages.

3.2.1.2. Project Output

In the project, after the training provided to the extension officers of the Provincial Agriculture and Forestry Office (PAFO) and District Agriculture and Forestry Office (DAFO) was first completed, activities based on the appropriate use of land and forests were formulated and demonstrated at the IS. Through these activities at the IS, practical technology transfer to the counterparts was implemented. Then, the counterparts and the DAFO extension officers became central to providing the resident support at the PS to implement the CSP. As referred to hereinafter, the activities at the IS and PS were mostly smoothly implemented by the end of the project. The activities at the PS were planned and implemented on an annual basis over four years (the 1st – 4th PS). (See the Table 1 “Number of participating farmers in major Type 2 activities” for the trends in the number of the participating farmers in each project step from the IS to the fourth PS.) Concerning the Extension Spots, on the other hand, there was no particular increase discernible in the number of participating farmers at the IS /PS and extension of the CSP to the neighboring

Table 1. Number of participating farmers in major Type 2 activities
(breakdown by project step)

	IS (Mar. 2005 –)	1 st PS (Nov. 2005 –)	2 nd PS (May 2006 –)	3 rd PS (May 2007 –)	4 th PS (Apr. 2008 –)	Total or Ratio (%)
Number of villages	4	7	7	8	8	34
Number of farmers ⁽¹⁾	516	792	701	595	651	3,255
Start of the project:						
Number of participants	218	259	259	288	243	1,267
Rate of participation	42%	33%	37%	48%	37%	39%
End of the project:						
Number of participants	301	299	256	282	238 ⁽²⁾	1,376
Rate of participation	58%	38%	37%	47%	37%	42%

Source: Created by the evaluator based on the evaluation report upon termination. ((1) is the total number of farm households at the start of the PJ, (2) is calculated using the number of participating farm households at the start since the data was not obtained for four villages in the 4th PS.)

² Extension of technologies by making use of a revolving system by the village leaders and the key farmers as the center of the activities.

³ Extension to the neighboring villages by the DAFO officers who developed the extension methods at the PS.

villages by the DAFO extension officers by the end of the project. However, in this evaluation survey, it was confirmed that the number of participating farmers had steadily increased at some project sites by the time of the post-project evaluation.

The degree of attainment of each achievement is mostly achieved as referred to hereinafter. Among the achievement indicators for which the level of attainment did not meet the target value, the “increase in the number of participating farmers” and “increase in income of the participating farmers” indicated the achievement of the effects after the project was completed in the survey at the time of the post-project evaluation. As for the efforts regarding the recommendations of Output 4, the activities for ensuring sustainability were implemented in the final stages of the project, and some parts are to be dealt with in the subsequent project of PAREDD⁴. The details of the level of attainment of each achievement are indicated below.

1) Output 1 “Activities based on appropriate land and forest use are demonstrated in the Initial Sites (IS)” had been achieved by the end of the project, which means that the activities based on the appropriate use of land and forests at the IS were displayed. In the project, the technology transfer was implemented for expanding the sustainable activities mainly by the participating farmers.

Indicator 1 “Identification of low-cost technology” has been achieved, considering that the technologies for the alternative means of livelihood (Type 2 activities) such as low-cost feeding methods for livestock (cows, pigs, goats and chickens), and production methods for lac (ingredient for varnishes and dyes) and paper mulberry (ingredient for paper) as agroforestry making use of croplands during the fallow period have been introduced at the IS. In the process of the introduction of the technologies, the experts conducted technology transfer regarding the methods for the introduction and operation of the activities in the villages for the extension officers as well as technical guidance for the means of livelihood through training and OJT at the IS. For farmers, technology transfer regarding the extension methods focusing on autonomy, capacity for analyzing and solving problems and the self-reliance and the development of the farmers from the viewpoint of ownership was conducted by the cooperation of the experts and the extension officers at the IS.

Indicator 2 “Continuance of the adopted technologies at the IS (50% or more of the introduced technologies)” has been achieved since all the participating farmers had continued 50% or more of the major introduced technologies two years after the start of the

⁴ “Participatory Land and Forest Management Project for Reducing Deforestation (PAREDD)” This is a subsequent project, which aims to establish systems to reduce deforestation mainly through participatory land and forest management.

activities according to a survey (on the number of participating farmers rearing livestock, etc., in four villages) conducted by DAFO in September 2007.

Indicator 3 “a 20% increase in income at the IS (60% or more of the participating farmers within two years)” has been achieved to a limited extent since the proportion of the participating farmers using production methods introduced by the project that led to a 20% increase in income was 2.7% one year later and 39% two years later. Regarding the activities for which the period required to create a profit is short among the Type 2 activities (pigs, goats, chicken rearing, fish farming, paper mulberry cultivation, etc.), the proportion of participating farmers gaining a 20% increase in income two year later was 56.3% on average, which was almost 60% of the target value. On the other hand, regarding the activities for which the period required to create a profit is long (expansion of rice paddies, cattle rearing and fruit cultivation), at the evaluation upon termination, it was believed to be difficult to attain the goal by the end of the project. As for expansion of rice paddies, the proportion of the participating farmers gaining a 20% increase in income two year later remains at 20.7%. As for cattle rearing and fruit cultivation, the proportion of participating farmers gaining a 20% increase in income was less than 10%, but according to the survey in the post-project evaluation, the number of cows is steadily increasing in at least 16 villages out of the 26 villages that introduced the activities of cattle rearing, and further accomplishment (income increase) is expected in the future. Meanwhile, harvesting was confirmed in at least two villages out of the seven villages that introduced the activities of fruit cultivation, but other villages have not shown significant achievements.

Indicator 4 “Increase in the number of visitors to the IS”: According to the visitor record book and interviews with the residents of the village, many farmers from the neighboring villages visited to observe the site, which indicates that the number of visitors is on the increase. In particular, Hat Houay Village had many visitors (117 visitors from July 2005 to August 2007) since it is close to Luang Prabang, a local city, and it has model farmers involved in pig rearing, fish farming, fruit plantation and weaving.

Indicator 5 “The demonstration capacities of CSP by the key farmers”: At the evaluation of the demonstration capacities, more than 90% of the village mayors and activity group leaders can explain the contents of the activities of the IS to visitors, which means this indicator has been achieved.

2) Output 2 “Extension staff gain extension skills and techniques through training.” has been achieved since the extension officers have acquired the skills for systematization of the activities among the residents and skills for Type 1 and 2 activities through the training. As a

system to maintain the extension activities, the institutionalization of the CSP, establishment of the self-reliance and development committees, etc., were achieved as referred to below.

Indicator 1 “The capacity building of extension officers with regard to extension services (60% or more of the extension officers (PAFO: 11, DAFO: 8) who went through the training obtained 4 or higher in the examination on a scale of one to five” has been achieved since 100% of the examinees got 4 or higher at the second examination conducted in June 2008. The examination consisted of the following items: (1) Agriculture and forestry extension system in Lao PDR, (2) Code of conduct, (3) FORCOM, (4) CSP, (5) Monitoring and evaluation.

Indicator 2 “The technical scope that can be extended (providing 60% or more of the standard training contents about the extension activities developed by the project to farmers)” has been achieved since the extension team of PAFO / DAFO has practiced at least 66% of the activities at the PS.

