



# JICA LAOS OFFICE

## Final Report

(Final Version)

### EX-POST EVALUATION STUDY

ON

## THE FOREST CONSERVATION AND AFFORESTATION PROJECT PHRASE II IN VIENTIANE PROVINCE (FORCAP), LAO PDR

[November- December 2007]



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## **THIRD PARTY REVIEW BY EXTERNAL EXPERTS**

## PREFACE

This Ex-Post Evaluation Report on the Forest Conservation and Afforestation Project Phase II in Vientiane Province (FORCAP) was commissioned by Mr. Thanomvong KHAMVONGSA<sup>1</sup>- Local Consultant, on behalf of JICA Laos and Ministry of Agriculture and Forestry, Lao PDR.

We owe appreciation to these people for their contribution to this ex-post evaluation study. Without the support and encouragement of Mr. TAKEI Koichi, Deputy Resident Representative, JICA; Mr. SASAKI Mitsugu--Assistant to Resident Representative of JICA Laos Office, Vientiane, Lao PDR; Mr. HATANO Makoto, Assistant Resident Representative, JICA; Mr. ARAI, Yuki, Programme Officer, JICA; Mr. NAGAOKA Akira, Advisor of PSO, MAF; Mr. Viengsavanh SISOMBATH--Programme Office, this study would have been more difficult. My heartfelt thanks go to Mr. Khamthieng Phomsavath—Deputy Director General of NAFES, Ms. Thongsawath Boupba—Deputy Director of Extension and Project Management Division, NAFES; Mr. Bounlam—Acting Director of Agriculture and Forestry Training Center (AFTC), Mr. Daovieng Deputy Director of Vangvieng Agriculture, Forestry and Extension Office, former FORCAP counterpart from Vangvieng district; Mr. Chansy—Head of DAFEO of Hinherb district, Mr. Phetsamay Vongkhamounry—General Director of PAFO, Mr. Somdy Syvone—Head of Vientiane Upland Development Center (VUDC) and Mr. Soum—Head of Provincial Agriculture and Forestry Office for their contributions and efforts to facilitate and to the active support given on our field arrangement and data collection. I would also like to thank all villages' authorities inside and outside the sub-project areas for their support and for providing reliable information and data for this ex-post evaluation study. To those who we interviewed in the field and surrounded project areas, too many to mention, I would like to extend my sincere appreciation for their participation.

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December 17, 2007, Vientiane Capital, Lao PDR

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## ABBREVIATION

AFC	.....	Afforestation Centre
AFTC	.....	Agriculture and Forestry Training Centre (Houy Pamom)
DAC	.....	Development Assistance Committee
DAFEO	.....	District Agriculture and Forestry Extension Office
FORCAP	.....	Forest Conservation and Afforestation Project
FNS	.....	Forest Management system
FMT	.....	Forest Management Technology
GOL	.....	Government of Lao PDR
IG	.....	Income Generation
JICA	.....	Japan International Cooperation Agency
JEC	.....	Joint Evaluation Committee
Lao MDC	.....	Lao Management and Development Consultants Co., Ltd.
Lao PDR	.....	Lao People Democratic Republic
MAF	.....	Ministry of Agriculture and Forestry
NAFES	.....	National Agriculture and Forest Extension Service
NTFP	.....	Non-Timber Forest Product
PAFO	.....	Provincial Agriculture and Forestry Office
PCM	.....	Project Cycle Management
PRA	.....	Participatory Rural Appraisal
PFC	.....	Participatory Forest Conservation
PSS	.....	Profit Sharing System
RLFU	.....	Regulations of Land and Forest Utilization at the village level
VFMP	.....	Village Forest Management Plan



(Project site map)

**SUMMARY SHEET**

<b>1. Outline of the Project</b>			
<b>Country:</b> Lao People Democratic Republic		<b>Project title:</b> The Forest Conservation and Afforestation Project (FORCAP) Phase II	
<b>Issue/Sector:</b> Forestry/Forest Conservation		<b>Cooperation scheme:</b> Technical Cooperation Project	
<b>Division in charge:</b> Agriculture and Rural Development Sector, JICA Laos Office		<b>Total Cost:</b> 630 million yen	
<b>Period of Cooperation</b>	July 16, 1998 - July 15, 2003	<b>Partner Country's Implementing Organization:</b> National Agriculture and Forestry and Extension Service, Ministry of Agriculture and Forestry, Vientiane Province	
		<b>Supporting Organization in Japan:</b> Ministry of Agriculture, Forestry and Fisheries, Forestry Agency, Forestry and Forest Products Research Institute	
<b>Related Cooperation:</b> Vangvieng District Forest and Watershed Conservation Project (JICA Development Study), Northeastern Thailand Afforestation and Extension Project Phase (JICA Technical Cooperation Project)			
<b>1-1. Background of the Project</b>			
<p>The land area of Lao PDR is 23.68 million hectares, and 80% of the country areas are mountains and hills. Lao PDR is comparatively rich in natural forest. In 1940s, 70% of the land was covered with forests. However, the forest in the Lao PDR has been rapidly deteriorating. In 2002, the forest land was accounted to only 41.50%. The main reasons of these circumstances are shifting cultivation and inappropriate forest management. Consequently, the Government of Lao PDR requested the Japanese Government to provide technical cooperation to reduce shifting cultivation while improving the living standard of the people in Num Ngum Watershed area.</p>			
<b>1-2. Project Overview</b>			
<p>In order to realize its plan, the Government of Lao PDR requested project type technical cooperation to the Government of Japan in 1997 aiming at reducing the trend of forest degradation through administrative guidance of local government. The Forest Conservation and Afforestation Project II in Vientiane Province (hereinafter called the FORCAP or the Project) had been implemented from July 16, 1998 till the July 15, 2003 (5 year project) for the purpose of strengthening the capacity of the local administration for promotion of participatory forest management in order to reduce the trend of forest degradation in the fifteen targeted villages in Vientiane Province.</p>			
<b>(1) Overall Goal</b>			
The trend of forest degradation in the lower part of the Nam Ngum Dam watershed area and its vicinity is reduced.			
<b>(2) Project Purpose</b>			
The capacity of the local administration for promotion of participatory forest management is strengthened.			
<b>(3) Outputs</b>			
There were five expected outputs during the five years of technical cooperation between the Government of Laos and Japan are the following:			
(a) Village Forest Management Plans (VFMP) are prepared based on the review of Regulations of Land and Forest Utilization at the village level (RLFU).			
(b) Forest Management methods by the villagers are established using the technology developed by the project.			
(c) The income generation models introduced by the project are practiced by the villagers.			
(d) The recommendation report on village level forest management in terms of administrative, technical matters is prepared.			
(e) Skill and knowledge of the local administrative, especially the project counterparts, are improved.			
<b>(4) Inputs</b>			
Japanese side:			
Long-term Expert	11	Equipment	51,350,000 yen
Short-term Expert	20	Local Cost	127,880,000 yen
Lao Personnel Trained in Japan	18		
Lao side:			
Counterpart	32	Local Cost	5,964,000 yen
Land and Facilities	Agriculture and Forestry Training Center (AFTC), Ministry of Agriculture and Forestry		

<b>2. Evaluation Team</b>		
<b>Member of Evaluation Team</b>	<b>1. Lao team:</b> (1) Mr. Savanh Hanephome, Deputy Director General, Department of Planning; , (2) Mr. Buaphanh Konedavong, Deputy Director General of Vientiane PAFO, (3) Ms. Thongsawath Boupha, Deputy Director of Extension and Project Management Division, NAFES, (4) Mr. Khamsingh Kinnavong, Director of Administration Division, DOIn, (5) Mr. Lattana Phaxaysomboun, Deputy Director of AFTC, NAFES, (6) Mr. Khamphachanh Bounakeo, Technical Staff, Department of Forestry, (7) Mr. Phommy Inthichack, Programme Officer, DICl, Department of Planning (DOP), (8) Mr. Alounxay Onta, Technical Staff, Information Technology Center, DOP <b>2. Japanese team:</b> (1) TAKEI Koichi, Deputy Resident Representative, JICA, (2) SASAKI Mitsugu, Assistant Resident Representative, JICA, (3) HATANO Makoto, Assistan Resident Representative, JICA, (4) ARAI, Yuki, Programme Officer, JICA, (5) NAGAOKA Akira, Advisor to PSO, MAF, (6) Mr. Viengsavanh SISOMBATH, Program Officer, JICA	
<b>Period of Evaluation</b>	October 31 to December 23, 2007	<b>Type of Evaluation:</b> Ex-post Evaluation
<b>3. Results of Evaluation</b>		
<b>I. IMPACT</b>		
<b>1-1) Impacts on the Project's Overall Goal and Forest Conservation</b>		
<p>The trend of the forest degradation is reduced compared to the situation before project intervention. Project's technology and methodology such as agro-forestry, watershed management combined with fisheries and other approaches were replicated in different villages. In addition, the study team found that the total areas of forest cover in two districts were increased compared to the project termination in 2003 and increased up to 36,681 ha (53.50% increase) in November 2007. In total, the total area of protected forest area increased from 9,469 ha to 23,672 ha (149.99%). As for shifting cultivation, in the target villages at Vangvieng district, its area decreased from 945.50 ha to 475.00 ha (only 39.55% remained). On the other hand, shifting cultivation in Hinheup district was also reduced from 2,449 ha to 100 ha since 2003 (source: Hinheup DAFEO). The total areas of forest plantation in both Vanvieng and Hinheup districts are increasing. The total areas of demonstrated forest plantation established by AFTC increased to 77 ha in 2007 (71ha in 2003) and about 2 ha had been planted each year for the purpose of watershed protection, and this achievement also contributed to the increase of forest cover in Vientiane Province.</p>		
<b>1-2) Impacts on Income Generation</b>		
<p>Major income generation activities introduced by FORCAP still exist. However, some activities such as Mulberry paper handicraft (Mulberry paper (Posa) weaving and paper making) were not extended to other villages due to (i) inappropriate raw material collection (ii) low quality of paper and weaving production, (iii) low demand for such product, (iv) tools and instruments for making posa paper is quite expensive. In addition, the villagers still earn income from other income generation activities such as (1) charcoal making, (2) agro-forestry and (3) methodology introduced by the FORCAP such as intercropping with seasonal and perennial crops such pineapple and other fruit tree. Agro-forestry intercropped with Rattan (<i>Sorte de rotin-Vay thoun</i>) was considered as the most successful case among the FORCAP introduced techniques. Up to date, villagers and agro-forestry plantation owners regularly earn income from fruit tree and rattan plantation. The study revealed that the total number of poorest households in two districts were reduced from 609 households in 2003 to 285 in 2007 (53.20% decrease). Meanwhile, the number of wealthy households had increased from 124 to 276 household (122.58% increase). Though there are other factors, we can say that some of the income was generated from FORCAP introduced techniques, such as agro-forestry and fisheries.</p>		
<b>2. SUSTAINABILITY</b>		
<b>2-1) Technical Sustainability</b>		
<p>After the project termination, Agriculture and Forestry Training Center (AFTC) under the National Agriculture and Forestry Extension Service (NAFES) became the training center that provides technical and managerial training related to agriculture and forestry to officers and villagers. They still play an important role on enhancing government staffs' knowledge, capacity and skills in terms of agriculture, forestry and other related subjects. FORCAP techniques were adopted and utilized. The technical manual for forest plantation and management, plantation mapping and layout techniques were utilized by the following project (1) Vientiane Upland Agriculture and Forestry Training Center, (2) NamNgum Watershed Management Project, (3) Forest Management and Community Support Project and (4) some projects in northern province such as Bokeo, Luang Namtha, Oudomxay provinces.</p>		
<b>2-2) Institutional / Organizational Sustainability</b>		
<p>After the project termination, AFTC runs under the management of central government (NAFES), this arrangement create the gap between central and local government. Provincial Agriculture and Forestry Office (PAFO), and two District Agriculture and Forestry Office (DAFO) (Hinheup and Vangvieng) understood that maintaining the FORCAP outcomes is the responsibility of AFTC or NAFES and that the extension activity did not continue properly. After the FORCAP phase out, most of project staff was transferred to other offices. Meaning the all trained and experience staff moved out (except Deputy Director of AFTC) and replaced by new staff. Those staffs are not qualified in terms of technical skills, knowledge and experience; therefore, it is difficult for extending the project outcomes.</p>		
<b>2-3) Financial Sustainability</b>		
<p>Financial sufficiency is another factor of project sustainability. The outputs of FORCAP was not broader extended due to the insufficiency of financial availability, there were only little contribution from NAFES for continuing project activities since project termination (200 Million Kip annually).</p>		



### 3. FACTORS THAT HAVE PROMOTED AND INHIBITED PROJECT'S OUTCOMES

#### 3-1) Factors that have promoted project's impact and sustainability

The Forest Strategy 2020 and the National Poverty Eradication Strategy conducted by the Lao Government, which aims to implement sustainable forest management and poverty reduction, has propelled the impact and sustainability of the project.

#### 3-2) Factors that have inhibited project's impact and sustainability

Inappropriate human resource management is one of the factors that inhibited project impact and sustainability. After the FORCAP termination, most of project staff was transferred to other offices and replaced by only new unqualified staff. Most of new staffs are not qualified in terms of technical skills, knowledge and experience; therefore, it is difficult for extending the project outcomes. Recently the Governor of Vientiane province announced two districts (Hinheup and Vanvieng district) to be the growing territory for industrial and commercial tree plantation. The local government gives the concession of large land areas to private companies to make industrial and commercial plantation without careful plantation management planning could lead to negative impact to the environment and ecological degradation. Inadequate financial support from central government, it is very difficult for AFTC to continue support and monitor all projects' outcome regularly.

### 4. CONCLUSION

Forest management and afforestation techniques introduced by FORCAP certainly had a positive impact on forest conservation in Lao PDR, although there were some areas where natural conditions did not fit FORCAP techniques. We also conclude that the income generation activities introduced by FORCAP particularly agro-forestry and fisheries also contributed to reduction of poverty and shifting cultivation. However, lack of extension mechanism, individual plantations and community forest are unfortunately not extended to other villages. It is possible to expand the project achievement if more economic incentive is created. The Joint Evaluation Team recommends following items to the parties concerned.

### 5. RECOMMENDATIONS

The recommendation is made for four different levels as follows:

- 5-1) Central government (NAFES) should allocate appropriate fund for AFTC to maintain the FORCAP's outcomes.
- 5-2) AFTC should improve and develop all the technical manual such as teaching syllabus for future extension and promotion; some part of revenue from training service should be allocated for forest plantation and curriculum development; coordination with local authorities such as PAFO and DAFO should be improved; the AFTC should also maximize the effectiveness of the existing facilities; and find out the alternative income generation for running and operating its activities, and consider the cost reduction and appropriate management approaches for AFTC.
- 5-3) Vientiane PAFO/Vangvieng and Hinheup DAFOs should improve its coordination mechanism with AFTC better extension activity; DAFO should regularly follow up and monitor community forests and individual plantation operations by villagers; since 15 years contract with individual plantation is too long, it is advised DAFO to revise it.
- 5-4) Target village authority should regularly follow up all individual household plantation and do not allow villagers to clear their own trees and replaced with other new species unless they get permission from the district and concerned authorities.
- 5-5) In order to reduce forest degradation from industrial tree plantation, the provincial authority should (i) check the process of land concession, (ii) examine the company personnel's qualification when industrial tree plantation is requested, (iii) discuss with local village authorities prior to providing land concession.

### 6. LESSONS LEARNT

In order to sustain community forest management, we should consider the following lesson learnt:

- 6-1) The objective of forest plantation should be clear and agreed within the entire community.
- 6-2) Selection of tree species is very important. Native tree species such as *Pterocarpus Macrocarpus* and *Afxelia Xylocarpa* would take 50 to 100 years until villagers can gain profit. Agro-forestry is recommended because it provides continuous and short term benefit to villagers, which enhances their incentive toward participating in sustainable forest management.
- 6-3) Conducting awareness campaign regarding forest law is important. It is necessary to inform villagers that earlier logging of hardwood such as the above-mentioned native tree species are against the Lao PDR's Forest Law.
- 6-4) *Acacia Mangium* should be replaced by other species such as *Tectona grandis* or eucalyptus so that villagers can generate income easier.
- 6-5) Individual plantation that planted native species such as *Pterocarpus Macrocarpus* and *Afxelia Xylocarpa* using profit sharing system (PSS) with 15 years contract was not very appropriate, since villagers prefer short term income, and they are not willing to share their profit with DAFO. Therefore PSS contract between DAFO and individual owners should be revised.

# FINAL REPORT

## EX-POST EVALUATION STUDY FOR FOREST CONSERVATION AND AFFORESTATION PROJECT (FORCAP)

*VIENTIANE PROVINCE, LAO PDR, NOVEMBER 2007*

### 1 INTRODUCTION

#### 1.1 **Project Background**

- (1) The land area of Lao PDR is 23.68 million hectares, and 80% of the country areas are mountains and hills. Lao PDR is comparatively rich in natural forest. In 1940s, 70% of the land was covered with forests. However, the forest in the Lao PDR has been rapidly deteriorating recently. In 2002, the forest land was accounted to 41.50% only. The main reasons of these circumstances are shifting cultivation, and inappropriate forest management. On the other hand, the forest resource in Lao PDR plays an important role not only in environmental aspect but also the economy and livelihood of its population. Most of people in the rural area still highly dependent on the forest products for their daily life.
- (2) Consequently, the Government of Lao PDR has been planning to reduce shifting cultivation while improving the living standard of the people in Num Ngum Watershed area. In order to realize its plan, the Government of Lao PDR requested project type technical cooperation to the Government of Japan in 1997 aiming reducing the trend of forest degradation through administrative guidance of local government, such as those in province and districts, and through the voluntary participation of local people at the project target villages in Vientiane Province. Upon the request the Japan International Cooperation Agency (hereinafter called the JICA), a technical cooperation agency of the Japanese Government carried out the two-year preparatory project as the first phase from July 1996.
- (3) Base on the result of first phase, the Forest Conservation and Afforestation Project II in Vientiane Province (hereinafter called the FORCAP or the Project) had been implemented from July 16, 1998 till the July 15, 2003 (5 year project) for the purpose of strengthening the capacity of the local administration for promotion of participatory forest management in order to reduce the trend of forest degradation on the fifteen targeted villages in Vientiane Province.
- (4) There were five expected outputs during the five years technical cooperation between the Government of Laos and Japan were as follows: (1) village forest management planning (VFMP) were prepared based on the review of regulation of land and forest utilization at the village level (RLFU); (2) forest management methods by the villagers were established using the technology developed by the project; (3) The income generation models introduced by the project were practiced by the villagers; (4) the recommendation report on village level forest management in terms of administrative, technical and financial matters, were prepared; and (5) Skills and knowledge of the local administrations, especially the project counterparts, were improved.
- (5) Six months prior to the end of FORCAP project, the joint terminal evaluation was carried out by the Government of Lao PDR and the JICA in order to analyze the overall achievement of the project. The evaluation report concluded that the project achieved its goals and also the project contributed to the realization of more effective government support to the villagers by introducing remarkable changes in working styles of both government staff and villagers.
- (6) Four years after the project's completion since July 2003 till the beginning of October 2007, the JICA Laos Office (hereinafter called the client) intends to conduct an ex-post evaluation study of its completed FORCAP project that emphasizes on more impact and sustainability. In this concern, the study's result will be use for better-informed decision-making of JICA based on the lessons learned from the project, and to formulate similar programs in agriculture, forestry and rural development sector in the future, as well as to promote greater accountability.
- (7) Intentionally, the study's result will also be shared among JICA so that it can contribute for decision-

making for an effective implementation of technical cooperation in agriculture, forestry and rural development in the near future. That is one reason that the JICA Laos Office addressed to Lao MDC to prepare this proposal entitled "Ex-post Evaluation study on the forest conservation and afforestation (FORCAP) project in Vientiane province" (hereinafter called the evaluation).