Indicator 3 “Understanding of the farmers who received the training (60% or more)” has been achieved since about 90% of the participating farmers answered, “Well understood” or “Understood” (targeted at the monitoring results of the fourth PS / stockbreeding activities).

3) Output 3 “Under the framework of Community Support Programme (CSP), activities based on appropriate land and forest use are implemented at the Pilot Sites (PS) by villagers and extension staff” has mostly been achieved for the continuation of the CSP at the PS and the improvement of the livelihoods of the participating farmers as a result of establishing the CSP mainly carried out by the residents and the extension officers. The project focused on activities to ensure that the alternative means of livelihood provided a substantial incentive for the shifting cultivation farmers (Type 2 activities), and adopted an approach to indirectly reduce their dependence on shifting cultivation by promoting the activities. In the project design, therefore, many achievement indicators regarding Type 2 activities were set.

Statistically the activities at the project sites are summarized in Table 2 and 3 below. The number of project sites where Type 1 activities aiming at the improvement of forest management were conducted is relatively small. Although there are some villages where school afforestation activities are being carried out smoothly and the students consume the fruit, the activity results are not good on the whole, with plantation trees having died and the lack of demand for the seedlings. In particular, the activities of livestock rearing among the Type 2 activities were carried out at a number of project sites, and the pig rearing activities above all were successful in many villages. On the other hand, activities in which the number

of participating farmers declined had some cases of failure, where chicken rearing experienced disease epidemics (particularly in the rainy season), and fish farming experienced flooding in the rainy season and droughts in the dry season. Lac production was stopped due to a price collapse and a transition to another activity was implemented.

Table 2. Breakdown of the major Type 1 activities

Activity	Number of project sites that introduced the activity	Proportion of all the project sites
Community forests	13	38%
School afforestation	17	50%
Water source forests / water facilities	12	35%

Source: Created by the evaluator based on the evaluation report upon termination.

Table 3. Breakdown of the major Type 2 activities and trends in the number of participating farmers

Activity	Number of project sites that introduced the activity	Proportion of all the project sites (34 villages)	Number of participating farmers (households)		
			At the start	End of PJ *	Increase (decrease)
Pig rearing	26	76%	272	374	102
Cattle rearing	26	76%	267	283	16
Goat rearing	22	65%	225	230	5
Chicken rearing	10	29%	72	65	(7)
Expansion of rice paddies	16	47%	148	150	2
Fruit cultivation	7	21%	53	53	-
Fish farming	11	32%	83	72	(11)
Lac production (Ingredient of varnishes and dyes)	7	21%	49	44	(5)
Paper mulberry cultivation (Ingredient of paper)	3	9%	33	35	2
Fabric production	7	21%	65	70	5
Total			1,267	1,376	109

Source: Created by the evaluator based on the evaluation report upon termination. (* These are calculated using the number of participating farm households at the start because the data was not obtained for four villages in the 4th PS.)

Indicator 1 “Number of CSP sites” has been achieved in the context of the target goal of “At

least four project sites in each of the targeted six districts,” since 1,404 participating households had conducted CSP activities in 34 villages in the targeted nine districts by the end of the project.

Indicator 2 “Continuance of the technologies adopted in the first PS (50% or more of the participating farmers continue using 40% or more of the introduced technologies)” has been achieved since almost all the participating farmers have continued 40% or more of the activities.

Indicator 3 “20% increase in income at the first PS”: 12.4% of the participating farmers achieved a 20% increase in income one year later, and 16.8% two years later. As for the activities that generate profits in a short period (pig rearing and weaving), 32.7% of the participating farmers achieved a 20% increase in income as the goal.

Concerning the activities for which the period required to generate profits is long, which it was believed would be difficult to achieve by the end of the project in accordance with Achievement 1-3, it was confirmed that cattle rearing in particular is steadily expanding in at least 15 villages, which is leading to an increase in income according to the survey in the post-project evaluation. Although in the expansion of rice paddies it is difficult to secure appropriate land, which resulted in only a limited rise in the number of participating farmers, it has contributed to an increase of the profits of the farmers who are continuing the activity. Since fruit cultivation takes the longest, about eight years for fruit with a long growing period, some activities have not been linked to any increase in income, and the number of participating farmers remains at the same level.

4) Output 4 “Recommendations are made on sustainable land and forest use”: Based on the recommendations, the CSP has been incorporated into the agricultural extension system in Lao PDR by integrating it with the LAO Extension Approach (LEA), and the establishment of the self-reliance and development committees has been achieved. Many efforts to ensure sustainability were made in the final stages of the project, which had a certain level of achievement in terms of the CSP adjustment in accordance with the new extension systems such as the cluster system and the Extension Technical Service Center (ETSC). In this process, it was recognized that further activity development would be desirable for extension of the CSP at the field level and the improvement of land and forest management (utilization plans for land and forests, awareness-raising campaigns among the residents, etc.) in order to achieve the overall goal, which is expected to be implemented in the subsequent project.

Indicator 1 “Response by the MAF to the recommendations in the mid-term review”: It was

decided that the level of attainment of this indicator is not applicable since there were no recommendations in the interim evaluation. The preparatory committee, which was established in the related organization of the Lao PDR to respond to the interim review, made recommendations including the institutionalization of the CSP, which were deliberated on with regard to the establishment of the mechanisms and through discussions by a working group.

Indicator 2 “Response by the MAF to the recommendations in the terminal evaluation”: The recommendations and the efforts made in response were as mentioned below.

1. Institutionalization of the CSP

Recommendation ①: Support for the internalization of the CSP as part of the Lao Extension Approach (LEA) through a coordination group committee.

Efforts under the project: With the letter by the National Agriculture and Forestry Extension Service of Ministry of Agriculture and Forestry on the “Internalization of the CSP”⁵, the CSP was certified as a Community Support Program Tool (CSPT) as an effective tool for village development intended for poor districts in the northern mountainous areas in Lao PDR. As a result, it was integrated into the LEA that was being promoted by other donors, which resulted in the internalization of the agricultural extension system within the Lao PDR.

Recommendation ②: Securing the budget for continuing the CSP in the provinces and districts, and the implementation of extension of the CSP through the self-reliance and development committees.

Efforts under the project: At a seminar on the final achievements in January 2009, the self-reliance and development committees of the targeted six provinces reported on their action plans for extending the CSP. Five provinces secured the budget for monitoring, but have not secured the budget for extending activities to other villages.

In this project, an average of about 700,000 yen per village (about 18,000 yen per participating farmer) was provided from the project budget as an activity fund for the project sites (see Table 4 “Amount of project activity funds”). In addition to this, the extension activity budget of DAFO (such as gasoline costs) is also needed, but securing such a budget for extension services is difficult, which has become a major factor adversely affecting the sustainability of the project effects.