## 1.2 Project Overview (the logical framework)

- (6) The overall goal of the project is to reduce the trend of forest degradation in the lower part of the Nam Ngum Dam watershed area and its vicinity. To achieve such overall Goal, the project had set its purpose that, the capacity of the local administration for promotion of participatory forest management is strengthened in order to reduce the trend of forest degradation.
- (7) To verify the overall goal, the project had set its indicator that, (1) by 2008, individual plantations and community forests are established in more than 20 villages, (2) By 2008, at least one of the income generation models continue to be practiced.
- (8) According to the final evaluation of the project which was conducted since 2003, the achievement of the project purpose was confirmed; especially the completion of project activities at fifteen target villages, mechanism for sustainable forest management and afforestation in two target districts. Nevertheless, some difficulty concerning impact and sustainability of the project such as high burden of project operation cost and uncertain institutional arrangement for future extension of project achievement were in need to be taken into consideration.
- (9) The following were the outputs during the implementation of five-year technical cooperation, these are mainly:
  - (1) *Village Forest Management Plans (VFMP) are prepared based on the review of Regulations of land and Forest Utilization at the Village level (RLFU).* Here are the following verifiable indicators to measure the output success i.e. VFMP were prepared at least for 3 villages;
  - (2) *Forest Management methods by the villagers are established using the technology developed by the project.* The verifiable indicator under this output is by the end of 2001, at least 200 individual plantations were established; and by the end of 2001, community forests area established in at least 8 villages.
  - (3) *The income generation models introduced by the project are practiced by the villagers.* At the end of 2002 the achievement indicator is that at least five technologies tested and demonstrated by the project until the fourth year are adopted by the farmers in targeted villages by the end of implementation term.
  - (4) *The recommendation report on village level forest management in terms of administrative, technical matters is prepared.* The following OVI under this output is the recommendation report at least includes the analysis result on the items.
  - (5) *Skill and knowledge of the local administrative, especially the project counterparts, are improved.* The OVI is as follows: every counterpart prepares at least one report which he/she is responsible for the project activities.

## 1.3 Study Objective

- (10) As described in the given TOR, there are three key study objectives of this ex-post evaluation, mainly:
  - To verify the existing important issues relating to the project's impact and sustainability three years after its completion from 2003 up to 2007.
  - The result of ex-post evaluation will be contributed to have a better-informed decision-making of the local Government of Vientiane and the Ministry of Agriculture and Forestry based on the lessons learned from the project, to formulate similar programs in agriculture and rural development sector in the future and to promote greater accountability.
  - The result of this ex-post evaluation study will also be shared by the local government of Vientiane Province and the Ministry of Agriculture and Forestry so that it can also contribute to the decision-making of Lao authorities for an effective implementation of agriculture and rural development in the future.

## 1.4 Scope of evaluation study

(11) Lao MDC consultants will undertake the ex-post evaluation study that illustrated in given TOR, these are mainly (1) verifies the important issues relating to the project impact and (2) sustainability observed four years after completion of the project and (3) verification of the given recommendations made during the project termination, these are summarized below:

### (a) Verify the Impact

- How far had the overall goal achieved since the terminal evaluation?
- Are the unintended positive and negative effects observed?
- What factors contributed to positive and negative impacts?
- What are the external factors that influenced the achievement of project's overall goal?
- Are there any impact that has been expected at the time of terminal evaluation emerged?

### (b) Verify the Sustainability

- How do the counterpart agencies have been maintaining the project activities and services provided by the project?
- Have the project outcomes have been maintained since the termination of assistance?
- What are the factors contributing to or inhibiting to the project efforts for sustainability?
- Are there any sustainability that has been expected at the time of terminal evaluation emerged?

### (c) Verify the Recommendation made since final evaluation

(11) Moreover, the client intends to verify all the recommendations made prior to project termination, and these parts also will be consider during the ex-post evaluation study for FORCAP project, that summarized below:

- Were the recommendations by terminal evaluation implemented properly by the Government?
- Were the recommendations appropriate from the viewpoints of clear goal settings, time frame, feasibility and responsibility?
- What are the possible causes underlying successes and/or failures of realizations of the recommendations?

### (d) Expected deliverable

(12) The consultants will provide their services to fulfill clients' expectations with the following deliverable, these are summarized below:

*Table 1: Summary of ex-post evaluation study deliverable*

EXPECTED DELIVERABLE	DEADLINE
Submit Evaluation GRID with 5 days after first meeting with JICA	October 30, 2007
Submit final draft ex-post evaluation report	November 29, 2007
Submit final report to JICA Laos Office before the date agreed upon in 5 copies printed format and 3 copies in CD ROM;	Approximately in between December 17-23, 2007

## 1.5 The Report Outline of Ex-Post Evaluation

(13) As described in the given terms of references, the main contents of ex-post evaluation report will include the following topics, these are mainly:

1. Scope of evaluation study
2. Project overview
3. Evaluation methods used
4. Results of evaluation
5. Conclusions
6. Recommendations
7. Lessons learned
8. Annex (Logical Framework and Evaluation Grid)

In addition to this, the Consultant will also submit an evaluation summary sheet in the specified format within the agreed date and to be prepared according to given JICA guidelines, which describes in TOR.

## 1.6 Ex-Post Evaluation Team

(14) There are three sub-teams joining this ex-post evaluation team members, who guides and supervise in implementing this ex-post evaluation study, these are:

### 1. Lao team from the Ministry of Agriculture and Forestry:

- Mr. Savanh Hanephone, Deputy Director General, Department of Planning
- Mr. Buaphanh Konedavong, Deputy Director General of Vientiane PAFO
- Ms. Thongsawath Boupna, Deputy Director of Extension and Project Management Division, NAFES
- Mr. Khamsingh Kinnavong, Director of Administration Division, DOI
- Mr. Lattana Phaxaysomboun, Deputy Director of AFTC, NAFES
- Mr. Khampachanh Bounakeo, Technical Staff, Department of Forestry
- Mr. Phommy Inthichack, Programme Officer, DICI, Department of Planning (DOP)
- Mr. Alounxay Onta, Technical Staff, Information Technology Center, DOP

### 2. Japanese team:

- TAKEI Koichi, Deputy Resident Representative, JICA
- SASAKI Mitsugu, Assistant Resident Representative, JICA
- HATANO Makoto, Assistant Resident Representative, JICA
- ARAI, Yuki, Programme Officer, JICA
- NAGAOKA Akira, Advisor to PSO, MAF
- Mr. Viengsavanh SISOMBATH, Program Officer, JICA

### 3. Local Consultant team:

- Mr. Thanomvong KHAMVONGSA, ..... Team leader, Forest Engineering
- Mr. Phommalath Chaleurnsouk ..... Rural Development Consultant;
- Mr. Lamphoun..... team member;
- Mr. Songher ..... team member
- Ms. Lacko ..... team member;
- Ms. Kanha ..... team member

## 1.7 Study Period

(15) The study was scheduled to commence from October 31, 2007 and to be completed by December, 2007. The Consultant services will be agreed upon between JICA and the Consultant within the effective period that had been signed between two parties. In addition to this, the additional commitments might be required if the JICA Laos Office reviews the reports and requests amendments or additional information within the scope of the work specified in this TORs (for more detail see herewith attached ex-post evaluation schedule)

## 2 EVALUATION STUDY APPROACH

### 2.1 Evaluation methods used

(16) There are multi-tools and methodologies applied during the ex-post evaluation, which were summarized as follows: (i) *prior to engagement*, the consultants performed *review of related literature* including all concerned project documents given by JICA Laos Office such as terminal project evaluation report, project final report, JICA evaluation guidelines and other relevant documents; *Design ex-post evaluation GRID* and further developed the *questionnaire* that utilized as a data collection instrument during the field data gathering at the project sites including two target districts (Vangvieng and Hinherb) that covered 15 villages of FORCAP sub-project areas and provincial and district organizations where former counterparts are currently working.

(17) In addition to this, (ii) *during the field data collection and site visit* in five target villages, the local consultants identified specific ex-post evaluation methods and data collection approaches that were summarized below:

- (a) *rapport building* (or trust building) before starting data collection by enhancing more participation and feeling “we are together” and understanding about the study objective, both villagers and the evaluation team;
- (b) Inform them about the *data collection objectives* as well as “why we are here” and give an introduction to

study team members and the agenda to be done in the target villages.

- (c) *Randomized sampling technique* also applied during the selection of individual household for impact study and the representation number in each village was targeted at least 50% of total number of household, in which, the target household will be selected both drop-out and non-participants of the project activities;
- (d) *Conduct surveys using questionnaire* to measure the socio-economic and environmental impact due to the project intervention throughout 15 target villages as well as this questionnaire targeted to get information and data from individual and community forest plantation including drop-out and non-participants of the activities; than, *focus group discussion* and *individual selected household interview* also applied during this stage in order to get into deep insights of particular issues.
- (e) *Interview Head of DAFO at Vangvieng and Hinherb district and PAFO office* at Vientiane province
- (f) *Interviews former project's counterparts* those who worked with the Japanese Experts as well as involved in the project implementation and also who were trained in Japan during the project intervention period. The targets of such counterpart are mainly the staffs of AFTC, PAFO, and DAFOs (including Vangvieng and Hinherb district) in Vientiane Province; in this regard, the specific questionnaire for interviewing the project counterpart were also designed and distributed to all concerned GoL staff that were available during data collection time.
- (g) *Feedbacking and clarification: (iii) after the submission draft report*, the study team joints the field or site observation with JICA and GOL key personnel, than, summarize, analyze and finalize report of the study's result and its presentation to the JEC at the Ministry of Agriculture and Forestry. Finally, the aid memorandum of understanding this ex-post evaluation study will be signed during the last joint evaluation workshop.

## 2.2 Sampling of target respondents for ex-post evaluation study

- (18) The sample for this study interviewed more than 696 villagers including individual forest plantation farmers and reached only 38.26% in total (see table 2 below). Initiatively, the study team planned in getting at least fifty percent of the entire target groups, as already described above is because during the months of November and December is the most significant season for the villagers (harvesting time).

Table 2: Sampling of selected size to be interviewed during ex-post evaluation study

No.	Village	Total Households			Interviewed household number	% study sample
		2003	2007	Disparity %		
<b>Vangvieng District</b>						
1	Houypamom	265	236	-10.94	40	16.95
2	Thahuea-tai	179	174	-2.79	60	34.48
3	Thahuea-Neua	241	216	-10.37	60	27.78
4	Houaymo	167	182	8.98	65	35.71
5	Nampath-tai	51	51	0.00	39	76.47
6	Houay-xi	83	76	-8.43	65	85.53
7	Namphao	280	220	-21.43	65	29.55
8	Phakoup	68	32	-52.94	30	93.75
<b>Hinheup District</b>						
9	Taothan	83	97	16.87	50	51.55
10	Phonethong	33	34	3.03	30	88.24
11	Vangkhi	176	196	11.36	50	25.51
12	Nampad	51	59	15.69	45	76.27
13	Somsanouk	187	212	13.37	65	30.66
14	Sivilai	25	34	36.00	32	94.12
	<b>Total</b>	<b>1,889</b>	<b>1,819</b>	<b>-3.71</b>	<b>696</b>	<b>38.26</b>

Source: Ex-post Evaluation study, November 2007

## 2.3 Data gathering process and procedure

- (19) The process and procedure of data collection was flexibly utilized during the field work that depends very much on actual case and situation. The data gathering process and procedure start with the following steps:
1. short "rapport building" by friendly said or told about something interesting and funny topics,
  2. Introduction to the site visit objective "why we are here?"—the study team prepares the study objective in a large brown flipchart paper. In this stage, the clear understanding about the ex-post evaluation must be clear and agreed up on between facilitators and villagers,
  3. introduction to the participants and facilitators "who we are and where we came from?", and next,
  4. explanations about the agenda and data collection programme and urge for an active participation from the entire villagers and
  5. The data gathering process will end with short summary and closing event.

## 2.4 Summary of Ex-post evaluation implementation

- (20) The ex-post evaluation was successfully implemented according to the given scope of services that was scheduled in the following date, see table below:

*Table 3: Actual Ex-Post Evaluation implementation for FORCAP, November 2007*

Ex-post Evaluation implementation process	Deadline
o JICA Lao office called for submission of proposal and explain about the FORCAP project ex-post evaluation outline	October 2007
o Submit technical and financial proposal	October 2007
o Prepare ex-post evaluation GRID and submit to JICA Lao Office (draft)	October 29, 2007
o Revise Evaluation Grid and data collection tools and instruments (checklist, questionnaire and all relevant data gathering forms such as villagers randomized and registration forms...)	October 30, 2007
o Presentation of ex-post evaluation study methodology and tools to JSEC at the 1 <sup>st</sup> JSEC workshop in MAF, get comments and suggestions on how to implement the ex-post evaluation in the field.	October 31, 2007
o The starting date of data collection or evaluation study commenced, that aimed to ensure the participation of target and surrounded villagers during their peak season (harvesting time);	from November 04 to 18, 2007
o Submit draft Ex-post Evaluation report to JICA and JSEC	November 27, 2007
o Presentation of progress evaluation study to 2 <sup>nd</sup> JSEC in MAF	November 29, 2007
o Revision of the draft report based on feedback gained from JSEC and submitted revised ex-post evaluation report (Second draft) to JICA evaluation team for comments and feedback	November 30 to December 3, 2007
o Site validation by joint steering evaluation committee including Japanese and Lao sides	December 4 to 6, 2007
o Presentation of final revised evaluation study to 3 <sup>rd</sup> Joint Evaluation Committee in MAF	December 7, 2007
o Revised and submits final evaluation report including summary report to JICA Lao	December 17-23, 2007

## 2.5 Limitations of the evaluation study

- (21) The following constrains had been found during the site visit and field data collection, these were mainly:
- The most of Laotians are celebrating boat racing festival and the interview with some villagers and key informants had to be proposed accordingly;
  - During November up to the beginning of December is the peak season for the villagers to harvest their upland and low land paddy rice, and it is one critical reason that the study team hardly get enough number of respondents;
  - It may be due to improper communication between concerned government authorities and target villages for this study, consequently, some target villagers were not informed in advance, therefore, some data were not deliberately discussed among villagers themselves and concerned stakeholders. On the other hand, some villagers were not available for an interview as they left for the field or outside the village.

- The individual villager provided estimated data and information about the past three years and therefore, it was lacking of project baseline data to verify precise economic impact from project intervention and some issues were not accurately supported by a data in the village levels such as improper recordable statistic from last three years and before the project started until now.
- There are few former FORCAP counterparts available either in the center and their office during the field data collection and some statistics requires information were adequately provided.

### 3 PROJECT PERFORMANCE

#### 3.1 Performance of the Project Purpose

Most activities have been carried out in accordance with the project tentative implementation schedule and the revised Project Design Matrix (PDM).

The promotion of the participation of local administration and villagers, including improvement of the understanding of effective land use and forest conservation have been implemented

Villagers have partially accepted the FORCAP introduced techniques such as agro-forestry, and some of them were successfully and continuously implemented, which had certain effects in reducing forest degradation and shifting cultivation.

It is acknowledged that the project activities had improved the knowledge and techniques on sustainable forest management among the local administrators and villagers.

#### 3.2 Achievement related to Project overall goal

The project intervention contributed to the increase of the forest protection area in lower Nam Ngum watershed. The study has shown that the total area of shifting cultivation in two districts' (Hinherb and Vanvieng district) target villages reduced from 945.50 ha (2003) to 475 ha in 2007. On the other hand, shifting cultivation area in Hinheup district also reduced from 2,449 ha (since 2003) to 100 ha (in 2007) (source: Hinheup and Vangvieng DAFO). However, there are some difficulties related to the impact and sustainability of the project due to the high burden of project operation cost and inappropriate institutional arrangements.

#### 3.3 Follow-up of the Terminal Evaluation Study

- (1) By the end of the project, the project had completed its analysis on Village Forest Management Plan (VFMP), on cost-benefit on Profit Sharing System (PSS).
- (2) Income generation models and technical manuals on forest management methods were developed.
- (3) After the project termination, the project was transferred from the responsibility of the local government to the central government body namely the National Agriculture and Forestry Extension Service (NAFES), and its name changed from the "The Forest Conservation and Afforestation Project (FORCAP) II to " The Agriculture and Forestry Training Center" (AFTC).
- (4) The agro-forestry activities and non-timber forest products such as rattan, fruit trees and medical plants were continuously being practiced by villagers in order to generate their income.
- (5) Outputs produced by the project were disseminated and applied by other projects, namely by international organizations, donors, and the Forest Management and Community Support Project (FORCOM).
- (6) However, the regular monitoring of Village Forest Management Plans (VFMPs), Profit Sharing System (PSS), and income generation activities which should be undertaken by Hinheup and Vangvieng DAFOs staff was not actively implemented due to the financial constraints and lack of equipment.



## 4 RESULTS OF EX-POST EVALUATION, FORCAP -NOVEMBER 2007

### 4.1 DIRECT IMPACT

#### 4.1.1 THE IMPACT OF FORCAP'S OVERALL GOAL

- (22) It is certain that project intervention has had a positive effect in alleviating forest degradation. The figure from Table 4 indicated that the total area of forest cover, including the enriched degraded forest area in two districts increased compared to the area of forest cover at the time of project termination in 2003. The increase started from 23,897 ha in 2003 to 36,681 ha in 2007, this is about 53.50% increase. According to the figure, the protected forest area increased from 9,469 ha to 23,672 ha (about 149.99%). Based on those figure, we conclude that FORCAP's intervention had a positive impact on the reversal of the trend of forest degradation in the lower part of the Nam Ngum Dam watershed area.