⁵ Letter No. 3588 / NAFES 08, 29 November 2008

Table 4. Amount of the project activity funds (breakdown by project step)

(Unit: million Kip)

	IS	1 st PS	2 nd PS	3 rd PS	4 th PS	Total or Average
Activity fund per village	215	226	157	135	121	164
Ratio borne by the village	57%	60%	62%	57%	58%	59%
Ratio borne by the PJ	43%	40%	38%	43%	42%	41%

Source: Created by the evaluator based on the evaluation report upon termination

(Exchange rate at the post-project evaluation: 8,000 Kip \doteq US\$1)

Recommendation ③: CSP adjustment in accordance with the new extension systems such as the cluster system and the Extension Technical Service Center (hereinafter called ETSC).

Efforts under the project: Since the efforts for the establishment of the ETSC and in relation to staff extension officers through the village cluster system are being made as a form of support by FORCOM led by the Lao government, a recommendation was made that NAFES should adjust the CSP in accordance with such new extension systems jointly with FORCOM, for which a lot of effort was made in the last stages of the project. As a result, CSP adjustment in accordance with the new extension systems such as the cluster system and the Extension Technical Service Center (ETSC) has resulted in certain achievements, which are also to be dealt with in the subsequent project “PAREDD.”

2. Extension of the CSP at the field level

Recommendation: Human resources development, creating extension materials, improving the revolving system and analysis of trends in shifting cultivation among farmers.

Efforts under the project: As stated previously in the “Outputs,” the technology transfer for the extension of the CSP at the field level was implemented as planned in the project. Considering that the further development of such activities is desirable to attain the overall goal, continual activities are expected to be conducted in the subsequent project of PAREDD.

3. Improvement of land and forest management

Recommendation: Utilization plans for land and forests, awareness-raising campaigns for the residents, etc.

Efforts under the project: Considering that the further development of such activities is desirable to attain the overall goal, continual activities are expected to be conducted in the subsequent project of PAREDD.

3.2.1.2. Achievement of Project Objectives

The project objective is “The activities leading to the sustainable land and forest use begin to expand in the project site and its surrounding areas, initiated by villagers” and the level of attainment is mostly achieved as mentioned below according to each of the indicators. Indicator 1 “Number of participating farmers” and Indicator 2 “Increase in income of the participating farmers” were not achieved, which was mainly due to the fact that the timing of the effects varies since the activity cycle of the CSP, which consists of a period during which the fund revolves and profits are created, depends on the type of activity. As previously stated in Indicator 3 of Output 1, pig rearing and weaving in which the activity cycle is short had an effect during the project period and created an increase in profits, which led to an increase in the number of participating farmers under a revolving activities. On the other hand, cattle rearing and fruit cultivation in which the activity cycle is long did not produce sufficient effects by the end of the project, which did not lead to revolving activities and the number of participating farmers did not increase. However, the interview survey in the post-project evaluation indicated that there are a number of successful cases not only in pig rearing, but also in activities requiring a long period, which enabled to understand the situation where the residents share and transfer know-how for success to extend activities in the village. For this reason, at the sites where the project was involved (project sites), the number of participating farmers has steadily increased and the livelihoods have been improved, which is evaluated as a certain level of achievement. The level of attainment of the project objective can be evaluated not only by the indicators, but also by considering such points. Indicator 5 of the project objective “Reduction of shifting cultivation” has a basis in common with Indicator 2 for the overall goal, and both of them have been achieved.

Indicator 1 “Number of the participating farmers (The number of the first participating farmers who started production before April 2007 at the IS, the first PS and the second PS increased by 50% and more)”: In general, the activities with a short activity cycle have a relatively good level of achievement of the target, and the activities requiring a long period had a low level of attainment during the project period. The increase in the proportion of farmers participating in all the activities was 37.6 % for the IS, 15.7 % for the first PS and -1.2 % for the second PS as of October 2008. Although this indicator was not achieved by the end of the project, pig rearing with a short-term activity cycle, which was intensively introduced in this project, increased the number of participating farmers greatly in a number of villages by the end of the project as shown in Table 5 (in the order in which the activity started, four villages out of seven villages in all the IS and the first PS, and one village out of seven villages in the second PS achieved a rate of increase of more than 50%). According to the interview survey in the post-project evaluation, it is understood that the residents have

shared and transferred know-how for success at the project site to gradually extend them since the implementation of the project not only in pig rearing as described above, but also in activities requiring a long period such as cattle rearing and fruit cultivation.

Table 5. Villages where the number of farmers involved in pig rearing activity greatly increased

Project site	Village	Number of the first participating farmers	Number of the participating farmers as of October 2008	Rate of increase in the number of the participating farmers (%)
IS	Samton	8	24	200
IS	Pongdon	10	28	180
IS	Namon	11	28	155
IS	Hat Houay	10	20	100
1 st PS	Natak	11	22	100
1 st PS	Phakha	4	8	100
1 st PS	Pangthong	8	15	88
1 st PS	Vangheung	10	16	60
2 nd PS	Silimoon	6	16	167

Source: Project-related data

Indicator 2 “An increase in income at the IS and the first PS (At the end of the project, 50% or more of the participating farmers at the IS and the first PS increased their income through the production activities under the project by 30% or more compared to before the start of the project)”: Although 12% of the sampled farmers covering all the activities increased their income by 30% or more in 2006, 17% of them in 2007 and 15.8% of them as of October 2008, that indicator, for which the target was set at 50% or more of the participating farmers has not been achieved. However, along with Indicator 1, the degree of attainment depends on whether the period of the activity cycle is short or long, and the short-term activities including pig rearing have a relatively good level of attainment, for which 22% of the sampled farmers increased their income by 30% or more in 2006, 29% of them in 2007 and 27% of them as of October 2008. On the other hand, the long-term activities including cattle rearing had a low degree of attainment by the end of the project, for which 1% of the sampled farmers increased their income by 30% or more in 2006, 3% of them in 2007 and 3% of them as of October 2008.

Along with Indicator 1, according to the interview survey in the post-project evaluation, it is

understood that the activities requiring a long period have been also extended gradually at the project sites since the implementation of the project and led to an increase in income.

Indicator 3 “Adoption of the introduced technologies by non-participating farmers (Non-participating farmers around the IS, the first PS and the second PS areas introduce the technologies for the sustainable use of land and forests by the end of the project)”: There are some cases in which non-participating farmers adopted alternative means of livelihood based on the CSP activities. The survey conducted during the evaluation upon termination revealed that pig rearing, vaccination of livestock, fish farming, lac production and so forth were introduced in more than one village around the project sites. However, these are considered to be at a level where only an indirect effect can be expected in terms of a reduction in shifting cultivation and preservation of the forest. Regarding the extension of the CSP activities to the neighboring areas after the project was completed, although there are not so many cases, project site tours for neighboring villagers given by the DAFO officers (Houyla Village in Nan District in 2010, etc.) and voluntary visits from neighboring villages were conducted.

Indicator 4 “Evaluation of the extension officers by the participating farmers (At least 50% of the participating farmers in at least 60% of the villages in which PS are located give an evaluation by the end of the project that the performance of the extension officers has progressed)” was achieved since 80% of the farmers where the survey was conducted answered that the performance of the extension officers has progressed.

Indicator 5 “Reduction in shifting cultivation by the participating farmers (30% or more of the participating farmers reduced the area of shifting cultivation in all the project sites by the end of the project)” has been achieved since 54.5% of the participating farmers managed to reduce shifting cultivation compared to the time at the start of the project (see Indicator 2 of the overall goal).

On the occasion of the evaluation, the project design was also reviewed. This project aims to expand the formulation and extension of the activities at the project sites to the neighboring villages, which is set as the project objective. It seems, however, the activities and outputs of the project set out in the Project Design Matrix (PDM) remain those leading to the formulation and extension of the CSP at the project sites. The setting of the indicators for the project objective does not focus on expanding activities to the neighboring villages. For this reason, as a result of implementing the project pursuant to the activity and output indicators in the PDM, although “Extension of the CSP at the project sites” had a certain level of attainment by the end of the project, extension to the neighboring areas appears to have a low

degree of attainment, in which validation of the relationship between the activities and expected outputs was insufficient. In addition, in the setting of the indicators, the timing of the onset of the effects varies depending on the activity under this project (pig rearing as a short-term activity and cattle rearing as a long-term activity), but these were not differentiated. This point is also regarded as a defect in the project design.



(A door plate indicating a participating farmer)



(A new participating farmer using the revolving fund is distinguished by the color of the door plate)

3.2.2. Impact

3.2.2.1. Degree of attainment of the overall goal

“The rate of deforestation (by shifting cultivation) is reduced in the districts where the project sites are located”: It appears that this initial overall goal has not been achieved as mentioned below. It is also unlikely to be achieved in the future since the CSP has not been expanded beyond the project sites.

Indicator 1 “Reduction in the area of forest degradation (The annual area of forest degradation decreases to the level of from 1992 to 2002 in the districts in which the project sites are located)”: Sufficient information was not provided since a survey was not conducted to measure this effect of the project. However, as stated above, considering the situation in which the CSP activities have not expanded to the neighboring areas of the project sites yet, it is considered that the effects of the project on the reduction in the area of forest degradation are not very substantial.

For reference, the trends in the forest coverage were reviewed based on the data from the survey on land coverage trends in Luang Prabang Province conducted for the subsequent project of PAREDD. As a result, as shown in Table 6 “Trends in the forest coverage in Luang Prabang Province,” although the decrease in forest coverage is slowing down for the whole province, it is believed that there is no identifiable improvement in the reduction in forest coverage in the districts targeted by the project compared to the districts not targeted by the project.

Table 6. Trends in the forest coverage in Luang Prabang Province

District	Forest coverage (%)				
	Around 1990	Increase/decrease	Around 2000	Increase/decrease	Around 2010
Districts targeted by the project in Luang Prabang Province:					
Viengkham District	68.2	-9.7	58.5	-4.6	53.9
Nan District	62.1	-9.1	53	-3.0	50
Pakseng District	61.3	-10.4	50.9	-9.1	41.8
Average for the districts not targeted by the project	62.4	-8.7	53.7	-5.9	47.8

Source: Created by the evaluator based on the PAREDD-related material (Assessment of the land coverage trends based on the analysis of satellite images)

Indicator 2 “Reduction in shifting cultivation (50% or more of the first participating farmers reduce shifting cultivation at all the project sites)” has been achieved since 54.5% of the participating farmers managed to reduce shifting cultivation from the time of the start of the project. In particular, at the first PS, 70% or more of the participating farmers managed to reduce shifting cultivation. As a specific example to show the scale of reduction in the area of shifting cultivation fields, the field survey and interviews in the beneficiary survey⁶ show that Pondong Village in Nan District (IS) reduced the area of shifting cultivation fields from 103 ha to 75 ha, Hat Houay Village in Pakseng District (IS) from 100 ha to 36 ha, Natak Village in Sayaboury District (1st PS) from 78 ha to 36 ha, Tha Village in Sayaboury District (2nd PS) from 280 ha to 180 ha, and Houasaking Village in Pakseng District (3rd PS) from 70 ha to 13 ha (There are various reasons given for the reduction in the area of shifting cultivation: the fact that the policy bans shifting cultivation in some regions, the transition to alternative means of livelihood is proceeding due to the large amount of labor required for shifting cultivation in general, and the Lao Policy Bank and Lao Agriculture Promotion Bank that provide funds for the expansion of rice paddies for promotion have all had an influence in addition to the effects of this project).

While Indicator 2 is considered to have been achieved, for the evaluation, it is necessary to pay attention to the fact that the scope targeted by the overall goal is the whole district that the project sites are located in. Therefore, it is impossible to evaluate the likelihood of the attainment of the overall goal using the attainment of Indicator 2, which is aimed at the effects only at the project sites. On this point, Table 7 “Trends in the proportion of shifting

⁶ Interviews were conducted with the village mayors and activity group leaders on the situation of continuation of the activities and the situation of the onset of the effects.

cultivation fields in Luang Prabang Province” shows that there is no identifiable reduction in the proportion of shifting cultivation fields in the districts targeted by the project compared to the districts not targeted by the project.

Table 7. Trends in the proportion of shifting cultivation fields in Luang Prabang Province

District	Proportion of shifting cultivation fields (%)				
	Around 1990	Increase/decrease	Around 2000	Increase/decrease	Around 2010
Districts targeted by the project in Luang Prabang Province:					
Viengkham	3.0	-0.1	2.9	-0.1	2.8
Nan	4.4	-0.9	3.5	1.1	4.6
Pakseng	4.1	-1.6	2.5	1.1	3.6
Average for the districts not targeted by the project	3.9	-0.4	3.5	0.6	4.1

Source: Created by the evaluator based on PAREDD-related material (Assessment of the land coverage trends based on the analysis of satellite images)

Regarding the reduction in deforestation as the overall goal, although it is expected that the effects of reducing shifting cultivation may be seen at some level due to the project activities and the achievement of the project objective, the achievement is to be difficult under current project framework and requires further activities and time to expand the effects to lowering the deforestation rate at district level within the project site. On this point, in this project, more direct activities for the “control of deforestation by shifting cultivation” such as developing a utilization plan for land and forests and awareness-raising campaigns among the residents regarding forest preservation have not been fully implemented, and JICA reaffirms that such projects for the purpose of more direct activities should be implemented in an integrated manner to reduce the deforestation rate. As a result, these activities have been taken over by and implemented in PAREDD, the second phase of this project. Considering these points, it is considered that the overall goal and indicators that logically accord with the project objective should have been set in the design of the PDM.