Table 4: Status of forest cover in target villages of Vangvieng and Hinheup district, 2003 to 2007

No.	Village name	2003						2007						
		CF	Pt.F	Pd.F	RF	AL	Total, ha	CF	Pt.F	Pd.F	RF	AL	Total, ha	
<b>Vangvieng District</b>														
1	Houypamom	-	1,680	168	820	384	3,052	-	16,860	168	820	384	18,232	
2	Thahuea-tai	-	896	92	64	394	1,446	-	896	92.00	64.00	394.00	1,446	
3	Thahuea-Neua	-	607	34	12	132	785	-	607	34.00	12.00	132.00	785	
4	Houaymo	202	898	135	144	87	1,466	202	475	135	144	87	1,043	
6	Nampath-tai	2	566	148	318	18	1,051	2.00	557	148	318.00	17.6	1,025	
7	Houay-xi	172	905	191	684	134	2,086	172	340	191	684.00	148.00	1,535	
8	Namphao	76	736	360	640	428	2,240	76	736	700	640.00	428.00	2,580	
9	Phakoup	500	800	2,000	-	-	3,300	500	800	500	-	-	1,800	
<b>Hinheup District</b>														
10	Taothan	95	87	10	83	47	321	95	87	10	83.25	46.73	321	
11	Phonethong	31	74	49	90	210	455	31	74	4	90	210.31	199	
12	Vangkhi	328	1,968	544	20	1,618	4,478	328	1,988	544	20.00	1,618	4,498	
13	Nampad	68	54	12	41	329	503	68	53.5	12	40.5	328.95	503	
14	Somsanouk	408	200	270	82	1,754	2,714	408	200	270	82	1,754	2,714	
15	Sivilai	Not yet completed land allocation						-	-	-	-	-	-	-
<b>Total areas (ha)</b>		<b>1,882</b>	<b>9,469</b>	<b>4,013</b>	<b>2,998</b>	<b>5,534</b>	<b>23,897</b>	<b>1,882</b>	<b>23,672</b>	<b>2,808</b>	<b>2,998</b>	<b>5,321</b>	<b>36,681</b>	
							%	0.00	149.99	-30.03	0.00	-3.85	53.50	

Source: Ex-Post Evaluation study, November 2007

Note: CF—Conservation Forest, Pt. F—Protected Forest; Pd. F—Production Forest, RF--Regeneration Forest, AL--Agriculture Land

#### 4.1.2 IMPACT IN TERMS OF POLICY ASPECTS

- (23) The local governments has a power on giving land concessions to private or individual companies for forest plantation purposes, as a result, the total number of industrial tree plantation areas in both districts increased gradually (see Table 5).
- (24) Other direct impact found is that the total areas of forest plantation established by AFTC itself had also increased by 77 ha in 2007 (71 ha were planted in 2003). About 2 ha were planted each year for the purpose of watershed protection. The main species planted by AFTC are native species namely (1) *Pterocarpus Macrocarpus* (or Mai Du) and (2) *Azelia Xylocarpa* (or Mai Tee) in approximately 2 ha each year.
- (25) After project termination, some training programs related to forest conservation, nursery production, and charcoal production were implemented by the AFTC. After attending charcoal production training at AFTC, some villagers successfully practicing charcoal production in their villages and the most successful case is Taothan village, Hinheup district.

#### 4.1.3 IMPACT OF FOREST PLANTATION CUM-FISHERIES TECHNIQUES AND METHODOLOGY

- (26) FORCAP introduced techniques on forest plantation cum-fisheries. This practice allows villagers to plant native species in the area surrounding the lakes. This activity was practiced in about 5.2 ha in the two

pilot villages namely Namphat and Houayxee villages. This community forest plantation-cum-fishery provides direct benefit to villagers as (1) villagers in the 2 villages have an additional forest conservation area, (2) villagers could generate income from aquaculture. Each year, the villagers earn approximately 5-6 million kip per annum, and those money were used for the installation of electricity connections to their villages. The total revenue from the sales of fish was divided in 3 parts; two thirds of this was put into the village revolving fund, and the remaining was allocated to the villagers.

- (27) The project installed 9 water delivery points, provided relevant water supply equipment, and plantation techniques for watershed-cum-forest conservation for Namphat-Tai, Namphat, and Namphao villagers for the purpose of forest conservation. As a result, the villagers planted an additional 10 ha in these three villages and organized a village forest watershed inspection unit who are directly in charge of follow-up and overseeing the forest in their villages. From the good forest management by villagers, the ground water resources have increased and the water is cleaner than before the project intervention.

#### 4.1.4 STATUS OF FOREST PLANTATION AND PROFIT SHARING SYSTEM (PSS)

- (28) **Forest plantation establishment.** It is clear that the total area of forest plantation in both the districts increased compared to before project termination in 2003, from 539 ha to 3,524.60 ha in 2007 (an increase of about 553.92% when compared to the total area of all the forest plantation areas in Vientiane Province) (see table below).
- (29) **After participating in the AFTC's training in forest management and agro-forestry technology and methodology,** some of the villagers replicated and adapted the knowledge and skills learnt into the practice. Some villagers were able to select market-oriented forest plantation species such as Cessna, Rattan, *Jatropha curcas* (Mak-yao). This capability can also be considered as one of the impacts of FORCAP intervention. The training programs provided could also help villagers in enhancing their capacity on forestry management, and income generation.

Table 5: Status of Forest plantation in two districts (Vangviang and Hinheup), 2003 to 2007

Type of Forest plantation	District / province	2003		2004		2005		2006		2007	
		Areas, ha	House-holds	Areas, ha	House-holds	Areas, ha	House-holds	Areas, ha	House-holds	Areas, ha	House-holds
Promotion of forest plantation establishment	Whole Vientiane Province	1,923.4	NA	2,301.6	NA	2,172.3	NA	2,689.7	NA	8,445.06	NA
Forest plantation establishment	Vangviang	431	NA	200	150	121.7	150	200	130	1,927.2	77
% compared to the whole province		22.41	NA	8.69	NA	5.60	NA	7.44	NA	22.82	NA
Forest plantation establishment	Hinheup	108	NA	515	NA	215	NA	690.5	NA	1,597.40	NA
% compared to the whole province			5.62		22.38		9.90		25.67		18.92
Total of the two districts		539		715		336.7		890.5		3,524.60	
% compared to the whole Province		28.02		31.07		15.50		33.11		553.92	

Source: Ex-Post Evaluation study, November 2007

- (30) The table below prioritizes the key recommendations and preferences of the target beneficiaries regarding the establishment of forest plantations and income generation through FORCAP intervention. Most of the villagers suggested that the project should consider and support existing activities that already functioning and being implemented by the local people, for example, by support to the local people to rear large animals and to increase fish production. When asked this question more than 41.15% of respondents mentioned the support of livestock and fishery as their preferences.

*Table 6: Summary of Villager's comments regarding forest plantation, 2007*

Comments and recommendations for project activities	Number of answers	%	Prioritized
Support of livestock and aquaculture are required	416	41.15	1
Renovation of FORCAP activities is required in order to meet local needs	136	13.45	2
<i>Pterocarpus macrocarpus</i> -Mai du, <i>Azelia xylocarpa</i> -Tae, Teak, eaglewood & rubber trees are needed	126	12.46	3
No funds to support for continuing individual plantation and income generation	124	12.27	4
Acacia Holoseriacea with brown leaves should be thinned	71	7.02	5
Acacia Holoseriacea with brown leaves is not satisfactory for the local people	65	6.43	6
There is no market for Acacia mungium with brown leaves	50	4.95	7
No monitoring and coaching by GOL organization concerned	23	2.27	8
<b>Total</b>	<b>1,011</b>	<b>100</b>	

Source: Ex-post evaluation, November 2007

#### **4.1.5 IMPACT ON THE STABILIZATION OF SHIFTING CULTIVATION IN TWO DISTRICTS, VIENTIANE PROVINCE**

- (31) The Government of Vientiane province set its goal for the stabilization of shifting cultivation by the year 2010 by introducing the alternative permanent occupations to replace slash and burn practices. To achieve such goal, the government has introduced the land allocation to villagers and throughout such exercise the individual households or villagers are only able to cultivate within allocated land. Other than the government policy, FORCAP also contributed in creating forest plantation area, better forest management system, and awareness rising by villagers. Resulting from that exercises, the shifting cultivation in the project area was remarkably reduced.
- (32) The table below shows that the shifting cultivation in target villages in Vangvieng district was reduced from 945.50 ha to 475.00 ha, and only 39.55% remained in the year 2007. The shifting cultivation area in Hinheup district also reduced from 2,449 ha in 2003 to 100 ha (Source: Hinheup DAFEO) and only about 8.33% remained.
- (33) The study also revealed that the significant external factors affecting the shrinking of shifting cultivation areas came not only from the forest plantation establishment in the region, but also mainly because villagers developed new paddy land for sedentary agriculture using their own funds, some contributions were made by different stakeholders such as some centers, stations and other technical cooperation projects namely:
- The NamNgum Watershed Management Project introduced some alternative developments such as (i) micro financing for women's' income generation activities, (ii) animal bank, (iii) fruit tree plantation, (iv) watershed management, (v) introduction to the forestry laws and regulations to local villagers and more;
  - The Upland Agriculture Development Center introduced (1) fruit tree plantation technique, (2) livestock, (3) agriculture, (4) micro-financing to target villagers living around the Nam Ngum reservoir.
  - The Food Security Project funded by Food and Agriculture Organization (FAO) which is being implemented in the areas.;
  - The Small Holder Project (an ADB project) also introduced intensive agriculture and forestry activities in the target villages.
  - The NCMI project that moved from the northern province of Laos and that focuses on irrigation construction programmes allowed villagers to develop their lowland rice paddies.
  - The Agriculture and Forestry Division of Vientiane province being implemented the strategic shifting cultivation vision under the 8<sup>th</sup> congress of the Lao People Revolutionary Party that emphasizes 4 prioritized goals and 13 approaches<sup>1</sup>.

<sup>1</sup> 4 prioritized development goals are mainly (1) food security production, (2) commodity production, (3) shifting cultivation, and (4) sustainable forest management including survey, inventory, and maximize utilization of all available NTFPs in the long-term prospective manners.

The 13 approaches are (1) Agriculture and Forestry development, (2) survey and allocation of agriculture and forest land, (3) secure variety, (4) extension and personnel capacity building services, (5) establish focal development- cum agriculture and forestry development, (6) Implement and construct all relevant infrastructure from bottom up, (7) Irrigation and drought and flood control, (8) Increase the productivities,

**Table 7: Comparison of shifting cultivation and individual forest plantation in two districts (Vangvieng and Hinheup district)**

No.	Village	2003				2007			
		Shifting cultivation (Ha)	No. of Hhs practicing SC	Individual plantation (Ha)	No. of Hhs planting trees	Shifting cultivation (Ha)	No. of Hhs practice SC	Individual plantation (Ha)	No. of Hhs planting trees
Whole Vientiane Province		NA		1,923.40		1,201		8,445.06	
Vangvieng District									
1	Houypamom	3.00	2.00	112.00	22.00	-	-	112.00	22.00
2	Thahuea-tai	3.00	2.00	30.00	8.00	3.00	-	30.00	12.00
3	Thahuea-Neua	3.00	2.00	2.50	5.00	3.00	-	2.50	5.00
4	Houaymo	45.00	30.00	21.45	50.00	20.00	10.00	21.45	50.00
5	Nampath-tai	20.00	24.00	4.00	2.00	20.00	24.00	4.00	2.00
6	Houay-xi	168.00	84.00	26.60	45.00	12.00	6.00	26.60	45.00
7	Namphao	700.00	18.00	9.20	20.00	400.00	18.00	9.20	20.00
8	Phakoup	3.50	4.00	-	-	17.00	22.00	4.50	5.00
	<b>Total, ha</b>	<b>945.50</b>	<b>166.00</b>	<b>205.75</b>	<b>152.00</b>	<b>475.00</b>	<b>80.00</b>	<b>210.25</b>	<b>161.00</b>
	% compared to whole province	NA		10.70		39.55		2.49	
Hinheup District									
9	Taothan	98.00	94.00	16.00	9.00	30.00	97.00	16.00	9.00
10	Phonethong	5.00	5.00	5.00	9.00	5.00	6.00	3.00	8.00
11	Vangkhi	80.00	70.00	21.00	19.00	50.00	40.00	21.00	19.00
12	Nampad	119.00	51.00	25.00	28.00	NA	79.00	25.00	28.00
13	Somsanouk	2,147.00	210.00	6.00	16.00	NA	203.00	6.00	16.00
14	Sivilai								
	<b>Total, ha</b>	<b>2,449</b>	<b>430</b>	<b>73</b>	<b>81</b>	<b>100</b>	<b>425</b>	<b>71</b>	<b>80</b>
	% compared to whole province	NA		3.80		8.33		0.84	

Source: Ex-Post Evaluation study, November 2007

#### **4.1.6 INCOME GENERATION THROUGH AGRO-FORESTRY INTRODUCED BY FORCAP, (2003-2007)**

- (34) Several income generation activities introduced by the project still exist. For instance, (1) charcoal making, (2) agro-forestry technology and (3) methodology introduced by FORCAP like intercropping with seasonal and perennial crops such as pineapple, fruit tree, mango and other cash crops at their agro-forestry sites are successfully continued by villagers. For example, (i) villagers at Ban TaoThan Village are earning about 400,000-500,000 kip per year selling pineapples to local markets. (ii) Another example is in Ban Houypamom Village, villagers reported that they can generate approximately 1,000,000 kip yearly by selling fruits such as mango, pineapple and others to the market. (iii) In another case, in the same Ban Houypamom village one model farmer is generating income from selling Psidium guava (Mak sida), Pentace burmanicam (sisiat) and grass for roofing and he also makes more than 2,000,000 kip per year from his agro-forestry plantation; (iv) Yet another case of agro-forestry practice found in same village is that the villagers have replaced Acacia Holoseriacea species with Cessna (eagle wood) trees and bambo, and each year they can sell more than 350 bamboo poles worth about 2,800,000 kip annually.
- (35) Recently, the AFTC organized on-the-job training (OJT) on how to produce charcoal. Two participants from each of the target villages were invited. As a result, the charcoal production in both districts increased by more than 3 households (255 households in 2003 had increased to 258 households in 2007), an increase of about 1.18%, but they did not utilize wood from their own plantation, because in the PSS contract they must wait for 15 years, consequently, they utilized wood from natural trees instead.

(9) assure quality and standard SPS and prevention of disease, (10) financial support including domestic and international donation, (11) cost effective, (12) monitoring and evaluation, and (13) task allocation and corporate with villagers and other economical sectors.

- (36) As a result of the signing of a contract between DAFO and the plantation owners, it was found that the villagers producing charcoal did not utilize wood from their own individual forest plantations but rather they benefited by selling some naturally trees such as Mai Teiw (*Cratoxilon Sp*) and Mai Bok (*Irvingia Malayana*), Mai Safang, May Makkome and other trees for making poles, for house construction material and so on. Such trees are being sold in "La" (a local measurement) specific for sales of timber and trees., One "La" is equivalent to 1 cubic meter (1m x1m x 1m) . 1 La of Mai Teiw is purchased by charcoal producers for 100,000 kip, but they are willing to pay only 20,000 kip per La for Acacia wood from individual plantations, so the villagers are not happy to sell their acacia.
- (37) Stove making activities had stopped (see table below) by November 2007. The main reason for this are summarized below:
- (1) Inadequate continuous support and follow-up actions to all project' IG activities by organizations concerned especially from DAFO office after project termination.
  - (2) Inappropriate raw material collection and management for sustaining mulberry paper handicraft and weaving activities and the dependency on natural forest as the main source of raw materials is now shrinking.
  - (3) Low quality of production and low market demand for such products.
  - (4) Some villagers could not make Posa paper by themselves because they are lacking tools and instruments,
  - (5) Villagers are still generating income from fisheries from the Nam Ngum reservoir and the income generation activities introduced by the project were considered as additional sources of household income.
- (38) **Agro-forestry intercropped with rattan** is considered as a success for FORCAP technology and methodology, from now on the villagers or the individual agro-forest plantation owners can regularly earn income from fruit trees and rattan shoots. The rattan can be sold not only to local markets but it can also be the main food for the family. Some other agro-forestry plantation owners can also generate additional income from their plantations from the sale of rumbutan, jam-bean, mango and others (in the case of Vangky Village) and they earn around 1,000,000 kip each year.
- (39) **School forest plantation.** The FORCAP methodology that involved school children into forest conservation and plantation was appropriate to the local situation, as this program is directly raising the forest plantation awareness for future generations who would care about the environment and promote a richer biodiversity in the future mainly (i) Acacia mungium, and (ii) Tectona grandis (Teak) are suitable tree species for school forest plantation; Unfortunately the process of forest plantation techniques of (1) nursery, (2) planting, (3) selling/processing and (4) collecting seed for the next plantation rotation was not sustained. All these processes should be refreshed and renovated in target schools within the two target FORCAP sub-project areas.
- (40) **Stove making** introduced by the project. The charcoal saving stove making technique was not continued after project termination in 2003, the main reasons were, (1) the local people prefer using wood and charcoal as firewood, (2) raw material (clay soil for making the stoves) not available in nearby areas and it was not economically cost effective from high cost of transportation..

**Table 8: Summary of Income Generation Activities from 2003 up to 2007**

No.	Village	Number of Households (2003)					Number of Households (2007)				
		Individual plantation	Charcoal production	Posa paper making	Posa weaving	Stove making	Individual plantation	Charcoal production	Posa paper making	Posa weaving	Stove making
<b>Vangvieng District</b>											
1	Houypamom	22	-	1	1	-	22	-	-	1	-
2	Thahuea-tai	8	3	-	-	-	12	-	-	-	-
3	Thahuea-Neua	5	-	-	-	-	5	-	-	-	-
4	Houaymo	50	-	-	-	2	50	-	-	-	-
5	Namphat-tai	2	-	-	-	-	2	-	-	-	-
6	Houay-xi	45	1	-	-	-	45	3	-	-	-
7	Namphao	20	2	-	-	-	20	3	-	-	-
8	Phakoup	-	-	-	-	-	-	-	-	-	-
<b>Hinheup District</b>											
9	Taothan	9	3	-	-	-	9	6	-	-	-

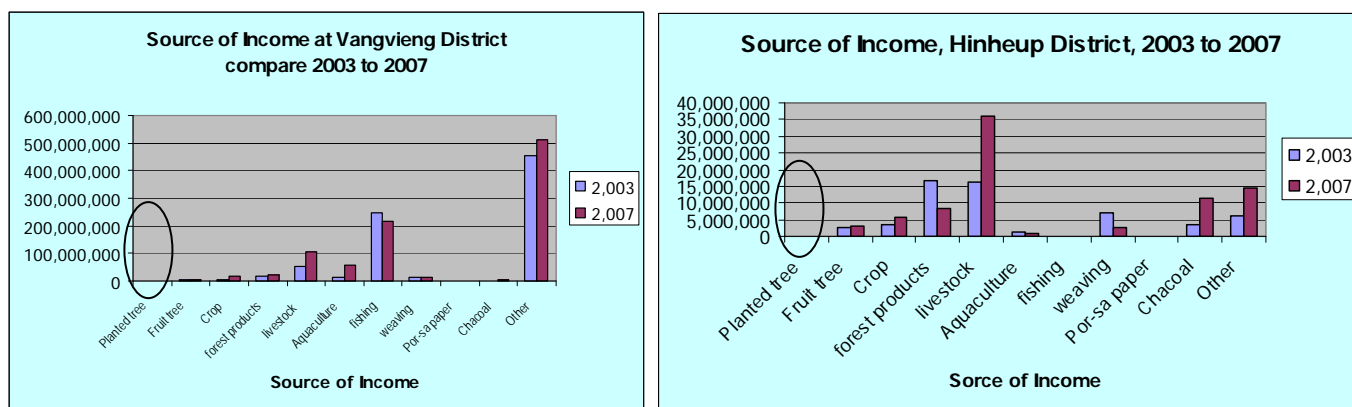
No.	Village	Number of Households (2003)					Number of Households (2007)				
		Individual plantation	Charcoal production	Posa paper making	Posa weaving	Stove making	Individual plantation	Charcoal production	Posa paper making	Posa weaving	Stove making
10	Phonethong	9	3	-	1	-	8	5	-	-	-
11	Vangkhi	19	3	-	-	-	19	3	-	-	-
12	Nampad	28	-	-	-	-	28	3	-	-	-
13	Somsanouk	16	-	-	-	-	16	-	-	-	-
14	Sivilai	22	-	-	-	-	22	-	-	-	-
	<b>Total</b>	<b>255</b>	<b>15</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>258</b>	<b>23</b>	<b>0</b>	<b>1</b>	<b>0</b>
	<b>% disparity</b>						<b>1.18</b>	<b>53.33</b>	<b>-100.00</b>	<b>-50.00</b>	<b>-100.00</b>

Source: Ex-Post Evaluation Study, November 2007

#### 4.1.7 SUMMARY OF SOURCE OF INCOME RELATED TO FORCAP ACTIVITIES

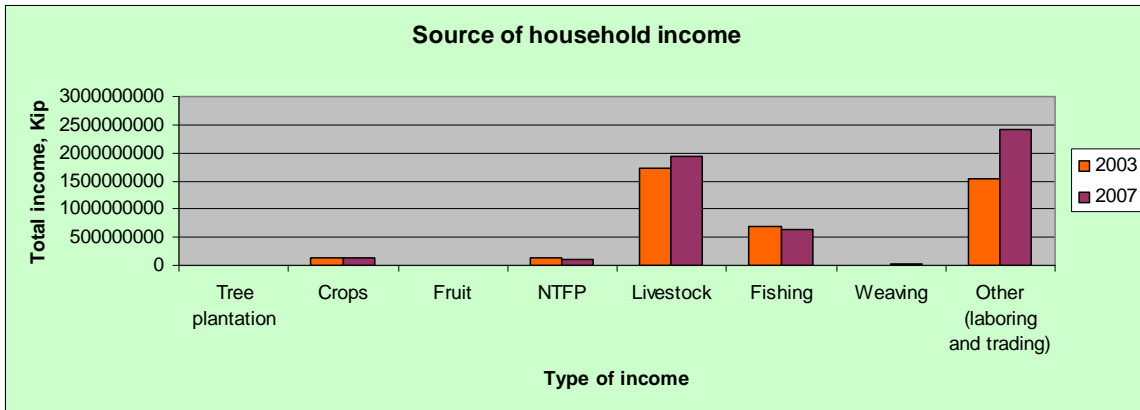
(41) Figure 1 below illustrates the main source of income of target villages in the two target districts from the termination of the FORCAP project in 2003 until November 2007. There are no income from individual forest plantations, and it is expected that sales of wood from individual plantations will generate a large amount of income over the next eight years or by the year 2015. Indeed, these sales will result from the need to thin all *Acacia mungium* to open a wider canopy to allow native species namely *Pterocarpus macrocarpus* (Mai Du) and *Axillia xylocarpa* (Mai Tae Kha) faster growth. On the other hand, due to the prohibition of the logging of native species of a certain diameter (at least 50 centimeter) by the Department of Forestry, MAF; and, considering the value added those individual plantation owners should urgently take this into consideration. In this regard, the possibility of intercropping with *Cessna* or some other tree species after thinning *Acacia mungium* should take place and the provision of some relevant technical and other support including seedlings, to those individual forest plantation owners should be considered.

Figure 1: A comparison of the Main sources of income in the two districts



The figure below categorizes the source of household income being generated by target villagers after project termination in 2003 until 2007 in both Vangvieng and Hinheup districts. We asked the villagers about their source of household income. The villagers said that their main source of household income is gradually increasing from for example (1) livestock, (2) fishery, and (3) from other sources such as trading and renting out of labor or about 36.64%, 11.88% and 45.87% respectively of the total respondents. A major source of their income came from fishery. Even more came from other sources such as from the renting out of labor (45.87%), meaning that the people are getting income from trading and renting their labor to the forest plantations established by local private companies.

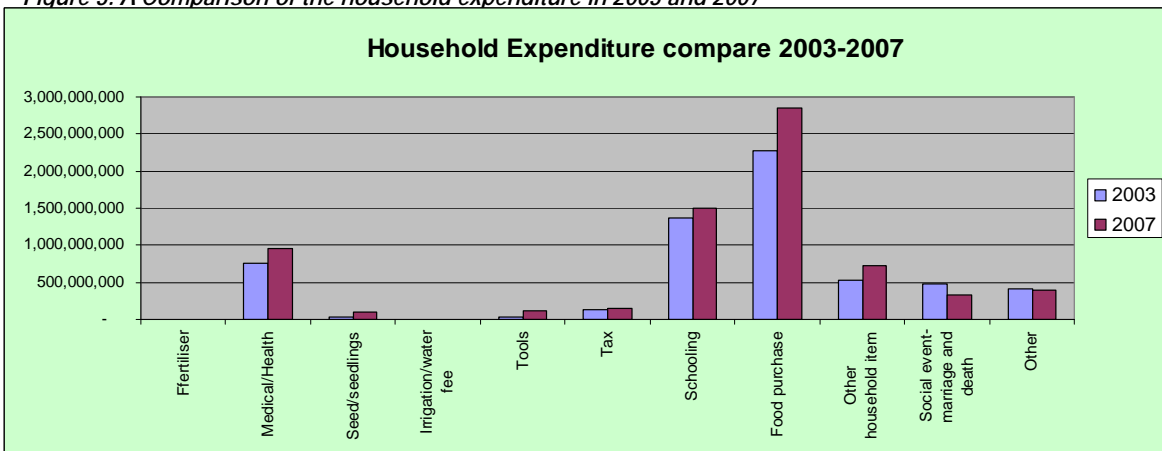
Figure 2: A Comparison of Sources of Household income since project termination up to 2007



their native wood and Acacia mangium over the next seven and half years (based on the PSS contract). The AFTC is now searching for markets for Acacia mangium and these will soon be found before the expiry of the PSS contract between DAFO and individual households (15 years duration). On the other hand, the AFTC plan to demonstrate the processing of Acacia mangium wood in order to add more value as furniture or wooden products by using the small machines already purchased by FORCAP.

- (43) The study team intended to investigate any changes in households' expenditures spent in purchasing tools, equipment and other forest plantation supportive inputs. The figure below illustrates the comparison of annual household expenditures from 2003 up to 2007, which shows that the majority of expenses on (1) food, (2) schooling and (3) health/medicine slightly increased, while on the other hand, the household expenditures on the forest plantation seem to be very little only 0.02% had been spent on fertilizers and 1.42% on purchasing seeds and seedlings for individual tree plantations.

Figure 3: A Comparison of the household expenditure in 2003 and 2007



## 4.2 INDIRECT IMPACT

### 4.2.1 CONTRIBUTION TO POVERTY ALLEVIATION IN BOTH TARGET DISTRICTS

- (44) One of the study's objectives was to clarify the changes in terms of poverty reduction in that region as a result of the establishment of forest plantation. There are many reasons or factors which contribute to poverty reduction in such areas, and the establishment of individual plantations has impacted directly to the reduction of the workload of women and children regarding the collection of firewood. Furthermore, the wood from the forest plantations can be used to produce charcoal, to make fences, poles and other household uses.

Another appreciable indirect impact is shown in the table below is that, the total number of the poorest households in the two districts dramatically reduced from 609 households in 2003 and to only 285 households in 2007 or a decrease of about 53.20%. While the number of well-off households increased from 124 to 276 households or about by 122.58%. The village leaders reported that the establishment of individual forest plantations had directly reduced the workload of the collection of firewood by women and children in their villages.

Table 9: Change of village stratification status

No.	Village	2003			2007			% variation of very poor Hhs
		No. of well-off, Hhs	Middle poor, Hhs	Very poor, Hhs	No. of well-off, Hhs	Middle poor, Hhs	Very poor, Hhs	
<b>Vangvieng District</b>								
1	Houypamom	2	163	100	10	221	5	-95.00
2	Thahuea-tai	3	169	7	3	168	3	-57.14
3	Thahuea-Neua	18	200	23	25	190	1	-95.65
4	Houaymo	3	152	12	94	85	3	-75.00
5	Nampath-tai	1	30	20	-	40	11	-45.00
6	Houay-xi	3	74	6	6	68	2	-66.67
7	Namphao	28	30	222	39	50	133	-40.09
8	Phakoup	30	20	18	10	10	12	-33.33
<b>Hinheup District</b>								
9	Taothan	6	57	20	10	75	12	-40.00
10	Phonethong	6	24	3	17	16	1	-66.67
11	Vangkhi	5	80	91	25	141	30	-67.03
12	Nampad	5	39	7	10	36	5	-28.57
13	Somsanouk	12	100	75	22	126	64	-14.67
14	Sivilai	2	18	5	5	26	3	-40.00
<b>Total</b>		<b>124</b>	<b>1,156</b>	<b>609</b>	<b>276</b>	<b>1,252</b>	<b>285</b>	<b>-53.20</b>
<b>%</b>					<b>122.58</b>	<b>8.30</b>	<b>-53.20</b>	

Source: Ex-Post Evaluation Study, November 2007

- (45) As already mentioned, there are many external factors that have contributed to the alleviation of poverty in these two districts as well as in the former FORCAP sub-project areas. The villagers always mention that the convenience of using a part of the established plantation for household fire wood, fencing, poles and other purposes that are related to the use of wood. Since the area is rich in natural resources, the villagers are still using natural forest species namely Mai Teiw (*Cratoxilon Sp*) and Mai Bok (*Iringia Malayana*) for making charcoal.
- (46) Since project termination in 2003 it was found that the type of housing in the target villages (sub project areas of former FORCAP) had greatly changed, for example, the number of bamboo houses decreased from 73 to only 35, a 0.48 fold decrease, while the number of concrete houses increased from 71 to 233 houses, a 3.28 fold increase.

Table 10: Type of house in target villages, in Vangvieng and Hinheup districts

Type of House	2003	2007	Change	Comments
Flat house constructed on soil	85	58	0.68	Decreasing
Wooden house	467	370	0.79	Decreasing
Concrete house	71	233	3.28	Increasing
Bamboo house	73	35	0.48	Decreasing

Source: Ex-post evaluation study, November 2007

- (47) There was a 2.67 fold increase in all household assets of target villagers in the FORCAP sub-project areas between 2003 and 2007 in terms of household ownership of assets. For example, the number of car/trucks and motorbikes increased 3.23 and 3.04 fold respectively. Some of the income contributing to the increase in their wealth came from their agro-forestry plantations and from sales of native wood and poles from their plantation establishments. There was also an 8 fold increase in the villagers' access to the electricity network between project termination in 2003 and 2007.

Table 11: Change of household assets comparing from 2003 up to 2007

Household facilities	2003 [A]	2007 [B]	Change [A]/ [B]	Comments
TV set	326	539	1.65	Increasing
Radio or CD/DVD	274	373	1.36	Increasing
Bicycle	335	351	1.05	Decreasing



Motorbike	129	392	3.04	Increasing
Small truck	30	97	3.23	Increasing
Hand tractor	40	64	1.60	Increasing
Boat engines)	13	37	2.85	Increasing
Access to electricity (no. of villages)	1	8	8.00	Increasing
Latrine	356	448	1.26	Increasing
Average change			<b>2.67</b>	

(Source: Ex-Post Evaluation Study, November 2007)

- (48) **Indirect impact to livestock raising opportunity:** the study team found that the establishment of individual forest plantations has a direct positive impact on the villagers in both target districts. We asked about this impact, and most of the villagers reported an increase in their livestock and fishery between the time of project termination in 2003 and up to 2007. For example, the number of large animals such as buffalos and cattle increased by 1.11 and 1.32 times respectively, while the small animals such as goats also increased by about 1.22 times. However the number of pigs, poultry and fish cultivated had reduced by 0.58, 0.83, and 0.95 times respectively (see table 12 below).

**Table 12: Livestock rising and fishery by target villages**

Livestock	2003	2007	Change	Remark
Cattle	1,914	2,517	1.32	Increased
Buffalo	1,113	1,238	1.11	Increased
Goats	73	89	1.22	Increased
Pigs	2,419	1,415	0.58	Decreased
Poultry	15,019	12,441	0.83	Decreasing
Number of fish released	137,320	131,086	0.95	Decreasing

(Source: Ex-Post Evaluation study, November 2007)

#### 4.2.2 INSTITUTIONAL AND MANAGEMENT ASPECTS

- (49) Another impact found is that most of the former FORCAP counterparts who had cooperated and worked between 1999 and 2003 have been promoted within the PAFO and DAFO organizations in Vientiane Province, Vangvieng district, Hinheup district and central organizations. All of them have adopted and replicated techniques and methodology similar to those of FORCAP in their routine work, for example, almost all former FORCAP counterparts have higher positions and more important roles and responsibilities such as (1) Mr. Somdy Sivone is now the head of the Vientiane Upland Agriculture and Forestry Training Center, he has adapted various FORCAP technical manuals: "How to predict the seed demand for forest plantations", "How to conduct plantation establishment surveys", and a series of manuals on nursery management techniques, agro-forestry and other relevant techniques and methodology; another example is (2) Mr. Saysana who was promoted to the position of AFTC Deputy Director. He has transferred all of the technology and methodology to the newly formed AFTC personnel who will later continue to maintain FORCAP outcomes and follow-up activities. Below is illustrated the key former FORCAP counterparts and their current jobs and responsibilities since project termination.

**Table 13: List of formal counterpart involved during the project intervention period (1999-2003)**

No.	Name and surname	FORCAP 1998-2003		2007		Contact number
		Title	Workplace	Title	Workplace	
1	Mr. Khampha	Project manager	FORCAP	Studying in China	Head of Research unit, NAFRI	Office: (+856 21) 770074; Mo: (+856 21) 5814591
2	Mr. Bounmanh Keomolakoth	Chief of HH	PSS Unit	Technical official	NAFRI	Mobile: (+856 20) 2416 205
3	Mr. Lattana	Chief of VV	PSS Unit	Deputy of director	AFTC	Mobile: (+856 20) 2412 256
4	Mr. Khamsana	Technical official	FORCAP	Chief of unit	AFTC	Mobile: (+856 20) 2435 018
5	Ms. Bounpheng Xayyavong	Counterpart	VV-DAFEO	Technical official	VV-DAFEO	Mo: (+856 20) 6520 698
6	Mr. Vong Inthavong	Counterpart	VV-DAFEO	Technical official	VV-DAFEO	Mobile: (+856 20) 5399 578
7	Mr. Oudong	Chief of Unit	Demonstrating forest unit	Studying in NOUL	Technical official, NAFRI	Office: (+856 21) 770074

No.	Name and surname	FORCAP 1998-2003		2007		Contact number
		Title	Workplace	Title	Workplace	
8	Mr. Phetsakhone	Technician	FORCAP	Studying in Japan	Deputy project manager, FORCOM	Mobile: (+856 20) 2429 508
9	Mr. Somdy Sivone	Deputy project manager	FORCAP	Director	VUAFTC	(+856 020) 5818235

(Source: Ex-post Evaluation study, November 2007)

- (50) The FORCAP technology and methodology introduced by the project is still being used and adjusted. This includes the technical manual for forest plantation and management, plantation mapping and layout. Such manuals and textbooks are being revised and used by the following projects (1) Vientiane Upland Agriculture and Forestry Training Center, (2) Nam Ngum Watershed Management Project, (3) FORCOM projects and (4) some projects in the northern provinces of Bokeo, Luang Namtha, and Oudomxay.
- (51) During the site visit it was found that since project termination there has been inadequate coordination and cooperation mechanisms among AFTC and the local authority for continuing support of project outcomes especially the cooperation with PAFO and DAFOs in the two target districts, for the following reasons:
- (1) Inappropriate institutional arrangements after termination of the project especially the coordination and cooperation among NAFES, PAFO and DAFO;
  - (2) Limited budget resources and human resources in NAFES and Vientiane PAFO, Hinheup and Vangvieng DAFOs and there are no clear definitions of roles and responsibilities or the mutual benefits in terms of coordination and cooperation between the two organizations.
  - (3) Inadequate hand-over of full responsibilities for FORCAP outcomes were included in the target village cluster development program meaning that the continuing follow-up mechanism was missing and was not considered prior to project phase-out. Consequently, the project outcomes and main activities were not formally integrated into the cluster development programme. In order to sustain the project outcomes the regular monitoring and support by local authorities should urgently be taken into consideration.
- (52) The study team made a great effort to find as many as possible project impacts and trend of its sustainability. The following could be described as having some impact toward the achievement of the overall project goal; and are mainly:
- (1) The Governor of Vientiane province has officially announced that Vientiane province is to be the main source of commercial and industrial forest plantation and this is one reason why there are large areas of forest plantation established from 2003 up to 2007 by individual and private companies.
  - (2) Another impact, between 2003 when the project terminated and 2005 approximately 3 projects or 45 visitors altogether came to learn and share their experiences with the project in terms of (1) Village forest plantation extension, (2) seedling production techniques and methodology of establishing the forest plantation, and (3) on-the-job training on all FORCAP activities for future replication. The main visitors included: the LEAP Project, the Nam Ngum Watershed Development Project, and FORCOM. The table below shows the details of the projects/villages and of topics they have learned from FORCAP.

*Table 14: Visitors who came to learn from the FORCAP experience*

Date	Organization/section	No. of visitor	Topic of lesson learnt
Jul 31, 2004	LEAP—Lao Extension and agriculture project	35	Extension of villager
Dec 15, 2005	Nam Ngum watershed development project	8	Seedling production technique and establishing of plantation
Aug 4, 2005	FORCOM	2	Study tour on activities of FORCAP II
	Total	45	

#### **4.2.3 IMPACT IN TERMS OF ENVIRONMENTAL ASPECTS**

- (53) As of 2007 there are a total of 1,201 hectares under shifting cultivation remaining in Vientiane Province.

This is a dramatic reduction in both districts when compared with the 2003 statistics. Only 14.15% of shifting cultivation remains in the former FORCAP sub-project area. Both target districts have positive impacts towards creating a friendly environment after project interventions, For example, the protected forest cover in both districts increased by 149.99%; an increase from 9,469 ha in 2003 up to 23,897 ha in 2007 (Source: Ex-Post Evaluation, November 2007).

- (54) Up to date, the village forest lands are being granted as concessions to international and domestic private companies for establishing industrial tree species such as (1) rubber, (2) Cessna, and (3) *Jatropha curcas* (Mak-Yao), and if there is less attention paid to forest plantation management planning and there is establishment of monoculture plantation technique and land clearing this might lead to degradation of the environment and harm the watershed in the lower Nam Ngum basin.

#### **4.2.4 SOCIAL-CULTURAL ASPECTS**

- (55) Villagers prefer to receive a regular income from their established PSS. The introduction of inter-cropping techniques and methodology during FORCAP intervention were appropriate to villagers' custom. For example, growing rattan and other fruit trees in their agro-forestry plantation also allowed them to generate additional income and enough food and fruit for their families.
- (56) In some cases, for example, AFTC organized on-the-job training on charcoal making by inviting all participated villagers to attend, but after returning to their homes, they did not start making charcoal at all, the main reason behind this is that the activity is too new for them, and therefore, the initial support or hand-to-hand extension services by the organization concerned should be taken into consideration.