3.2.2.2. Activities by the counterparts

Specific examples in which the local government has implemented extension technologies after the project was completed include Houysao Village in Sayaboury District. In the village, the CSP was newly introduced in the local government budget, which can be said to be a successful case of an Extension Spot. As a result of the provincial assembly appreciating the effects of the project and after getting good results in the approaches taken by the counterpart

Table 8. Successful case of an Extension Spot (Houysao Village in Sayaboury District)

Background and policy	<ul style="list-style-type: none"> • The budget was requested to the provincial assembly as an idea of the counterparts after the project was completed. As a result, the CSP activity costs were secured as part of the PAFO budget to implement the activities in a village (Houysao Village). • As a future policy, the extension should be expanded by recovering the funds from Houysao Village to utilize in other villages. In the pre-arrangement with the village introducing the activities, an agreement that the funds should be recovered and transferred to other villages in the future is supposed to be implemented. • When introducing the activities in the village, support including technical guidance should be provided mainly for the counterparts.
Budget allocation	<ul style="list-style-type: none"> • 50 million Kip (about 6,300 U.S. \$) was approved in total as the PAFO budget. The amount actually used was less than this. • A million Kip/HH was allocated in the village. The interest payback is 33,000 Kip/year (3%). In future, however, it is expected that the interest at an annual rate of 8% should be paid to PAFO (to enable the extension funds to be utilized for other villages).
Activity contents	<p><Type 1 activities></p> <ul style="list-style-type: none"> • Community forest • Water supply facility (installing a tank to supply water for the villagers) <hr/> <p><Type 2 activities></p> <p>Among all the 82 HH of the farmers</p> <ul style="list-style-type: none"> • Fish farming: 11 HH at the start → 12 HH at present • Expansion of rice paddies: 6 HH at the start → 8 HH at present <p>Examples of livelihood improvement</p> <ul style="list-style-type: none"> • Fish farming: 1.8 million or more Kip (about 225 or more U.S.\$) annually /HH • Expansion of rice paddies: 3 tons of yield annually <p>Others</p> <ul style="list-style-type: none"> • Knowledge and know-how are shared at meetings in the village before the agricultural season.

Source: Interviews with the counterparts and a door-to-door survey in Houysao Village

staff and the efforts to continue the activities, the budget was secured (see Table 8 “Successful case of an Extension Spot”). Other than this, the extension technologies are also applied by the counterpart staff in projects using funds from other donors. As a specific example, Agrisat of France have implemented activities near a project site in Samton Village

in Viengkham District where the CSPT is applied and it was found that the counterparts actively make use of the technologies transferred in this project if the opportunity arises.

As described above, the activities for the control of deforestation have been taken over by the subsequent project called PAREDD in order to make efforts in a form that responds to the changes in the social environment where the change in land use from dry-land rice cultivation by shifting cultivation to commercial crop cultivation is noticeable in the targeted area. In PAREDD, more direct activities and land utilization plans to control deforestation are being implemented as well as activities focusing on livelihood improvements for farmers since they are necessary to preserve the forests. In these activities, efforts to develop a system to reduce deforestation are being made, for example, the REDD (Reducing Emissions From Deforestation and Forest Degradation)⁷ policy has been adopted and methods of making use of the funds from emissions trading for the CSP are being studied.

3.2.2.3. Other impacts

None

Considering the above, the effectiveness and the impact are medium, where certain effects have been found due to the implementation of this project. At the project sites, the number of participating farmers has gradually increased and livelihoods have been improved, and the project has contributed to improvement of the domestic system, which means that there has been a certain level achievement. As for the project objective, while the indicators where the effects that can be shown in the short term have mostly been achieved, some efforts have also been confirmed for those activities that require some time to achieve, where the CSP has been expanded within the project site and where the effect has been found in a reduction of shifting cultivation. However, as for the overall goal, the CSP has not been expanded beyond the project sites and thus, it is unlikely to be achieved the overall goal.

⁷ Efforts to reduce the emissions of greenhouse gases by avoiding deforestation and forest degradation in developing countries or projects to achieve this.

3.3. Efficiency (Rating:③)

3.3.1. Inputs

Table 9. Comparison of the plan and the results of the inputs

Input factor	Plan	Results (upon termination)
(1) Dispatch of experts	<ul style="list-style-type: none"> • Long-term experts: 6 • Short-term experts: dispatch as needed 	<ul style="list-style-type: none"> • Long-term experts: 11 in total • Short-term experts: 9 in total
(2) Acceptance of trainees	Village development, forest management etc.: 2 to 3/year	Participatory resources management, extension methods, etc.: 25 in total
(3) Training in third countries	None	—
(4) Provision of equipment	Major equipment provided: materials, vehicles, office equipment	Major equipment provided: 29 motorcycles, 3 vehicles, office supplies
Total cooperation amount	686 million yen in total	688 million yen in total
Input amount by the Lao government	—	46,000 US dollars in total

Source: Evaluation report upon termination

3.3.1.1. Input factors

Japan side

(1) Dispatch of experts

Long-term experts: chief advisor, operation coordination / extension promotion, regional development, training / extension, participatory resources management and village program coordination

Short-term experts: stockbreeding development, agroforestry, agriculture and forestry technology, farming system development, preparation of guidelines on sustainable use of land and forests, village development funds, analysis of PCM / organization and development of extension materials

(2) Acceptance of trainees

A total of 25 counterparts (6 from NAFES, 11 from PAFO, and 8 from DAFO) took part in the courses below during training in Japan.

Table 10. Contents and participants of the training courses in Japan

Training courses	Participants
Participatory resources management / training and extension / regional development	PAFO: 5, DAFO: 2
Formulating projects for regional development focusing on human security	NAFES: 2
Participatory development / extension methods / local development	NAFES: 1, PAFO: 4, DAFO: 6
Joint training course for forest guardians	NAFES: 1
International cooperation seminar: operation of a natural environment conservation project including livelihood improvements through resident participation	NAFES: 1, PAFO: 1
Third country training program for participatory approaches in the management of the extension implementation system	NAFES: 1
Group training for forest restoration	NAFES: 1
Regional training for formulating a project for regional development focusing on human security	PAFO: 1

Source: Evaluation report upon termination

(3) Other factors

A baseline survey of the project sites, annual household budget monitoring during the project period and the analysis of satellite images in the targeted areas were conducted.

Lao PDR side

(1) Assignment of the counterparts

From NAFES, PAFO, DAFO, a total of 43 officers took part in the project activities. Among these, 11 officers (2 from NAFES and 9 from PAFO in Luang Prabang Province) were assigned to the project office in Luang Prabang City, the center of the activities, and they were engaged full-time in the project activities.

Table 11. Details of the assignment of the counterparts

Organization	Number	Work contents / assignment of teams
NAFES	6	Managing the project as Project Director, Project Manager and Project Coordinator.
PAFO	13	Belonging to 4 teams ((1) Project/management team, (2) Community development team, (3) Training / extension team, (4) Participatory resources management team) established in the project office and the project team in each targeted province.
DAFO	24	Belonging to the project team in each targeted province.

Source: Evaluation report upon termination

(2) Provision of land and facilities

A project office in Luang Prabang City was provided as the base for the project activities, and a project office in Vientiane City was provided for operation coordination with NAFES, etc.

3.3.1.2. Cooperation amount

The cooperation amount was planned to be 686,360,000 yen and resulted in 688,600,000 yen (100% of the plan) in expenditures, which was as planned.

3.3.1.3. Cooperation period

The cooperation period was planned to be 60 months and was completed in this time, which was as planned.

Considering the above, in this project, the input factors were appropriate for the output of the achievements. As a result, activities leading to the sustainable use of land and forests through livelihood improvements for farmers have been developed at the project sites, and the counterparts have acquired the technologies to extend the CSP to the neighboring areas. The cooperation amount and period turned out almost as planned, which means the efficiency is high.