#### **4.2.5 ECONOMIC AND FINANCIAL ASPECT**

- (57) The villagers prefer the "2+3" benefit package introduced by private forest plantation, For example, "2" means that (1) the villagers provided their own land, (2) labor; and "3" means that the company provides (1) seedlings, (2) forest plantation input and (3) marketing support. The main species planted included rubber trees, Cessna, teak and other industrial tree species (*Jatropha curcas*-MakYao to be used for extracting bio-diesel as alternative substitute energy in the future).
- (58) We asked about the economic reasons why the villagers had stopped growing the types of tree species introduced by the FORCAP project (*Acacia mangium* with brown leaves and local species), the villagers gave the following reasons:
- Some villagers said that it took too long to wait for the returns from their forest plantation while the villagers needed subsistence and continuous income from their forest plantation establishment.
  - *Acacia mangium* with brown leaves always falls down when it grows bigger.
  - Inadequate market and processing demand for the above-mentioned fast growing species (*Acacia*)
  - The profit sharing between the villagers and DAFO should be revised, because (i) the villagers prefer to have 100% of the total sales after paying some fees to the government agencies concerned, (ii) the content of contract should allow villagers to thin their *Acacia mangium* after year three in order to wider canopy and allow native species faster growth.
  - Inadequate follow- ups support by local authorities both in technical advances and funding support.
- (59) There was a sufficient demand and market guarantee for the newly introduced commercial tree species namely (1) rubber, (2) Cessna, (3) teak, (4) *Jatropha curcas*-Makyao and other industrial and commercial trees. For example, rubber can be sold directly to China, and Cessna-oil can be processed locally and exported to central Asian countries such as Malaysia, India and other Islamic countries, and teak logs with a diameter greater than 20 cm can be sold directly in the domestic market. Given that a rubber tree plantation after 7<sup>th</sup> year can provide 70 kg/tree/year of resin or about 14 kg/tree per year of dry rubber, for one hectare the grower can get (450 trees/1ha x 40 Baht/kg x 14kg/tree/year) 252,000 Thai Baht per hectare or about 70,560,000 kip per year per hectare (Source: DAFO, Hinheup district, 2007). For this reason, the villagers at the former FORCAP target sub-project areas are very enthusiastic in establishing such plantations on their own land even it means replacing old established ones. In this regard, the local authorities concerned should regularly follow-up and monitor such changes more often.

#### 4.2.6 INDUSTRIAL TREE PLANTATION ESTABLISHED BY INTERNATIONAL AND DOMESTIC PRIVATE COMPANIES

- (60) The study team found that the majority of forest plantations in both districts were being established by local and international private plantation companies. The villagers are more enthusiastic about the commercial and industrial tree species offered by private forest plantation companies, and it is a new external factor that would have an impact on the project goal since its termination (see table below). The key informants from both districts reported that the total area of forest plantation had increased, but most of the planters were mainly private companies who utilized their owned technology and methodology on establishing individual forest plantations in Vangvieng and Hinheup districts.
- (61) The majority of tree species planted up to date are mainly (1) rubber, (2) *Aquilaria sp.* (Cessna) and (3) *Tectona grandis* (teak). A Deputy Head of Vangvieng DAFEO reported that the dynamics of the increasing number of plantations to date is due to the increasing number of wood industries in Laos and regional countries such as Thailand and China. There is a similar situation in the industries of rubber, perfume and timber for furniture.

Table 15: Summary of private forest plantation companies operating in the two districts

No.	Company name	Owner	Plantation Area (Ha)	Target village	Year initiated	Main tree species planted
<b>A Hinheup District</b>			<b>6,075</b>			
1.	Lao-Asian Ecology	Mr. Visith	380	Khonephouk	2004	Tectona grandis, Aquilaria Sp.
2.	Mr. Boun-Eu	Mr. Boun-Eu	295	Vangkhi	2005	Aquilaria Sp.
3.	The 1 <sup>st</sup> May Company	-	1,200	Naxam	2006	Rubber
4.	GO Company	-	500	Khonephouk	2007	Rubber, Tectona grandis
5.	Mr. Tumelor	Mr. Tumelor	100	Vangkhi	2007	Rubber
6.	Mr. Joun	Mr. Joun	100	Vangkhi	2006	Rubber, Aquilaria Sp.
7.	Keophosy Company	-	100	Naxam	2007	Rubber
8.	Mr. Mai Phommaly	Mr. Mai Phommaly	100	Vangkhi	2006	Rubber, Fruit tree
9.	KoLao Group	-	1000	Khonekeo, Vangkhi	2007	Jatropha curcas --Mar Yoa
10.	Biodiversity Development Co., Ltd	-	500	Khonekeo	2007	Rubber
11.	Agriculture Extension Co.,	-	500	Khonekeo	2007	Cassava, Mar yoa
12.	Dine-Far Development Co.,	-	100	Hinheup	2007	Rubber tree
13.	Chanthalom Co.,	-	100	Khonephouk	2007	Aquilaria Sp. or cassava
14.	The 17 February	-	100	Hinheup	2006	Rubber
15.	Mr. Boumlam	Mr. Boumlam	200	Vangkhi	2007	Rubber
16.	Duangchalern Co.,	-	200	Naxam	2007	Eucalyptus
17.	Mr. Yia Por	Mr. Yia Por	500	Naxam	2007	Rubber
18.	Mr. Souksavanh	Mr. Souksavanh	100	Khonephouk	2006	Tectona grandis
<b>B Vangvieng district</b>			<b>1,727.2</b>			
19.	Lilieng Power		227.2	Phouphong	2007	NA
20.	Thong Theun Lao-China		200	Houaypamom	2007	NA
21.	Lao BSS		200	Vangvieng	2007	NA
22.	KoLao Farm		1,100	Phonekham	2007	NA
<b>Grant total, ha</b>			<b>7,802.2</b>			
<b>Total area of FORCAP's intervention, ha</b>			<b>281.25</b>			
<b>% compared to former FORCAP intervention</b>			<b>2,674% increased</b>			

Source: Ex-Post Evaluation study, November 2007

#### 4.2.7 IMPACT IN TERMS OF ENVIRONMENT AND BIODIVERSITY

- (62) Another positive impact to the decreasing of degraded forest areas from project interventions

(concluded by the joint evaluation teams - comprised of both key personnel from JICA Laos, NAFES, PAFO, DAFO and other organizations concerned) are summarized below:

- All the community forest management area and individual forest plantations are well maintained by both AFTC and villagers and will be further utilized for educational purposes for biodiversity research in the future; Such achievements have a direct friendly environmental impact and watershed improvement in lower Nam Ngum Dam basin. One of the unique FORCAP strategies was the introduction of environmentally friendly technology such as the use of bio-fertilizer, composting or bio-pesticide extracted from charcoal production and such techniques and methodology directly contributed to the reduction of shifting cultivation in both districts.
- The forest native species planted since FORCAP intervention will be conserved and maintained as the main sources of mother-trees for future native forest seed production.
- However, the committee observed that the plantation of native species with fast growing tree (*Acacia holoseriacea* with brown leaves) is not so appropriate for both re-forestation and PSS purposes in these areas.

The re-forestation by mixed planting of *Acacia mangium* with native species introduced by the FORCAP project is appropriated, but the *Acacia mangium* trees must be thinned or cut out after three years in order to open up a larger canopy and allow native species such as *Pterocarpus macrocarpus*, *Azelia xylocarpa* to grow faster.

## **4.2.8 OTHER FACTORS THAT CONTRIBUTED TO POSITIVE AND NEGATIVE IMPACTS**

### **4.2.8.1 COMMERCIAL TREE SPECIES BEING PLANTED IN TWO PROPOSED DISTRICTS**

(63) It was observed that the following factors obstructed the maximization of the project impact:

1. *Pterocarpus macrocarpus* species (a hard wood with the local name of Mai Du) and *Azelia xylocarpa* (Mai Tae Kha) are slow growing trees and it takes quite a long time to get returns. The local farmers prefer quick returns and more frequent income rather than waiting for a long time. Both species are 1<sup>st</sup> and 2<sup>nd</sup> listed in the government as protected tree species which means that these species are not allowed to cut if its size is smaller than 190 cm.
2. Almost all farmers reported that *Acacia Holoseriacea* with brown leaves is not suitable for this area since the size of their canopy is too big so when the trees got five years old they frequently fell down. While, *Alstonia scholaris* (Mai Teen Pet) provides quite long-term economic benefits to the planters.
3. Inadequate market and processing of *Acacia* wood in these areas. There are problems with the marketing of *acacia* species and uses of its wood are limited. One villager reported that there are big furniture firms in Vientiane Capital purchasing this wood to make different kinds of furniture, unfortunately, since the AFTC buys some *acacia* wood from the villagers to make charcoal and the sharing is 70 and 30; this means that the villagers get 70% of the net profit and AFTC get 30%, but it seems that this process will soon be stopped due to the villagers' wish to retain all of their income.

### **4.2.8.2 POLICY ASPECTS**

(64) The Local Government as well as the PAFO of Vientiane province has allowed individuals, private companies and investors to receive land concessions for the establishment of forest plantations. This process started in 2004 and is still continuing in 2007. The major species being planted are: (1) rubber tree species, (2) *Aquilaria sp.* or *Cessna* and (3) *Tectona grandis* (teak) and other commercially-oriented species.

(65) The PSS of establishing forest plantation introduced by the project is now being copied by other international and local forest plantation companies, but there are slight differences from the FORCAP's methodology. This package called "2+3" benefit. Certainly, the profit sharing system (PSS) did not extend much in other villages, but in the surrounding villages, the villagers were very interested in this idea (25-75 shares between the villagers and the project). Some suggestions made by villagers during the ex-post evaluation by Lao MDC team are as follows:

- (1) Villagers expect to get a regular income and benefits from their established plantation in the short, medium and long-term.
- (2) The tree species introduced by the project (*Acacia holoseriacea* with brown leaves) was not appropriate for the local environment, because it has too large a canopy and tends to fall over when it is more than 2 years old.
- (3) The local species take a long time to generate any return on investment and the Government organization concerned (Forestry Section) has specified the legally allowed-diameter for logging of such local tree species (*Pterocarpus macrocarpus*) This should be at least 190 cm in

diameter..(Source: *Prohibited list-I for tree logging species, DOF 1995*).

- (4) There are inadequate market and processing opportunities for Acacia wood
- (5) The villagers are not willing to share their profit with DAFO, because villagers expend their effort and energy on the maintenance of their plantation and wish retain all the benefits for themselves.

#### 4.2.8.3 PREFERENCE OF INDUSTRIAL TREE PLANTATION

- (66) When we asked the villagers to give their opinions on and suggestions for the establishment of individual tree plantations, they reported the following (1) 41.15% of all the respondents (416 villagers) said that the project should support livestock and aquaculture cum-conservation and afforestation campaigns because the villagers wish to earn and generate income continuously, and (2) more than 136 respondents or about 13.45% were very keen on renovating FORCAP activities in order to meet local people's needs and expectations.

### 4.3 Sustainability of the Project

#### 4.3.1 CONTINUE SUPPORT FORCAP OUTCOMES

- (67) The study team interviewed some of the key personnel at AFTC in order to ascertain if any follow-up activities had been carried after the project termination. It was found that there were very little follow up actions implemented after 2003 and up to 2007. The table below summarizes some of these carried out by AFTC to maintain all project outcomes. The joint evaluation committees concluded during their site visit that the clarification of stakeholders' roles and responsibility for maintaining of FORCAP outcomes and achievements should be taken into consideration and put into the actions.
- (68) The main reason for the inadequate follow-up of FORCAP outcomes by authorities concerned is as follows: (1) the two DAFO concerned (Vangvieng and Hinheup) did not make a budget plan and did not submit their budget request to PAFO for follow-up action, (2) inadequate coordination and cooperation among all authorities concerned - NAFES, PAFO, two DAFOs, AFTC and others authorities concerned, (3) there were very little capacity building (training) for newly recruited staff.

*Table 16: Summary of follow-up actions from the termination of FORCAP project in 2003 to 2007*

Date	Training/monitoring topic	Target village	No. of participant
Dec 12, 2003	Monitoring the PSS plantation	Vangkhi	2 Hhs
Feb 30, 2004	Extension of agro-forestry	Vangkhi	1 Hhs
May 12, 2004	Extension of PSS plantation	Houayxi	2 Hhs
2005 to 2007	Purchase woods from PSS plantation for making charcoal	<ul style="list-style-type: none"> <li>o Houaypamom</li> <li>o Somsanouk</li> <li>o Houaymo</li> <li>o Nampath tai</li> </ul>	NA
2005 to 2007	Monitoring of cattle and goat raising activities	Houaypamom	3 Hhs

Source: AFTC follow up action from 2003 to 2007.

#### 4.3.2 SUSTAINABILITY IN TERMS OF ORGANIZATIONAL ASPECT

##### 4.3.2.1 THE TRANSFER OF FORMER FORCAP OUTCOMES TO AFTC (UNDER NAFES) AFTER PROJECT TERMINATION

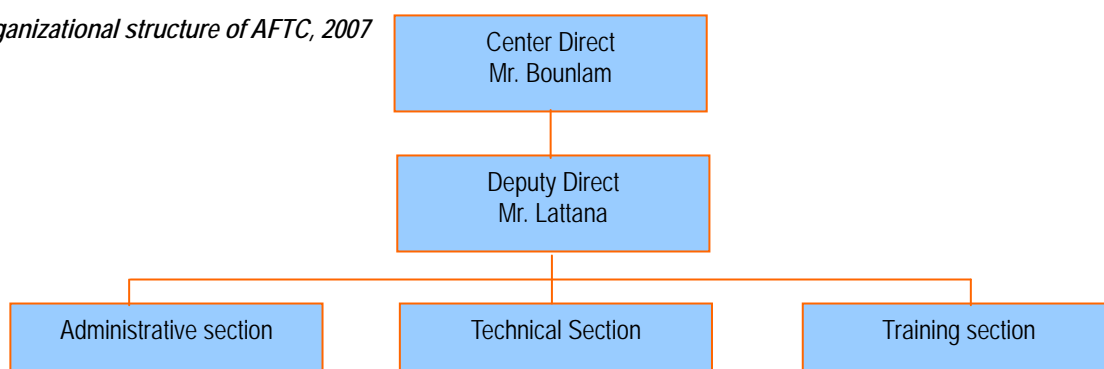
- (69) The project could have a better performance if there were good cooperation and coordination between central and local authorities. The roles, mandates and responsibilities for maintaining project outcomes were not cleared among the AFTC/NAFES and PAFO and DAFOs. Consequently, it was observed that inadequate attention had been devoted by both parties for maintaining the project outcomes after its termination.
- (70) The AFTC is under the organizational structure of NAFES, with the main objective to provide technical and managerial training related to agriculture and forestry officers and villagers nation-wide and play an important role in enhancing GoL staff knowledge, capacity and skills in terms of agriculture, forestry and other related subjects. (Source: Roles and Responsibility of AFTC). Therefore, the follow-up actions and maintenance of the former FORCAP outcomes and initiatives should fully be the responsibility of PAFO and the two target DAFOs where the sub-project areas were situated.
- (71) In terms of the AFTC's activities and outcomes which the local authority concerned (including DAFO and PAFO) agreed to follow (as agreed by the joint evaluation committee during the field visit) the following actions should be considered in order to enhance the sustainability of the project outcomes: (1) to consider - the budget for DAFO staff to follow-up FORCAP outcomes, (2) to officially hand over the-

follow up responsibility to the local authority for continuing the maintenance of the project activities, moreover the understanding in terms of both roles and responsibilities between the local authority and AFTC should take place and be agreed upon, (3) to involve former counterparts in the following-up of project outcomes and activities after its termination.

#### 4.3.2.2 AFTC PERSONNEL UP TO DATE

- (72) All former FORCAP key personnel have moved back to their original offices, only two people who were familiar with FORCAP's activities and outputs. The existing FORCAP outcomes and remaining activities have been handed over step-by-step to new recruited staff. FORCAP's activities which are being continued and maintained by the new AFTC personnel are (1) mushroom production demonstrated by AFTC to be a great success. Many villagers are buying mushrooms and learning how to produce mushrooms by themselves, (2) vegetable growing using FORCAP methodology and technology as well as utilizing bio-fertilizer, fiber, wood oil extracted from charcoal making and other techniques being replicated by the newly formed team. (3) Nursery activities also producing various tree species such as *Tectona grandis* (teak), *Jatropha curcas* (Mak Yao) and other ornamental species. (4) Forest plantations also still continue growing at a rate of two hectares per year by planting native species such as *Pterocarpus macrocarpus* (Mai Du) and *Azelia xylocarpa* (Mai Teae Kha); (5) the center now demonstrates aquaculture using strong catch-nets across the lake and other activities.
- (73) The job description for each section of AFTC shown in the organization chart below has not yet been officially approved by NAFES. The center is managed by Mr. Bounlam who is responsible for overall managerial and technical functions within the center, in the meanwhile, Mr. Lattana is playing an active role in helping the General Director, see figure below:

Figure 4: Organizational structure of AFTC, 2007



(Source: AFTC report No 0023/2007)

- (74) Based on the above mentioned AFTC organizational structure it is noticed that, there are neither (1) marketing nor (2) information technology management nor (3) curriculum development section/unit. In this regard, the key AFTC personnel reported that the number of outside organizations who come to use the center's facilities seem to be decreasing from time to time, due to a lack of proper and effective marketing and promotional mechanisms using the available local media and the internet. Consequently, this section should be seriously and urgently taken into account in order to sustain and maintain all project outcomes (see table below).

Table 17: List of AFTC personnel (2007)

No.	Name and surname	Responsibility	Highest education	Experience	Organization
1.	Mr. Bounlam	Director	Master's degree	8 years	GOL
2.	Mr. Lattana	Deputy director	Higher diploma	8 years	GOL
3.	Mr. Khamsana	Head of admin	Diploma	2 years	GOL
4.	Mr. Loryang	Financial staff	Higher diploma	2 years	GOL
5.	Ms. Inthanou	Admin staff		5 years	GOL
6.	Mr. Somchay	Accountant staff	Diploma financial	in 2 years	Hired staff
7.	Mr. Visith	Livestock technical staff	Diploma	6 years	Hired staff
8.	Mr. Kharn	Forester	Higher diploma	1 year	Hired staff
9.	Mr. Savath	Agro-culture technical staff	Diploma	1 year	Hired staff
10.	Mr. Lamlieng	Forester	High diploma	1year	Hired staff

No.	Name and surname	Responsibility	Highest education	Experience	Organization
11.	Ms. Bountheun	Agriculture technical staff	Diploma degree	1 year	Hired staff
12.	Ms. Souda	Agro-culture technical staff	Diploma degree	1 year	Hired staff

(Source: AFTC personnel statistic, 2007)

#### 4.3.2.3 SELF-SUFFICIENCY OF AFTC

- (75) From 2003 to 2007 the total number of participants who participated in the training courses using AFTC training facilities were 988 staff. These participants from only two main GoL organizations namely the Lao Extension and Agriculture Promotion (LEAP), and the Nam Ngum Basin Development Project.

*Table 18: Workshop/seminar service of AFTC*

Training topic	Date	No. of participants	Organization
Nam Ngum basin development	Jun 16-26, 2004	25	NBDP
Agriculture extension	Jul 28-Aug 8, 2004	35	LEAP
Agriculture extension	Aug 23, 2004	17	NBDP
Sustainable upland agriculture	Nov 1-12, 2004	22	NBDP
Management improve knowledge	Jan 24-28, 2005	49	NBDP
Lao extension system manner	Feb 28-Mar 4, 2005	39	NBDP
Agriculture extension	Apr 19-29, 2005	35	NBDP
Ethnic women's poverty reduction	Jun 14-15, 2005	15	NBDP
Improving of strategic development project	Jun 22, 2005	75	NBDP
Agriculture extension	Jun 24, 2005	48	LEAP
Nam Ngum basin development	Jul 12-15, 2005	40	NBDP
Proposal writing	Jul 20-26, 2005	42	NBDP
Extension of need evaluation	Aug 31-Sep 2, 2005	14	NBDP
Gender balance study	Oct 10-12, 2005	40	NBDP
Gender balance	Oct 10-13, 2005	36	NBDP
Agriculture extension	Nov 14-18, 2005	45	LEAP
Extension of provincial and district staff	Nov 14-18, 2005	32	LEAP
Lao extension manner	Nov 21-25, 2005	36	NBDP
Proposal writing	Jul 20-26, 2005	30	NBDP
Style of extension	Jul 12-15, 2005	45	NBDP
Nam Ngum basin development	Dec 30-Jan 3, 2006	37	NBDP
Data research	Aug 6-9, 2005	20	NBDP
Nam Ngum basin development	Nov 16-19, 2006	46	NBDP
Nam Ngum basin development	Feb 27-Mar 1, 2007	26	NBDP
Nam Ngum basin development	Jan 31-Feb 2, 2007	109	NBDP
Agriculture extension	Mar 20-23, 2007	30	LEAP
<b>Total</b>		<b>988</b>	

(Sources: AFTC training facility service summary, 2007)

- (76) The AFTC staff mentioned that the promotion and marketing of AFTC center was not well-known by other donors and technical cooperation projects in Laos and up to date there were very few organizations and agencies coming to use the center's facilities. The total income generated from AFTC facilities and services from 2003 up to 2007 is 123,731,000 kip or about 12,887 US Dollar in total (Exchange rate: 9,600 kip per 1 US Dollar, November 21, 2007).
- (77) Table 19 below shows that more than 53.85% of the entire income was generated from AFTC facilities and services (room rental for training courses, technical meetings and workshops) and the rest 46.15% was earned from all the activities in AFTC center such as charcoal, vegetable, mushroom and so on. This means that the center has many alternatives and potential for income generation, furthermore, the center can generate even bigger revenue in the future if all facilities and income generation activities were improved and developed effectively.

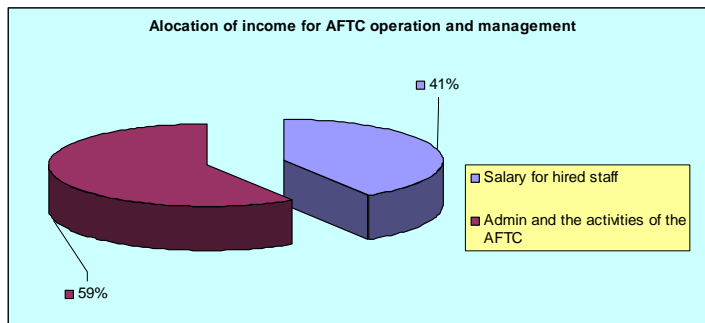


**Table 19: Source of income from AFTC facilities and services**

Source of income	2004 to 2005	2005 to 2006	2006 to 2007	%
5 training courses	20,582,000	-	-	53.85 %
18 training courses	-	22,665,000	-	
6 training course	-	-	13,855,000	
Activities of center	7,602,000	27,433,000	31,594,000	46.15 %
<b>Total</b>	<b>28,184,000</b>	<b>50,098,000</b>	<b>45,449,000</b>	
		<b>Grant total</b>	<b>123,731,000 kip</b>	<b>100%</b>

Source: AFTC income record, 2003-2007

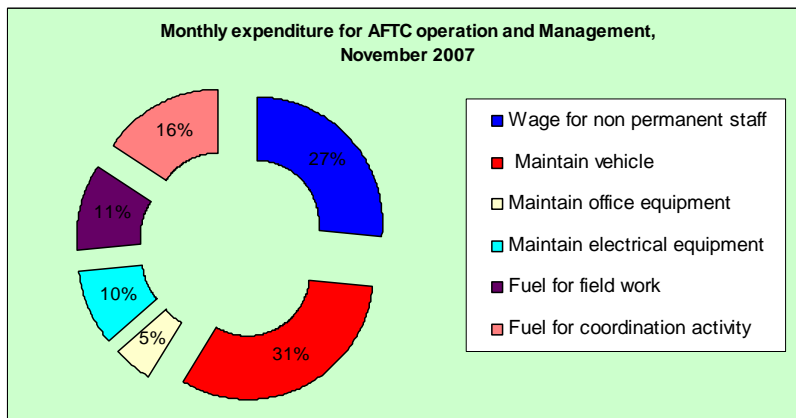
(78) Allocation of earned income for AFTC daily operation and management: The figure below illustrates the allocation of total income generated from facilities and services, and the sales of all AFTC activities. The key personnel at AFTC reported that more than 41% of the entire income was used for paying monthly salaries to all the staff are employed by the center and the rest 59% was for administrative and some activities undertaken in the center. In this regard, the center did not clearly describe the precise amount of revenue allocated for follow-up of former FORCAP outcomes and activities. In this regard, the key personnel involved in the allocation of such revenue did not mention any allocation of an amount for curriculum development and information technology management.



**Figure 5: Budget allocation for daily AFTC operation and management**

In order to enhance the project impact and sustainability the careful utilization of generated income from AFTC services should take into consideration.

(79) The study team made great efforts to find as many as possible examples of the project impacts and trend of its sustainability. The following classification of expenditures could predict the impact and sustainability in terms of the achievement of the project's overall goal.



**Figure 6: Monthly expenditure for AFTC Operation and Management**

Figure 6 shows that almost 31% of the entire expenditures were used for maintenance of the center's machines and vehicles, 27% went on wages and salaries of the hired staff. The expenditure portion used for maintenance of office

equipment' was only 5% and this seem to be too little, because during the study it was found that almost all of the office equipment were not functioning as a result of an insufficiency in the budget allocation for maintenance purposes. It is recommended at least 40% of the entire expenditure should be allocated for the maintenance of the office equipment and AFTC promotions in order to make use of all the office tools and equipment for training and syllabus development for extension activities and to increase sales from center facilities and services. The impacts and sustainability after project termination would be greatly improved if the AFTC could generate regular revenue from their facilities and services and properly maintain all costs for their operation and administration.

(80) Some AFTC's facilities have been utilized effectively such as nursery facilities and other equipment. There are some private companies which have established extremely large areas of industrial tree plantations mainly of rubber trees, Cessna, Jatropa Curcas--Mak Yao and other types in the two districts; these can be business opportunities for AFTC to intervene and provide its services for producing quality seedlings for all those companies and for their mutual benefit and to help one another.

### **4.3.3 SUSTAINABILITY IN TERMS OF ENVIRONMENTAL ASPECTS**

- (81) The trend of using new commercial tree plantation species that can give quicker returns on investment, it is much shorter than the local species planted during the FORCAP intervention. New species are: (1) rubber tree, (2) Cessna, (3) Tectona Grandis--teak, (4) Jatropha Curcas (Mak Yao--to be used as bio-diesel) will be spread over the two target districts. The following considerations for future environmental sustainability should take place, these are mainly:
- The appropriate forest plantation management planning directly guided by targets of DAFO/Vientiane PAFO is highly recommended, so land clearing in large areas and utilizing mono plantation methods with single species in those large cleared areas by private companies or individuals should be avoided, in this regard, careful preparation of forest plantation management plans should be drawn up and closely followed-up and monitored by the district authorities concerned (DAFO).
  - Consideration of civil culture, ecological and environmental factors should also be included in the plantation management plan. Therefore the mosaic forest plantation design should be considered and the leaving of a strip of natural forest along natural streams and temporary drainage. Moreover, appropriate slopes for establishing forest plantation should be taken into consideration.
  - The villagers are not satisfied with their plantations, because the planting of fast growing and native tree species do not provide a regular benefit to their households and it seems to be too long before they can benefit from their plantations, the villagers might change to plant another tree species that could respond to their basic needs and continue to generate income for improving their livelihoods.
  - Acacia species with brown leaves always die after three years, but with Acacia mangium another fast growing tree there is a wait of up to 15 years (according to the contract between DAFO and individual plantation owners) and they have to spend quite a long-time waiting to sell their acacia wood; consequently, the villagers are disappointed and not satisfied because of losing time and labor for maintaining their plantation. Due to inadequate market accessibility for Acacia mangium wood, the villagers might not be able to maximize their earning from their plantation even after the 15 year contract.

### **4.3.4 UTILIZATION OF THE CENTER'S FACILITIES AND EQUIPMENTS**

- (82) It was found that most of the facilities and equipments provided during the FORCAP intervention are being used for carrying out the current AFTC's activities and for maintaining the project outcomes. However, the percentage of usage of those facilities and equipment is not so high, because of the shortage of financial support from central government for running all activities.
- (83) Some equipment especially the machinery for making furniture is not utilize at all, this is because the local government is not authorized to that machinery for business purpose and there is no expert on operation of this machine. It is required to hire additional staff for this specific activity.

### **4.3.5 MARKETABILITY AND ECONOMIC TERMS**

- (84) Currently, the market for Acacia mangium is not well settled. According to the report of the General Director of AFTC by the next seven and half years (after the completion of the PSS contract) suitable markets and processing mechanisms for acacia wood will have taken place. There is a market demand for Acacia mangium trees, but only in Vientiane Capital and it is not economically profitable, because of transportation costs. The villagers reported that Acacia mangium can be sold as fire-wood and poles but the earnings are too small compared to the sale of natural wood species such as Mai Teui, given that one La (that equivalent to one cubic meter) of Mai Teui is about 100,000-130,000 kip/La, but for Acacia mangium the selling price is only 20,000-40,000 kip/La.
- (85) During the site visit and joint evaluation committee workshop at AFTC in December 2007, the AFTC will demonstrate how to process acacia wood for making furniture using some wood processing machines that are available in AFTC since project termination and this kind of actions could maintain more impact and sustainability of the project.

### **4.3.6 INSTITUTIONAL AND MANAGEMENT ASPECTS**

- (86) Inadequate in terms of the handover of all responsibilities to local authorities who has full power for continuously maintaining all project outcomes after project termination. The DAFO understood such project outcome were the responsibility of AFTC or NAFES. Unclear mandate, and responsibilities of all stakeholders made difficulties for maintaining FORCAP outcomes.

- (87) The study team found that there are no representatives from neither districts included in the AFTC's organizational structure (see figure 4); The project outcome can be more sustainable and have a greater impact if he/she can directly coordinate and cooperate with AFTC for the continuing maintenance of all project outcomes and the remaining project activities as well as continuing to support the income generation groups in target villages.

#### **4.3.7 CONSIDERING THE FINANCIAL ASPECT**

- (88) The financial aspect is considered as another factor of project sustainability. The methodology and technology was not extended due to an insufficiency of financial availability (reported by DAFO and key personnel at AFTC), for example, there were very few action carried out since project termination, and the center receives financial support of 200 million kip per year. Consequently, the villagers could not get any financial support for extending their individual forest plantations after the project was phased out.

## **4.4 Analysis of Factors of Impact and Sustainability**

### **4.4.1 FACTORS PROMOTING AND INHIBITING IMPACT AND SUSTAINABILITY**

Below is the description of some factors that promote impact and sustainability of the FORCAP project.

#### **4.4.1.1 POLICY ASPECT**

- (89) The afforestation methodology and technology is relevant to the National Growth for Poverty Eradication Strategy (NGPES) and the five year plan for socio economic development of the country. Two of Four main goals of the Ministry of Agriculture and Forestry are (1) sustainable forest management, and (2) stabilization of shifting cultivation.;
- (90) In addition, recently the Governor of Vientiane province announced that the two districts (Hinheup and Vangvieng) will be the growing territory for industrial and commercial tree plantations. This policy implementation would directly contribute to increase the forest cover in both target districts.

#### **4.4.1.2 TECHNICAL ASPECT**

The methodology and technology introduced by FORCAP appropriate for local implementation. Technical manuals and textbooks are available. AFTC has the responsibility to provide services as technical training center in agriculture and forestry sector, and some methodologies and technologies were transferred and utilized by different projects, including FORCOM.

### **4.4.2 FACTORS INHIBITING IMPACT AND SUSTAINABILITY**

Below is the description of some factors that inhibit impact and sustainability of the FORCAP project.

#### **4.4.2.1 INSTITUTIONAL ASPECT**

- (91) Inadequate institutional arrangements after project termination. Almost all project staffs were assigned to new positions. This arrangement affects on continuous implementation of project's outcomes. Moreover, there are inadequate coordination and cooperation between central and local authority for follow up and maintain project outcome after its termination. Consequently, there were also inadequate monitoring and evaluation by local government.

#### **4.4.2.2 FINANCIAL ASPECT**

- (92) The financial support was considered as the key factor in the promotion of the achievement of the project overall goal. Central government allocates very limited amount of fund for implementation of their activities.
- (93) Local government did not allocate any fund for monitoring the outcomes of the project, thus the extension staff could not continue monitoring the activities.

## **4.5 Conclusions**

The Ex-Post Evaluation Study of FORCAP was completed in accordance with the TOR; therefore all the questions which needed to be clarified have been settled and documented. It is concluded that FORCOM's methodology and technology of forest conservation and afforestation is in line with the National Growth for Poverty Eradication Strategy (NGPES) and five-year plans for socio-economic development of the country. The FORCAP's exercise was part of two main goals that was set by the Ministry of Agriculture and Forestry, namely sustainable forest management, and stabilization of shifting cultivation. The methodology being practiced is also relevant with the conditions of the villages. The forest cover in the project area has significantly increased, and shifting cultivation in

target area has also dramatically decreased. The income generation activities such as agro-forestry continues in practice and the participating villagers continuously generate income from those activities, and living standard of people are being improved.

However, lack of extension mechanism and inappropriate allocation of fund by the government authorities is concerned. Some FORCAP's activities such as the individual plantations, community forest plantation, and some income generation activities are not extended to other villages as expected.

Other external factor that influences the increase of forest cover in the target area is the government policy. The local authority allocated large area of land to private companies to establish the industrial plantation as a concession. This policy might have a positive impact in increasing the rate of forest cover, but might give a negative impact on the surrounding natural environment because of monoculture technology being used in this practice.

## **5 RECOMMENDATIONS AND LESSONS LEARNT**

### **5.1 Recommendations**

(94) In order to maintain the FORCAP's outcomes and expand its activities to other areas, it is strongly recommended to take the actions as recommended below:

#### **5.1.1 MEASURES TO BE TAKEN BY NAFES**

(95) As AFTC has the mandate in providing capacity building services through various technical and managerial training to all civil servant and communities on agriculture and forestry, the best practices of forest plantation should be deliberately disseminated and extended to all related organizations, companies, projects, group of farmers, and individuals.

(96) All the methodology and technology developed by FORCAP should be adapted and improved as tools for technical guidance for extension staffs.

(97) The NAFES should clarify future collaboration and coordination between AFTC and the local authority and consider involving their mandate and services for continued support and maintenance of FORCAP outcomes. In this regard, the NAFES together with PAFO should agree upon the forest plantation policy of Vientiane province and classify the different zones of afforestation, such as forest protection areas, forest conservation, regeneration forest, agriculture land and areas to be allocated for industrial tree plantation should be taken into consideration. In addition, the study of the civil culture, ecological and environmental consideration should take place.

(98) The individual household forest plantations need long time process to get returns, therefore, it is advised to consider the alternative income generation methodologies for daily, weekly, monthly and annual basis.

(99) NAFES should ensure a necessary fund for smooth operation of AFTC activities.

#### **5.1.2 MEASURES TO BE TAKEN BY AFTC**

(100) All FORCAP's technical and methodological manuals related to forest plantation, PSS, IG and others should be further improved and developed as teaching syllabus for future extension and promotion.

(101) In order to enhance the self-reliance and sustainability of the center, proper manage of revenue generated by AFTC should be taken into consideration. It was found that, of all the revenue generated from center facilities services, 41% was allocated for staffing, and the rest 59% was spent directly in the administrative use. It is recommended that at least 30% from the revenue should be allocated for forest plantation and 20% should be allocated for curriculum development and strengthening of center instructors.

(102) Embed extra forest plantation marketing unit within the existing organizational structure of AFTC, therefore one of the main duties and mandate of such a unit should be continuously searched for current demand and needs related to forest plantation products.

(103) The income generation course as well as the introduction to the spirit of entrepreneurship concepts should be provided to all managerial AFTC functions. Moreover, the provision of either national or international training to key center personnel with regards to market-oriented operation and management should be taken into consideration.

- (104) The representative from both districts should be included in the organizational structure of AFTC, because he/she would play an important role in coordination and cooperation with the center for maintaining all of the project outcomes and activities as well as the continuous support of income generation groups in target villages.
- (105) The AFTC should continue monitoring and coaching existing potential income generation activities such as Posa (mulberry) paper making, weaving and textiles; and at the same time, renovate non-practiced income activities such as stove making, charcoal production using *Acacia mangium*.
- (106) Promotion of fish processing in the target villages located along the Nam Ngum basin in order to increase the value of product is required.
- (107) Besides being a provider of facilities and service the AFTC should review improving the effectiveness of the remaining existing facilities such nursery spot, charcoal and Posa handicraft making in order to attract the users as well as to gain income by supplying seedlings in order to generate additional income for maintaining the center's expenditures.

### **5.1.3 MEASURES TO BE TAKEN BY VIENTIANE PAFO/ VANGVIENG AND HINHEUP DAFOs**

- (108) The provincial and district forest plantation policy and development program should be shared with AFTC for close cooperation and coordination. Moreover, the exchange workshop in terms of information and data regarding individual forest plantations in both districts (Vangvieng and Hinheup) and AFTC for future extension and collaboration should regularly take place. Clear roles and responsibilities between PAFO/DAFO and AFTC should be settled, in this regard, the regular follow up and monitoring of the individual plantation operations and maintenance should take place.
- (109) Marketing and processing support to target village forest plantations should be taken into consideration. DAFO should find out and allow private processing factories to invest and run their business there. The factories should have the equipment with machines that are appropriate for the processing of wood of small diameters for making furniture and other wood products.
- (110) Allowing individual forest plantation owners who signed the PSS contract with DAFO to thin their *Acacia mangium* trees in order to allow native species such as *Pterocarpus macrocarpus* and *Afzelia xylocarpa* (Mai Tae Kha) to grow up faster.
- (111) The PAFO should consider the two target DAFOs (Vangvieng and Hinheup) to be representative and include them in the organizational structure of AFTC, because he/she would play an important role in coordination and cooperation with the center for maintaining all the project outcomes and activities as well as the continuous support of income generation groups in target villages.