3.4. Sustainability (Rating:①)

3.4.1. Policy and system aspects

The sustainability of the policy and system aspects of this project has been maintained at the time of the post-project evaluation, as mentioned below. Regarding the sustainability of the policy aspect, a reduction in the number of poor households (to less than 11% of all households) and improvement of the forest coverage (to over 65%) have been continuously

set as a goal of the social environment sector in “The Seventh Five-year National Socio-economic Development Plan” (2011 - 2015). The policy for the development of the agriculture and forestry sector has been set as the improvement of agricultural production through the promotion of science and technology, an increase in the number of model farmers, a complete halt to shifting cultivation, the strengthening of forest management and

Table 12. Trends in dry-land rice cultivation⁸
in each province targeted by the project

	2005	2006	2007	2008	2009	2010
Luang Prabang Province						
Growing area of dry-land rice (Unit: 1,000 ha)	20.6	20.0	16.6	15.8	19.0	16.8
Yield of dry-land rice (Unit: 1,000 tons)	39.6	32.1	24.1	21.8	27.6	32.4
Sayaboury Province						
Growing area of dry-land rice (Unit: 1,000 ha)	15.0	14.7	15.7	13.5	14.4	14.3
Yield of dry-land rice (Unit: 1,000 tons)	31.4	28.7	23.1	24.9	27.6	29.5
Bokeo Province						
Growing area of dry-land rice (Unit: 1,000 ha)	3.9	7.8	9.3	8.7	7.0	10.1
Yield of dry-land rice (Unit: 1,000 tons)	8.6	13.9	18.4	20.4	19.2	20.7
Luang Namtha Province						
Growing area of dry-land rice (Unit: 1,000 ha)	6.7	6.7	6.0	5.1	6.2	4.9
Yield of dry-land rice (Unit: 1,000 tons)	12.9	11.5	10.7	9.5	11.0	8.5
Houaphan Province						
Growing area of dry-land rice (Unit: 1,000 ha)	13.6	12.0	12.1	12.0	14.0	15.8
Yield of dry-land rice (Unit: 1,000 tons)	25.2	22.7	26.0	27.0	32.0	35.0
Vientiane Province						
Growing area of dry-land rice (Unit: 1,000 ha)	1.3	1.7	1.2	12.0	9.5	8.6
Yield of dry-land rice (Unit: 1,000 tons)	2.8	3.3	1.5	19.7	15.5	15.2

Source: Statistics of the Food and Agriculture Organization (FAO)

⁸ Since the targeted areas traditionally pursue a self-sufficient life through dry-land rice cultivation in shifting cultivation system, dry-land rice cultivation and shifting cultivation are taken as being synonymous here. Currently, however, other crops (including adlay) are being cultivated in the shifting cultivation system.

so forth. The policy for the development of the agricultural and forestry sector in the northern area includes promotion of the modernization of agriculture and forestry, the cultivation of commercial crops and so forth. In the “Ministry of Agriculture and Forestry Five-year Development Plan” (2011 - 2015), (1) food security, (2) the expansion and modernization of agricultural production, (3) the introduction of sustainable production modes and (4) sustainable forest management are also listed as goals to reach by 2015. As issues to be tackled regarding the “introduction of sustainable production modes” and “sustainable forest management,” the stabilization of shifting cultivation, poverty reduction, preservation of the forest environment, etc., are listed.

The trends in dry-land rice cultivation in each province targeted by the project for the last five years are shown in Table 12 below. This shows that many provinces appear to still practice shifting cultivation, which is an issue requiring continuous efforts.

3.4.2. System of the counterparts

Although the outputs of this project were incorporated into the Lao Extension Approach (LEA) in the form of the CSPT, it is a fact that utilization of the CSPT is not being promoted. This is not a problem only with regard to the CSPT, but it stems from the fact that the entire agricultural extension service requires further improvement of its system and financing as described below. It is believed that the implementation system of the local governments (PAFO and DAFO) is not being maintained as the counterparts have not continued the activities conducted in the project for various reasons such as the transfer of personnel to another project or another department, while the restructuring of the extension system based on the cluster system has not progressed as planned. Table 13 “Extension system of the local government in the targeted areas” shows the system of PAFO and DAFO, where most of the counterparts in PAFO and DAFO who were questioned answered that the number of officers was insufficient compared to the number of targeted villages for the continuation of the project activities, which means that the extension system of the local governments requires further improvement. It is considered that contract workers in particular, who account for a substantial proportion of the personnel, are inexperienced young people at an insufficient technical level and their capacity needs to be improved. Although the self-reliance and development committees in regard to the sustainability of financing were also established in the provinces targeted by the project, the results have not been sufficient to secure the budget for extending the CSP as the major purpose.

Table 13. Extension system of the local governments in the targeted areas (1)

Province/ district	PAFO/ DAFO	Situation of the officers (at the post-project evaluation)		
		Sufficient/ insufficient	Number of officers *	Description
Luang Prabang Province	PAFO	Insufficient	A hundred and several tens	The number of all officers. There are quite a lot of extension officers, but the counterparts are currently engaged in other projects. Most of them are young office workers with a low extension technical level.
Nan District	DAFO	Insufficient	34	The number of the extension officers includes 21 regular workers and 13 contract workers. The extension service needs a few more officers. Currently most extension officers are stationed in the village cluster (the same applies to the following).
Pakseng District	DAFO	Insufficient	37	The number of the extension officers includes 20 regular workers and 17 contract workers.
Viengkham District	DAFO	Insufficient	36	The number of the extension officers includes 15 regular workers and 21 contract workers.
Sayaboury Province	PAFO	Insufficient	15	The number of the extension officers.
Sayaboury District	DAFO	Unknown	72	The number of the extension officers,
Bokeo Province	PAFO	Insufficient	129	The number of all officers, which includes 99 regular workers and 30 contract workers. There are 7 extension related departments, where there is a shortage of officers for the amount of work.
Pha Oudom District	DAFO	Insufficient	50	The number of all officers includes 38 regular workers and 12 contract workers. Of the total, 42 extension officers are stationed in the village clusters.

Source: Questionnaire surveys and interviews with the counterparts (* All the extension officers were surveyed, but since some of them have contract workers as well, the total number of officers is indicated where there is no accurate figure).

Table 13. Extension system of the local governments in the targeted areas (2)

Province/ district	PAFO/ DAFO	Situation of the officers (at the post-project evaluation)		
		Sufficient/ insufficient	Number of officers *	Description
Long District	DAFO	Sufficient	40	The number of all officers, which includes 34 regular workers and 6 contract workers. There are enough officers for the amount of work.
Houaphanh Province	PAFO	Insufficient	157	The number of all officers, which includes 92 regular workers and 65 contract workers.
Viengthong District	DAFO	Sufficient	30	The number of all officers, which includes 17 regular workers and 13 contract workers. Although a recent increase in the number of contract workers secured the required number of officers, the budget for the activities is insufficient.
Houamuang District	DAFO	Insufficient	23	The number of all officers, which includes 18 regular workers and 5 contract workers. Due to the budget deficit, contract workers were employed, but they have limited capacity. The number of officers is still insufficient.
Vientiane Province	PAFO	Sufficient	18	The number of the extension officers, who are all regular workers. Three or four of them are dispatched to each district.
Feuang District	DAFO	Insufficient	7	The number of extension officers. The total of 6 village clusters in the district requires about 12 extension officers.