### **5.1.4 MEASURES TO BE TAKEN BY TARGET VILLAGE AUTHORITY**

- (112) The village authority should regularly follow-up all individual household plantations and not allow them to clear their own plantation area and replace them with other new species unless they had permission from the district and authorities concerned.
- (113) The land approved for concession in the village should avoid conflict with individual household plantations, and conducting assessment in advance before issuing approval is highly recommended.
- (114) Encourage individual household plantations to make charcoal from their own plantation especially the using the fallen acacia species with brown leaves.

## **5.2 Lessons Learnt**

- (115) **Community Forest Conservation and Management:** The study team found that in order to sustain community forest plantation and management, the following lessons learnt should be considered:
  - The objective of forest plantation establishment should be clear and agreed upon among the entire communities such as areas to be planted as watershed protection, for increasing the productivity of non-timber forest products, etc.
  - Using individual villager's allocated land for planting native tree species for the purpose of increasing forest cover areas was not appropriate. Instead, using the village forest regeneration and degraded forest land for the above-mentioned purposes can be acceptable.
  - Regularly conduct forest awareness campaigns and let people be aware that the hard wood and valuable native tree species like *Pterocarpus macrocarpus* and *Afzelia xylocarpa* will take at least 50 to 100 years to reach maturity and the planters might not get any benefit from their efforts, therefore, they should think about their next generation. In this regard, the parent or future grand-parent

should be aware that their future generation will use and sell wood and have better life because of their efforts devoted to the planting such hard wood.

- Another campaign should let people know that early logging of hardwood like the above-mentioned native tree species is against the Forest Law of Lao PDR.
- The school nursery should be refreshed and *Acacia mangium* should be replaced with other species such as *Tectona grandis* or eucalyptus that can be used for life-security and income generation in the future.
- Regularly mobilize the target villages to conserve the watershed area and community forest.
- Organize village volunteer or some villager to look over illegal conserved forest logging and share a % of the fine with the reporter.

(116) ***Individual forest plantation:*** the profit sharing system for individual forest plantations will be more appropriate, if consideration is given as to how the owners can regularly benefit from their plantation. These are summarized below:

- For the individual plantation owners the planting of native species like *Pterocarpus macrocarpus* and *Afxelia xylocarpa* using the profit sharing system (PSS) for a 15 year contract was not so appropriate especially for poor villagers, because they would rather have a quick and regular income from their land.
- Some villagers are not fully willing to share their profit with the DAFO and would like to keep all the benefit by themselves; consequently, they might clear such a plantation and start with new species (such as eagle wood or *Cessna*, rubber trees or other commercial/industrial tree species) instead; therefore the PSS contract between DAFO and individual forest plantation owners should be revised, at least after the third year of planting to allow villagers to thin their *Acacia mangium* in order to achieve wider spacing and to allow native tree species faster growth. Therefore, replace with *Aquilaria* sp. (or *Cessna* species) or rubber trees for better future income earning.
- Considering of the market availability or the processing of *Acacia mangium* or other fast growing tree species before entry to the extension or encouraging other villagers to grow them.

(117) ***Income Generation activities:*** The income generation activities should consider the improvement of the soft components as well as local knowledge and their skills on marketing and micro- entrepreneurial competency. The following considerations should take place, mainly:

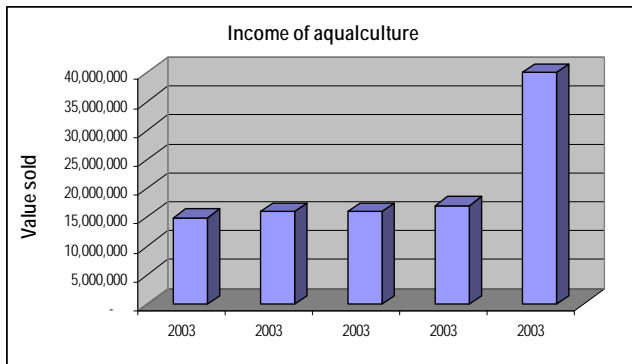
- Besides such income generation activities such as Posa paper making, weaving and textiles, commercial production of agro-forestry, aquaculture and livestock extension should be supplemented. The Posa (mulberry) paper making, weaving and textiles is required product improvement in order to compete with other producers and satisfy the clients' demands. The sustainable raw material supply should be taken into consideration.
- It is noticeable that some villagers are in debt and this necessitates a fund for agro-forestry running; hence, a village development fund should be established (some villages don't have any funds available); The study team found that in the case of Vangkhi village the revolving fund should be further replicated in those FORCAP's target villages as an source of finance sources for expanding and broadening project impact and sustainability.
- Integrated plantation by inter-cropping with cash crops and industrial trees such as corn, pineapple, *Cessna*, rubber trees, and other valuable species is recommended.

## 5.2.1 CASE STUDY

### 5.2.1.1 AQUACULTURE- CUM-INDIVIDUAL FOREST PLANTATION

(118) Mr. Khamsavai was considered as the best model for the practice of FORCAP income generation activities. He lives in Houayxi village, which is one of the 15 target villages supported by FORCAP. He still owns an individual forest plantation of 1.3 ha in which he planted more than 2,000 seedlings in total, 750 seedlings of which were *Acacia mungium* with brown leaves, 750 seedlings of *Pterocarpus macrocarpus* (Mai Du), and 500 seedlings of *Afxelia xylocarpa* species (Mai Tae). Before the project, the village located in the Nam Ngum basin in the direction of the former Special Administrative Zone (now Vientiane province) was defined as a poor village within Vangvieng district. From the study team's point of view, he is the best example of aquaculture cum-individual forest plantation practitioner in the village and he is considered as a better model farmer than the other 8 individual aquaculture-cum-forest plantation farmers in the village and other nearby villages.

Figure 7: Annual income generated from aquaculture



(119) The plantations of the above mentioned native species surrounding and along the fish-lake directly and effectively maintain the watershed and eco-system and at the same time he can benefit from aquaculture by selling fish and very soon he will benefit from selling the hard wood from the plantation. He started this aquaculture in the beginning of 2003 by releasing about 7,000

to 8,000 fingerlings and is still continuing He is will certainly continue this activity since the natural environment and watershed conditions surrounding the lake (the lake area is around 3 hectares) are gradually improving and getting better for aquaculture.

(120) Such technology and methodology (aquaculture-cum-individual forest plantation) is not at all difficult and quite similar to a real natural lake and very suitable for aquaculture, he added, because the native forest cover surrounding the lake maintains the ecological system for aquatic fauna. Initially, he nurses his fingerlings for the first 3 months then releases them to the natural lake. Then, 7 months later he can sell directly to the market in Vangvieng district and a nearby district.

(121) The cost of this kind of aquaculture-cum-forest plantation are rather low when compared to that of a man-made fish pond and requires only 3 sacks of compound feed, and 2 sacks of paddy rice. Only a small amount of equipment is needed.

(122) He has benefited from this aquaculture-cum-individual forest plantation by about 15 to 17 million kip or about 2 to 3 tons of fish annually. Recently, due to the increase in the demand for fish, he has increased the amount of fingerlings from 8,000 to 20,000, so he is expecting an income by the end of the of 40 million kip or about US\$40,000 In addition, Mr. Khamsavai said that in several years time he is expecting to get an extremely large amount from the sale of the hard wood from his individual forest plantation as well as from native species like *Pterocarpus macrocarpus* (Mai Du) and *Afxelia Xylocarpa* (Mai Tae Kha).

#### 5.2.1.2 CASE STUDY ON: INCOME GENERATION MODEL "MULBERRY PAPER WEAVING".

(123) Posa (mulberry) weaving is one of the income generation models of FORCAP, allowing the target villagers to generate alternative incomes instead of pursuing slash and burn cultivation and long-term incomes from individual plantations. Houaypanmom village is one of 15 target villages where Posa weaving is still going on. From the study team's point of view, Posa weaving of the women's group in this village is a better model than others in the sub project area and Ms. Sengthong is a good example of this.

(124) Ms. Sengthong is considered as the best Posa (mulberry) handicraft weaver of the entire target village and is able to produce 9 different types of weaving. Before the project, her household did not earn any supplementary income and after the peak season or after the rice harvest Ms. Sengthong and almost all the women in the village had nothing to do; however, since the advent of the project, the Posa handicraft making and weaving was introduced and considered as a supplementary income source for the women. It is apparent that, after a certain time the women's groups have been gradually generating additional income for their families after the peak season.

(125) The project taught her the following types of Posa (mulberry) handicrafts namely: (i) Posa sewing, (ii) Posa paper making, (iii) Posa textiles including the following products:

- Cushions of three different sizes: the biggest size of 83x130 cm; medium size of 50x70cm and the smallest one for glass or cup coasters of 31x42cm.
- Tote-bags of 3 sizes: large size (merchant use), medium (party use) and small (Wallet use).

(126) During the project operations, there were 3 major buyers as their main clients who - purchased the products, namely: (i) JICA, (ii) some hotels in Vientiane Capital and (iii) Lao-ITEC and she could sell at least 90 pieces of Posa handicraft per year thus she could generate an average income of US\$ 1,525 per year, for more details see the table below:

*Table 20: Summary of household income generation from mulberry paper weaving*

Year	Cushion						Tote-Bag						Grand total (US\$)			
	Big cushion	Price per unit	Value (US\$)	Small cushion	Price per unit	Value (US\$)	Big tote-bag	Price per unit	value (US\$)	Medium tote-bag	Price per unit	value (US\$)		Small tote-bag	Price per unit	value (US\$)
2000	15	25	375	16	6	96	28	19	532	25	16	400	27	5	135	1,538
2001	18	25	450	19	6	114	25	19	475	25	16	400	27	5	135	1,574
2002	17	25	425	20	6	120	26	19	494	25	16	400	28	5	140	1,579
2003	18	25	450	21	6	126	20	19	380	25	16	400	25	5	125	1,481
2004	20	25	500	25	6	150	20	19	380	25	16	400	26	5	130	1,560
2005	19	25	475	20	6	120	20	19	380	25	16	400	27	5	135	1,510
2006	18	25	450	20	6	120	20	19	380	25	16	400	26	5	130	1,480
2007	18	25	450	20	6	120	20	19	380	25	16	400	25	5	125	1,475
Total	143		3,575	161		966	179		3,401	200		3,200	211		1,055	12,197

(127) Between 2000 and 2003, Posa weaving and textiles by the women's group was supported by the project and almost all the products were purchased by JICA, some hotels and sold at Lao-ITEC. Since project termination in 2003 the women's group has continued to sell their products directly to hotels in Vientiane capital and at Lao-ITEC by themselves. Ms. Sengthong is still earning a big portion of her income and she is satisfied with these activities and willing to carry on and attempt to improve her product from time to time depending on the requirements and competition in the real market.

### 5.3 Follow-up Situation

The authorities concerned should regularly follow-up the situation as follows:

- The joint evaluation committee requests the JICA Laos Office to provide additional support for income generation activities that can directly enhance the AFTC's operations and enable the center to be able to maintain all FORCAP outcomes effectively. The assistance should include (i) on-the-job training on how to produce quality white charcoal; (ii) provide other training on how to process Acacia mangium wood by using machines that are available in AFTC; (iii) support establishing mulberry plantations (Posa) in order to provide raw material for Posa activity.
- Provide special training on center management, marketing, and assist in promoting AFTC activities and services in order to secure AFTC income and be able to continue maintaining all project outcomes in a sustainable manner.
- The provincial authority is giving land concessions to private companies and individuals for the establishment of commercial and industrial plantations on larger areas and this might overlap some villager's existing plantation (former FORCAP activities); the following intervention by the authorities concerned for following up or solving any land conflict that might occur, these are mainly: (i) checking if the process of land concession had followed the GOL investment procedures or not; (ii) checking the companies personnel qualification for establishing industrial tree plantations, (iii) checking whether the companies coordinate and cooperate with the local village authorities concerned prior to receiving land concession certification.
- Similar extension activities being carried out by Nam Ngum Watershed Management Project in their target areas, this project should consider FORCAP's methodology, technology and experience for development in their target areas (Vangvieng and Hinheup districts)

### 5.4 Annexes

- (1) Evaluation Grid
- (2) Logical Framework
- (3) Data collection tools (Questionnaire, forms)
- (4) List of people met
- (5) Tentative Schedule of Implementation



# Annex 1: Evaluation Grid

EX-POST EVALUATION GRID; FORCAP 2007--VIENTIANE PROVINCE, LAO PDR						
Supported by: JICA Laos						
Evaluation Questions			Achievement Criteria/Measures	Data needed	Data Sources	Data Collection Methods
Criteria	Main Question	Sub-Question				
IMPACT	(1) How far has the overall goal achieved since the terminal evaluation?	- Do the appropriate methodology and technology for sustainable individual plantations and community forests expanded to other villages in Vientiane province?	- Describe the newly obtained information and compare to the information during the terminal evaluation	- Number of villages appropriate methodology and technology (plantation of PSS) being apply in nearby villages;	- VDC; - DAFO in target districts; - DAFES; - PAFES; - NAFES; - Other villages	- Interview VDC and other villagers inside and outside the target villages and target key informants in the district, provincial and central levels; - literature/Document search
		- Are there any visitors from other villages/institutions/projects to learn FORCAP experiences?		- Number of villages/institution/projects come to learn form FORCAP experiences after the project completion;		
		- Are there any project in Vientiane province which utilizes the individual plantation and forest management methodology and technology of FORCAP?		- List of the individual plantation and forest management methodology and technology being adapted and applied in other area; - Number of the projects which utilize any individual and forest management methodology and technology of FORCAP in Vientiane province.		
		- In what extension the income generation activities of FORCAP continue to be practiced?		- Number of villagers of FORCAP who is using income generation models; - Type of income generation models are being the satisfactory result		
		- The manuals utilized or disseminated by the government after the project termination?		- Number of textbooks or manuals have been developed during the project cooperation in Vientiane province;		
		- Are there any modifications or improvement made on the manuals after the project termination?		- Are there any modifications or improvement made on the manuals after the project termination?		
	(2) What are the factors which affects the achievement of overall goals	- Are there any policy changes in province and MAF after the project completion? - Are there any changes in the government institutional set-up in province? - Are there any changes in allocating budget in agriculture and rural development extension in Vientiane province? - Are the FORCAP technology and methodology still effective in Vientiane province both in technical and financial aspects? - Are the FORCAP methodology influenced other villages? - What events in the area effected overall goal of the project?	- Describe the newly obtained information.	- Policy in MAF and Vientiane province - Organizational diagram of PAFO and PAFEC	- VDC; - DAFO in target districts; - DAFES; - PAFES; - NAFES; - Other villages	- Interview VDC and other villagers inside and outside the target villages and target key informants in the district, provincial and central levels; - literature/Document search
	(3) Are the unintended positive and negative effects observed?	- Do the target villages achieve individual plantation and village forests?	Compare the newly obtained information with the terminal evaluation report, and direct interview/observe. Comparative	- Number of Individual plantation (# of hectare, majority of plantation ) - Number of community forest area (# of hectare, majority of planted tree)	- villagers and head of household; - VDC in target village; - neighborhood villagers both	- interview target villagers and households about (1) their plantation, (2) community forest; (3) income; and (4) livelihood; (5) assets using prepared
		- Do the target villages increase individual plantation and village forests?		- Plantation data of individual plantation and community forest;		

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EX-POST EVALUATION GRID; FORCAP 2007--VIENTIANE PROVINCE, LAO PDR						
Supported by: JICA Laos						
Evaluation Questions			Achievement Criteria/Measures	Data needed	Data Sources	Data Collection Methods
Criteria	Main Question	Sub-Question				
		<ul style="list-style-type: none"> <li>- Do the overall income generation models of target villages improved?</li> <li>- Do the villagers satisfied about the project?</li> <li>- Do any changes on relationship between villagers and PAFO/DAFO staff?</li> <li>- Are there any changes of working procedure/style of government staff?</li> <li>- Are there any negative impacts on social and cultural of the target and other surrounded villages by applying FORCAP methodology and technology?</li> <li>- Are there any negative impacts on economic and environmental condition in the target and surrounded villages?</li> </ul>	<p>analysis with base line data which was collected before the project is also necessary. Describe the result of the interview.</p>	<ul style="list-style-type: none"> <li>- Incident of income generation rate in the target villages in comparison with nearby villages;</li> <li>- household income (income generation model);</li> <li>- Level of satisfaction of the villagers in target villages toward FORCAP technology and methodology.</li> <li>- The image of target villages by asking their neighboring villages.</li> <li>- Level of satisfaction of the villagers toward PAFO and DAFO staff after the project termination</li> <li>- Are there any changes of working procedure/style of government staff</li> <li>- Impact on social and cultural</li> <li>- Impact on economic condition;</li> <li>- Impact on environmental condition.</li> </ul>	<p>who are applying and not applying FORCAP methodology and technology</p>	<ul style="list-style-type: none"> <li>- questionnaire;</li> <li>- small group discussion/interview</li> <li>- visit selected (sample) household and observe their living conditions;</li> <li>- interview villagers in nearby target villages on applying of FORCAP methodology and technology</li> </ul>
	(4) What factors contributed to positive and negative impacts?	<ul style="list-style-type: none"> <li>- Are there any notable social/cultural change in the target Villages and surrounding area?</li> <li>- Are there any infrastructure changes in the area?</li> <li>- Are there any environmental/climate change after the project completion?</li> <li>- Did the transformation of FORCAP into PAFEC office affect the outcome of the FORCAP?</li> <li>- Did the transformation of FORCAP office into PAFEC affect performance of PAFEC and PAFO?</li> <li>- Are there any influence from other projects to the target villages and surrounding villages?</li> </ul>	<p>Describe the changes and possible reasons</p>	<ul style="list-style-type: none"> <li>- Activity record of PAFEC and PAFO;</li> <li>- Activity record of VDC;</li> <li>- The condition of office, and how PAFEC operate and maintain the office;</li> <li>- The condition of Afforestation center (AFC) and how the counterpart operate and maintain the AFC.</li> </ul>	<ul style="list-style-type: none"> <li>- villagers leader;</li> <li>- VDC in target village;</li> <li>- Neighborhood villagers</li> <li>- PAFEC and PAFO</li> </ul>	<ul style="list-style-type: none"> <li>- interview target beneficiaries;</li> <li>- Government staff</li> <li>- interview any opponents (or any group who against the project operation);</li> <li>- Site observation</li> </ul>
	(5) What are the factors influenced the achievement of project overall goal?	<ul style="list-style-type: none"> <li>- Are there any issues that influence the achievement of project goal?</li> <li>- Positive and negative effects observed from individual plantation and community forest and income generation models.</li> </ul>	<ul style="list-style-type: none"> <li>- Describe newly/updated obtained information</li> <li>- other factors that influences and support the achievement of project overall goal</li> </ul>	<ul style="list-style-type: none"> <li>- Unintended positive impacts found</li> <li>- Policy support plantation and afforestation and income generation operation and management that impact to the project overall goal achievement</li> <li>- Organizational support</li> <li>- Appropriateness of Technical, financial and organizational support for monitoring and maintain such activities of the project;</li> <li>- other negative impact from plantation and afforestation and income generation to the environment:                             <ul style="list-style-type: none"> <li>o Soil degradation by pesticide, fertilizer used...</li> <li>o Community life style</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- villagers leader;</li> <li>- VDC in target village;</li> <li>- Neighborhood villagers</li> <li>- PAFEC and PAFO</li> </ul>	<ul style="list-style-type: none"> <li>- interview target beneficiaries;</li> <li>- Government staff</li> <li>- interview any opponents (or any group who against the project operation);</li> <li>- Site observation</li> </ul>