Source: Questionnaire surveys and interviews with the counterparts (* All the extension officers were surveyed, but since some of them have contract workers as well, the total number of officers is indicated where there is no accurate figure).

On the other hand, an external factor influencing sustainability at the project sites is the rapid expansion of commercial crop cultivation, gum plantations, etc., using foreign capital in recent years. In particular, in the regions near the border or where the transportation

infrastructure has been developed, there are some cases where the CSP activities have stopped in the villages where the project was introduced and completed. One third of all the project sites have not maintained the implementation system involving the residents mainly due to such external factors. However, in the rest of the project sites that have not been influenced by external factors, more than half of the project sites have maintained the implementation system, although this varies according to the village (See Table 14 “Current situation of implementation and the extension system at the project sites”).



(Encouragement of commercial crop cultivation using foreign capital is rapidly expanding to villages in the targeted areas.)

Table 14. Current situation of implementation and the extension system at the project sites

	IS	1 st PS	2 nd PS	3 rd PS *	4 th PS *	Total
	4 villages	7 villages	7 villages	8 villages	8 villages	34 villages
Implementation and extension system in the village:						
Very good	2	1	3	1	1	8
Good	2	2	3	2	2	11
Having issues	-	4	1	1	1	7
Poor	-	-	-	2	-	2
Not surveyed	-	-	-	2	4	6

Source: Results of the beneficiary survey (* 2 villages in the 3rd PS and 4 in the 4th PS were not surveyed).

3.4.3. Technological practice of the counterparts

In the local governments, as stated above in the “overall goal,” there are some cases in which the utilization of the CSP was implemented mainly by the counterparts after the project was completed and where it is believed that some of the technologies transferred in the project have been maintained. The interviews with the counterparts also revealed that they have maintained the transferred technologies and actively make use of them. After the project was completed, however, due to the problems with the system and financing, monitoring of the villages that had already introduced the activities and their extension to new areas have not

fully implemented by the extension officers, which requires improvement to maintain them as practical technologies in the future.

Meanwhile, regarding the residents of the project sites, although there are some villages that have been greatly influenced by commercial crop cultivation, gum plantations, etc., using foreign capital, as mentioned above, more than half of the project sites have maintained the implementation system. The reason given as to why the implementation system has been maintained in these villages given in interviews conducted in the survey revealed that this is greatly dependent on the quality of the efforts of the activity group leader. It is believed that the proportion of villages where the transferred technologies are maintained at a high level and are mostly still used is consistent with the proportion of villages where the implementation system is also being maintained.

The issues to be resolved when continuing Type 2 activities at the project sites include coping with diseases in stockbreeding in which the number of participating farmers is high, and coping with drought in the dry season and floods in the rainy season in the fishponds in which the number of participating farmers is not high but where the impact is considerable. The surveys conducted at the project sites show that certain stockbreeding activities where a disease broke out were stopped in the village when the livestock died due to the disease, which only left them with a debt to the revolving fund. It is assumed from the interviews with farmers that there is room to improve both the capacity and the number of veterinarians. The current support from the local government involves setting a day for the vaccination of livestock annually, which started three or four years ago.

3.4.4. Financing of the counterparts

The finances of the local governments are a major factor limiting the sustainability, since the budget for the monitoring and extension of the CSP activities has not been sufficiently secured in PAFO and DAFO. The questionnaire surveys of and interviews with the counterparts revealed that the amount of the budget of a province for the extension activities was about several tens of millions of Kip (about several hundreds of thousands of yen) and there was hardly any allocation of the budget in the districts which resulted in a shortage of revolving fund's resource necessary for the activities as well as all the costs, such as gas, to support traveling villages. Thus, all the PAFO and DAFO counterparts answered that it was insufficient.

As for the residents at the project sites, except for cases where the area is greatly influenced by commercial crop cultivation, gum plantations, etc., using foreign capital, many villages make use of the revolving fund to maintain their activities without the additional injection of funds from outside and the number of participating farmers is increasing. Among the 34 villages at the project sites, the operational situation of the revolving fund is “very good” or “good” in 21 villages (excluding six villages that were not surveyed) (See Table 15 “Operation of the revolving fund at the project sites).



(At the project sites where continuation of the activities is good, books for each activity are prepared to manage the increase or decrease in livestock, etc.)

Table 15. Operation of the revolving fund at the project sites

	IS	1 st PS	2 nd PS	3 rd PS *	4 th PS *	Total
	4 villages	7 villages	7 villages	8 villages	8 villages	34 villages
Operational situation of the revolving fund:						
Very good	1	1	4	2	2	10
Good	3	3	2	2	1	11
Having issues	-	1	1	-	-	2
Poor	-	2	-	2	1	5
Not surveyed	-	-	-	2	4	6

Source: Results of the beneficiary survey (* 2 villages in the 3rd PS and 4 in the 4th PS were not surveyed).

3.4.5. Continuation of the effects

Although the continuation of the extension of the CSP activities by the local governments is an essential element in achieving the goals of the project, it has not been fully continued for the reasons as mentioned above, and it is not likely that the effects will be sustained.

Regarding the residents of the project sites, except for cases where the situation is greatly influenced by commercial crop cultivation, gum plantations, etc., using foreign capital, the number of villages where the Type 2 activities have been very well maintained has declined to 19 villages (excluding the six villages that were not surveyed, this is the sum of the “very good” and “good”), which is a little over half of the total of 34 villages (See Table 16. “Continuation of the CSP at the project sites). The proportion of villages where Type 1

activities have been maintained has declined slightly to about 40% (excluding the seven villages with no activity results). At the project sites with a good level of continuation, the interview surveys show that it is likely that the activities will be continued in the future in a form tailored to the situation in each village (focusing on pig rearing, expansion of rice paddies, etc.), while the response to diseases of livestock where the residents need support has not been accomplished and this remains a concern.

Table 16. Continuation of the CSP at the project sites

	IS	1 st PS	2 nd PS	3 rd PS *	4 th PS *	Total
	4 villages	7 villages	7 villages	8 villages	8 villages	34 villages
Continuation of Type 1 activities:						
Very good	1	-	1	-	-	2
Good	2	3	2	1	1	9
Having issues	-	2	1	-	-	3
Poor	1	2	1	3	-	7
No activity results	-	-	2	2	3	7
Not surveyed	-	-	-	2	4	6
Continuation of Type 2 activities:						
Very good	1	2	3	1	2	9
Good	3	-	4	2	1	10
Having issues	-	3	-	1	1	5
Poor	-	2	-	2	-	4
Not surveyed	-	-	-	2	4	6

Source: Results of the beneficiary survey (* 2 villages in the 3rd PS and 4 in the 4th PS were not surveyed).

Considering the above, this project has some issues although continuation of the activities in the villages at the project sites has been relatively effective and there are some critical problems with regard to the system of the counterparts and the financial conditions for extending the effects of the project to neighboring areas. As a result of comprehensive consideration of these in the context of the goals of the project, it is determined that the sustainability of this project is low.

4. Conclusions, Lessons Learned and Recommendations

4.1. Conclusions

This project was implemented for the purpose of the creation and improvement of alternative means of livelihood for shifting cultivation farmers in the poorest districts in the Lao PDR, and the control of deforestation by reducing the dependence on shifting cultivation. Its relevance is high since it is consistent with the development policies and development needs of the Lao PDR and the aid policies of Japan. The achievement of project objective is fair because although this project objective has contributed to the creation and improvement of alternative livelihoods for

shifting cultivation farmers at the project sites, some of indicators haven't been achieved yet and also these project activities haven't expanded. On the other hand, there is no sufficient data showing a reduction in deforestation, and it is observed that the project needs more time and further efforts for contributing to a reduction in deforestation. Comprehensively considering these facts, its effectiveness and impact are considered to be fair. The efficiency is considered to be high because the input factors were appropriate for the output of the achievements, and there was no problem with the period and the amount of funds. The sustainability is considered to be low because, although the activities of the villages at the project sites have continued at a relatively good level, there are problems in the implementation system and the finances of the local governments to extend the effects of the project to the neighboring regions. Considering the above, this project is viewed as having issues in part.

4.2. Recommendations

4.2.1. Recommendations to the counterparts

1. Recommendations for extension of the CSP by PAFO / DAFO officers

The sustainability of this project was a serious problem from the planning and implementing phases. The major cause of this is the deficits in the local government budgets, and the situation has not improved since the project was completed. Meanwhile, unless the extension officers of PAFO / DAFO extend the CSP activities to the regions surrounding the project sites, it cannot be expected that the effects that the project aimed at can be fully demonstrated. In this survey, future efforts for the extension of the CSP were discussed with the concerned parties and were then compiled as the following recommendations.

(1) Sharing successful cases: The successful case of the Extension Spot in Houysao Village in Sayaboury Province as stated previously in the "overall goal" has not been shared among other targeted provinces and districts. The information on securing and implementing the budget for introducing the CSP (recovering the capital of the revolving fund in the future to utilize it to further introduce the CSP to other villages) should be shared and referred to, and incentives for the extension of the CSP should be provided as well.

(2) The extension of the CSP to the neighboring villages utilizing the project site village fund: The capital of the revolving fund of the project site was provided to each village without any requirement for compensation, which successful villages then maintained and increased as a village fund, and some villages are considering loaning such funds to neighboring villages to invest as a form of the capital for the extension of the CSP. It is expected that PAFO and DAFO will mediate these efforts and provide support to realize them in the near future.

(3) Staffing by workers resident in the village clusters and their assignment to villages newly introducing the CSP: Even when the CSP is newly introduced to a village through the above efforts, there remains the issue that the activity budget for the extension officers of

DAFO is low. It is therefore expected that the resident workers can be assigned to villages that are newly introducing the CSP to provide them with technical support by making the best use of the village cluster residence system that is currently being implemented. Since most resident workers sent to a village that is newly introducing the CSP do not have sufficient knowledge of the extension technologies, they need to be provided in advance with sufficient training by the extension officers of DAFO, including the project counterparts.

2. Recommendations for the maintenance of the transferred technologies by the counterparts
After the project was completed, monitoring the villages that had already introduced the activities and further expansion to neighboring areas was not fully implemented by the extension officers, which means there are concerns about the maintenance and passing on of the practical technologies transferred in the project. It is recommended that improvements be made through the implementation of regular CSPT training sources or by including the CSPT in LEA training in order to maintain the technologies in the implementing organizations in the future.

3. Recommendations for extending stockbreeding in the villages

The villages where continuation of the CSP is good include successful cases, especially with regard to livestock breeding. On the other hand, the improvement of measures to control livestock diseases is an issue that many villages face. I recommend expanding assistance for the vaccination of livestock and increasing support to improve the level and increase the number of veterinarians in order to assure future continuation and further extension of livestock breeding activities in the villages.

4.2.2. Recommendations to JICA

I recommend providing support to resolve these issues as proposed above through subsequent cases, etc., and following up the sustainability of the project effects of this project and the subsequent cases. In particular, under this project, provision of the following cooperation for the local governments at the project sites is possible.

- (1) In regard to the recommendations for extension of the CSP by the extension officers of PAFO and DAFO; 1) Sharing the successful cases in Houysao Village in Sayaboury Province through workshops, etc.; and 2) Technical support for expanding the CSP to the neighboring villages making use of the project site village fund (advice in designing the revolving fund, etc.).
- (2) Support for the implementation of regular CSPT training (advice on preparing the curriculum and educational materials, etc.) with regard to the recommendation for maintaining the transferred technologies by the counterparts.

- (3) Technical support for improving the veterinarian system with regard to the recommendation for extending stockbreeding in the villages.

4.3. Lessons learned

1. Efforts for sustainability

The main factor obstructing the sustainability of this project is that neither the governments nor the residents can secure the funds to continue the activities, not only with regard to the system aspects. The counterpart organizations of this project have a limited budget, and the shifting cultivation farmers as beneficiaries basically have no funds to implement any new activity since they practice a self-sufficient agricultural system as their means of livelihood. Due to these circumstances, this project focused on the introduction of low-cost technologies, but the financing remained an issue after the project was completed, which is a lesson to learn for future project implementation.

In particular, in addition to the above, although it was assumed that securing the activity budget would be difficult after the end of the project in the Lao PDR, the capital for the revolving fund at the project sites was handed over to each village in this project, which is recognized as the property of the village that the funds were granted to (village funds). This makes it impossible to recover such funds from the project sites in the future to utilize them for the extension of the activities to new villages. In contrast to this, in the successful case of the Extension Spot in Houysao Village in Sayaboury Province, the counterparts adopted an approach for the recovery of the capital of the revolving fund in future for utilization as capital for activities in other villages, in recognition of a situation in which it is difficult to secure the budget for the further application of the improved know-how acquired in the project.

In the future implementation of the project, it is believed that discussions should be conducted with the counterparts when planning the vision after the end of the project and other essential matters and the activities for these should be clearly defined in the project design, and measures to ensure the sustainability of the effects of the project should also be developed during the project.

2. Issues in the project design

This project aimed to expand the formulation and extension of the activities at the project sites to the neighboring villages, which is set as the project objective. However, the activities and achievements of the project set in the PDM remain those leading to the formulation and extension of the CSP at the project sites, and the setting of the indicators for the project objectives did not focus on their extension to the neighboring villages. For this reason, as a

result of implementing the project pursuant to the activity and achievement indicators in the PDM, although “extension of the CSP at the project sites” had been achieved to a certain extent by the end of the project, extension to the neighboring areas appears to have had a low degree of attainment since validation of the relationship between the activities of the project and the expected achievements was insufficient. In agricultural and forestry extension projects in the future, a project design that is logically in accordance with the attainment of the project objectives should be established so that extension to the neighboring areas can be expected through the implementation of the project according to the PDM.

In addition, in determining the indicators, the timing of the onset of the effects varies depending on the activity in this project (pig rearing as a short-term activity and cattle rearing as a long-term activity), but these were not differentiated in the design. When expecting a different timing for the onset of the effects depending on the activity, in the implementation of future projects the indicators should be determined by taking this into consideration.

[End of text]