# Annex 1: Evaluation Grid

EX-POST EVALUATION GRID; FORCAP 2007--VIENTIANE PROVINCE, LAO PDR						
Supported by: JICA Laos						
Evaluation Questions			Achievement Criteria/Measures	Data needed	Data Sources	Data Collection Methods
Criteria	Main Question	Sub-Question				
	(6) Are there any impact that has been expected at the time of terminal evaluation emerged?	<ul style="list-style-type: none"> <li>How FMS, FMT, PFC and income generation activities were formed and implemented up to date?</li> <li>What kinds of impacts occurred related to the performance of MAF, PAFO and DAFE0 due to such arrangement?</li> </ul>	<ul style="list-style-type: none"> <li>Describe newly/updated obtained information</li> </ul>	<ul style="list-style-type: none"> <li>FMS, FMT, PFC and income generation activities were formed and implemented up to date;</li> <li>Performance of MAF, PAFO and DAFE0 due to such arrangement</li> </ul>	15 target villages	<ul style="list-style-type: none"> <li>Interview villagers' FORCAP counterpart in MAF and Vientiane province.</li> <li>interview target beneficiaries;</li> </ul>
SUSTAINABILITY	(1) How has the counterpart agency been maintaining the project activities and services provided by the project?	<ul style="list-style-type: none"> <li>Is there sufficient budget and staff of the GoL for monitoring and extending activities in villages?</li> <li>Have the financial and institutional arrangement been made for irrigation management and land allocation villagers' training?</li> <li>Are the equipment provided by FORCAP still utilized to maintain the activities?</li> <li>Are there sufficient persons to maintain the activities?</li> <li>Was specific action plan made to carry out the activities?</li> </ul>	Compare the newly obtained information with the ideal plan	<ul style="list-style-type: none"> <li>Budget allocation for monitoring and supportive activities in villages per year;</li> <li>The mandate of Government officer devote for project monitoring effort;</li> <li>The finance allocates for irrigation management;</li> <li>Numbers of training programmes provided by Government officer to the villagers after project termination;</li> <li>Activity record of plantation group;</li> <li>Equipment maintenance and usage record in VDC and PAFO.</li> </ul>	<ul style="list-style-type: none"> <li>DAFO;</li> <li>PAFO</li> <li>PAFEC and Villagers</li> </ul> Gather information from the financial of concerned GO offices and analysis of budgeting support and compare to the information from the terminal evaluation report	<ul style="list-style-type: none"> <li>Interview the financial section of concerned GO organization;</li> <li>interview target beneficiaries;</li> <li>Focus group discussion about the services they have been received after project termination including training provide by concerned GO;</li> <li>Site observation</li> </ul>
	(2) Have the project outcomes been maintained since the termination of assistance?	<ul style="list-style-type: none"> <li>Are formed VDC in five target villages able to implemented village forest management plans (VFMPs)?</li> <li>How are the trained Laotian counterparts in MAF and Vientiane Province making use of the knowledge and skills gained in FORCAP?</li> <li>How functioning of FMS, FMT, PFC and PSS being applied in Vientiane province?</li> </ul>	Compare the newly obtained information with the terminal evaluation report	<ul style="list-style-type: none"> <li>number of villagers being continue utilize the FORCAP methodology and technology in target villages after project termination</li> <li>Case study of good practice of utilizing of appropriate method and technology;</li> <li>Case study of income generation models</li> <li>VDC activity record</li> <li>VDC meeting minutes</li> <li>Water Users' Fee collection record</li> <li>Numbers of trained FORCAP counterparts in MAF and Vientiane province who are making use of the knowledge and skill gained from the projects;</li> <li>Structure of FMS, FMT, PFC and PSS of the target and neighboring villages</li> <li>Role and responsibility among above-mentioned different level? And what is the best practice of such extension offices?</li> </ul>	<ul style="list-style-type: none"> <li>Trained FORCAP's trainers;</li> <li>DAFO;</li> <li>PAFO</li> <li>PAFEC and Villagers</li> </ul>	<ul style="list-style-type: none"> <li>Interview target villager who are utilizing such methodology and technology after project termination and why?</li> <li>Interview villagers' FORCAP counterpart in MAF and Vientiane province of using and modifying or improving such method and technology, and the reason of changing;</li> <li>Interview a head of target organization (MAF and PAFO) about the performance of FORCAP counterparts</li> </ul>

# Annex 1: Evaluation Grid

EX-POST EVALUATION GRID; FORCAP 2007--VIENTIANE PROVINCE, LAO PDR						
Supported by: JICA Laos						
Evaluation Questions			Achievement Criteria/Measures	Data needed	Data Sources	Data Collection Methods
Criteria	Main Question	Sub-Question				
	(3) What factors are contributing to or inhibiting the project efforts for sustainability?	<ul style="list-style-type: none"> <li>- What are the main obstacles to continue the activity for government staff?</li> <li>- What are the main obstacles to continue the activity for target villages?</li> </ul>	Compare the newly obtained information with the terminal evaluation report and describe the factors	<ul style="list-style-type: none"> <li>- Numbers of staff working in the target villages and their responsibility</li> <li>- Frequency of visit by government staff to the villages</li> <li>- Budget allocation</li> </ul>	<ul style="list-style-type: none"> <li>- Target villagers;</li> <li>- PAFEC;</li> <li>- PAFO</li> <li>- DAFO</li> </ul>	<ul style="list-style-type: none"> <li>- Interview target villages;</li> <li>- direct observation,</li> <li>- Interview PAFEC and DAFO</li> <li>- Document Search</li> </ul>
	(4) Are there any sustainability that has been expected at the time of terminal evaluation emerged?	<ul style="list-style-type: none"> <li>- To what extent of FMS, FMT, PFC and income generation activities have been sustained and expanded from the time of final evaluation?</li> <li>- The AFC has been transformed AFCT?</li> </ul>	Compare the newly obtained information with the terminal evaluation report and describe the factors	<ul style="list-style-type: none"> <li>- Any plan for expanding and sustainability of FMS, FMT, PFC and income generation activities</li> <li>- AFCT operation and maintenance after transformed</li> </ul>	<ul style="list-style-type: none"> <li>- AFC/AFCT</li> <li>- MAF</li> <li>- DAFO</li> <li>- DAFEO</li> </ul>	<ul style="list-style-type: none"> <li>- Questionnaires</li> <li>- Interview guide</li> </ul>
RECOMMENDATION	(1) How does the counterpart agency to further ownership accommodation facilities, materials, vehicles and equipments in center?	- Do the appropriate management, responsibility and maintenance for LAO-JICA forestry conservation and afforestation center in Ban Sivlay Village of Hinheup District of Vientiane Province?	Terminal evaluation report, describe the other in formations and guidelines	- Number of accommodation facilities, vehicles, materials, equipments and other activities to improve, manage and maintain in the center and overview of project site areas	<ul style="list-style-type: none"> <li>- MAF;</li> <li>-DAFO in target districts;</li> <li>- PAFO</li> <li>- NAFES</li> <li>-FORCAP</li> <li>Other projects, if necessary</li> </ul>	<ul style="list-style-type: none"> <li>- Interview and Questionnaire</li> <li>- FORCAP counterparts</li> </ul>
		- Are there any counterparts to support and assist finance when without assistance from JICA?		- Number of counterpart section ,institutions and projects come to support and assist finance		
		- Are there any NGO projects come into contribute and encourage in the center when finished project?		- Number of NGO projects come into contribute and encourage in the center when finished project		
	(2) What policies of center to PSS participants in during without assistance from JICA?	- Are there any policy changes in center, DAFO and PAFO after the project completion?	<ul style="list-style-type: none"> <li>- Describe newly/updated obtained information other factors that influences and support the achievement of project overall goal</li> </ul>	<ul style="list-style-type: none"> <li>- Center policies to PSS participants in the both target district such as: Vangvieng and Hinheup Districts</li> <li>- Budget allocation</li> <li>- Organization in DAFO and PAFO</li> </ul>	<ul style="list-style-type: none"> <li>- MAF;</li> <li>-DAFO in target districts;</li> <li>- PAFO</li> <li>- NAFES</li> <li>-FORCAP</li> <li>Other projects, if necessary</li> </ul>	<ul style="list-style-type: none"> <li>- Interview target villages;</li> <li>- direct observation,</li> <li>- Interview PAFEC and DAFO</li> <li>- Document Search</li> <li>- In charge person of the project</li> </ul>
- Are there any PSS participants to continue contract and activities with center and all households to conduct agro-forestry the same last time when project completion?		- Number of target households and villages in the both district thus: Vangvieng and Hinheup district to implement and conduct PSS activities				
- How many PSS participants are received income generations from those activities?		- Number of PSS participants to be received income generation from project completion				
- Are there any board units of participants for established model group to manage, operate and coordinate between target villages?		- Number of established PSS model group in the target villages of a both two district such as: Vangvieng and Hinheup district				
(3) Do the authorities of the both Hinheup and Vangvieng DAFOs to be	- How about the authorities of the both Hinheup and Vangvieng DAFOs and authorities at both provincial and central levels to cooperate and coordinate while come to monitor and evaluate of VFMPs, PSS and income generation activities in the fields when project completion?	Describe newly/updated information other factors that	- Cooperation and coordination between local authorities and authorities of provincial and central levels into implementation monitoring and evaluation of VFMPs, PSS and income generation activities	<ul style="list-style-type: none"> <li>- MAF;</li> <li>-DAFO in target districts;</li> <li>- PAFO</li> </ul>	<ul style="list-style-type: none"> <li>- Interview target villages;</li> <li>- direct observation,</li> <li>- Interview PAFEC, DAFO, NAFES and MAF in charge person</li> </ul>	

# Annex 1: Evaluation Grid

EX-POST EVALUATION GRID; FORCAP 2007--VIENTIANE PROVINCE, LAO PDR						
Supported by: JICA Laos						
Evaluation Questions			Achievement Criteria/Measures	Data needed	Data Sources	Data Collection Methods
Criteria	Main Question	Sub-Question				
	always continued monitoring of VFMPs, PSS and income generation activities when project completion?	<ul style="list-style-type: none"> <li>- Do the established information and guidelines of VFMPs, PSS and income generation activities in Hinheup and Vangvieng DAFOS?</li> <li>- Are there any problems as concerned set-up the teams to implement monitoring of VFMPs, PSS and income generation activities when finished project?</li> <li>- Do the past other activities conduction plan can to be taken this information to utilize and model for new further applications in the future?</li> </ul>	influences and support the achievement of project overall goal	<ul style="list-style-type: none"> <li>- Important data, information and guidelines as involved VFMPs, PSS and income generation activities</li> <li>- Issues, problems and events as concerned project activities monitoring and evaluation operation</li> <li>- Information as involved to utilize and model for new applications in the target location site areas</li> </ul>	<ul style="list-style-type: none"> <li>- NAFES</li> <li>-FORCAP</li> <li>Other projects, if necessary</li> </ul>	<ul style="list-style-type: none"> <li>- Document Search</li> <li>- The project counterparts</li> </ul>
	(4) Do the all outputs to be relevant this project overall goal and can to be utilized model for other development projects in Lao PDR?	<ul style="list-style-type: none"> <li>Are there any outputs to utilize small budgets and achieve in the goal and determined time?</li> <li>- Do the outputs to be utilized practices for target villages and surrounding area?</li> <li>-What important factors to make outputs are successful?</li> <li>- What outputs to make counterpart agencies and participants to be jointed work and ownership together to project activities?</li> <li>- How to plan implementation before to be received success and what attraction to get outputs?</li> </ul>	Describe newly/updated information other factors that influences and support the achievement of project overall goal	<ul style="list-style-type: none"> <li>- Amount of budget to operate project activities</li> <li>- all practices of target villages to achieve outputs</li> <li>- Any factor condition to make outputs is successful</li> <li>- Amount of project activities to do between counterpart and project participants</li> <li>- Any operation planning and other attraction to get outputs</li> </ul>	<ul style="list-style-type: none"> <li>- MAF;</li> <li>-DAFO in target districts;</li> <li>- PAFEC</li> <li>- NAFES</li> <li>-FORCAP</li> <li>Other projects, if necessary</li> </ul>	<ul style="list-style-type: none"> <li>- Interview target villages;</li> <li>- direct observation,</li> <li>- Interview PAFEC, DAFO, NAFES and MAF in charge person</li> <li>- Document Search</li> <li>- The project counterparts</li> </ul>

## Annex 2: Logical Framework

The Forest Conservation and Afforestation Project (FORCAP) PHASE 2 PDM1 (Final Revised Version, 17/1/2001)

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
<b>Overall Goal</b> The trend of forest degradation in the lower part of the Nam Ngum Dam watershed area and its vicinity is reduced	1. By 2008, individual plantations and community forests are established in more than 20 villages 2. By 2008, at least one of the income generation models continues to be practiced	1. Annual reports of the local administrations concerned	a. The watershed management policy of the government is continued
<b>Project Purpose</b> The capacity of the local administrations (*) for promotion of participatory forest management is strengthened in order to reduce the trend of forest degradation	1. The recommendation report (output 4) is adopted as a guideline of forest management of Vangvieng district and Hinheup district 2. At least 80 % of the established individual plantations and community forests remain at the end of the project period 3. At least one of the income generation models continues to be practiced without financial support from the project at the end of the project period	1. Project documents 2. Project documents 3. Project documents	a. Institutional status and function of the Afforestation Center are defined b. Personnel and budget for operation of the Afforestation Center are secured c. The recommendation report (output 4) is adopted as a guideline of forest management of Vientiane province
<b>Outputs</b> 1. Village Forest Management Plans(VFMP)(**) are prepared based on the review of Regulations of Land and Forest Utilization at the village level (RLFU) 2. Forest management methods by the villagers are established using the technology developed by the project 3. The income generation models introduced by the project are practiced by the villagers 4. The recommendation report on village level forest management in terms of administrative, technical and financial matters, is prepared 5. Skills and knowledge of the local administrations, especially the project counterparts, are improved	1. VFMPs are prepared at least for 3 villages 2.1 By the end of 2001, at least 200 individual plantations are established 2.2 By the end of 2001, community forests are established in at least 8 villages 3. At the end of 2002, at least one of the income generation models continues to be practiced in the target villages 4. The recommendation report at least includes analysis results on the items(**) 5. Every project counterpart prepares at least one report on his/her responsible project activities	1. Project documents 2.1 Project documents 2.2 Project documents 3. Project documents 4. Project documents 5. Project documents	a. Personnel reshuffle of counterparts does not greatly affect the project implementation b. The established plantations and forests are not damaged by forest fires c. The established plantations and forests are not damaged by pests and diseases

(\*) Vangvieng District Agriculture and Forestry Office, Hinheup District Agriculture and Forestry Office, Vientiane Provincial Agriculture and Forestry Division

(\*\*) VFMP is an action plan which is easily prepared, understood and implemented by villagers as well as institutionally sustainable.

(\*\*\*) Process analysis on VFMP, cost-benefit analysis on Profit Sharing System and income generation models

Narrative Summary	Inputs		Important Assumption
<b>Activities</b>			
1-1. To train the village administration personnel 1-2. To examine the village border in RLFU 1-3. To compare forest classification in RLFU with actual forest condition 1-4. To identify actual forest use by the villagers 1-5. To revise RLFU, if necessary 1-6. To prepare VFMP	( Japanese side )	( Lao side )	a. Population in the project target villages does not increase with immigrant b. Land classification under the Land Law and the Forestry Law are not changed c. Economic condition does not become worse than at the beginning of the project period
2-1-1 To prepare technology development plan 2-1-2 To develop technology according to the plan in 2-1-1 2-1-3 To analyze and evaluate the result of technology development 2-1-4 To extend and apply the developed technology to the villagers	1. Long-term experts 1-1. Chief advisor 1-2. Coordinator 1-3. Forest management system 1-4. Forest management technology 1-5. Participatory forest conservation	1. Counterparts 1-1. Project director 1-2. Project manager 1-3. Management coordinator 1-4. Advisor 1-5. Counterparts personnel - Forestry Management System - Forestry Management technique - Participatory Forest Management 1-6. Counterparts for short-term expert	
2-2-1. To prepare nursery management manual 2-2-2 To prepare seeding production plan 2-2-3. To produce seedlings at Afforestation Center 2-2-4. To assist seedlings production 2-2-5. To revise the nursery management manual	2. Short-term experts Short-term experts in relative fields 3. Machinery and equipment 3-1. Machinery, equipment, tool, spare parts, and materials in the following technical fields;	2. Land, building, and facilities 2-1. Project office in Vangvieng district 2-2. Project office in Department of Forestry 2-3. Land for nursery	
2-3-1. To design demonstration forest plan 2-3-2 To establish demonstration forest according to the plan in 2-3-1 2-3-3. To utilize demonstration forest for training and extension	3-1-1. Forest management system 3-1-2. Forest management technology 3-1-3. Participatory forest conservation 3-2. Other equipment necessary for the implementation of the project	3. Operation cost	
2-4-1. To coordinate with the village administration for activities 2-4-2-2-4-7 2-4-2 To identify areas for individual plantations 2-4-3. To explain villagers on supporting systems for individual plantations 2-4-4. To select villagers for individual plantations 2-4-5. To train villagers on tree plantation and management technique 2-4-6. To provide seedlings and other materials for plantation 2-4-7. To monitor the performance and give necessary technical advise	4. Training Lao personnel in Japan		
2-5-1. To train the village administration personnel for activities 2-5-2-2-5-6 2-5-2. To examine the necessity of community forest 2-5-3. To identify area of community forest 2-5-4. To train villagers on tree plantation and management technique 2-5-5 To provide necessary materials 2-5-6 To monitor the performance and give necessary technical advise	5. Local cost 5-1. Afforestation 5-2. Extension 5-3. LLDC, etc		Preconditions a. The local people in the project target villages understand importance of the Land Law and the Forestry Law
3-1. To coordinate with village administration for activities 3-2-3-7 3-2. To select possible income generation models 3-3. To train villagers on necessary skills and techniques 3-4. To assist villagers to practice income generation activities 3-5. To assist villagers on market survey 3-6. To train villagers on accounting and administration 3-7. To assist villagers to organize themselves to manage models			
4-1. To analyze the results of activities in 1 to 3 4-2. To prepare recommendation report			
5-1 To identify necessary skills to be acquired by counterparts 5-2 To conduct training for counterpart 5-3 To prepare report on each field of activity 5-4 To conduct on the job training to the local administration staff through activities 1-3			

Annex 3: Data collection tools (Questionnaire)  
(A) Questionnaire for GoL

QUESTIONNAIRE FOR EX-POST EVALUATION  
FORCAP-2002-2005

1 OBJECTIVE OF EX-POST EVALUATION STUDY

The Forest Conservation and Afforestation Project II in Vientiane Province (hereinafter called the FORCAP or the Project) had been implemented since July 16, 1998 till the July 15, 2003 (5 years project) for the purpose of strengthening the capacity of the local administration for promotion of participatory forest management in order to reduce the trend of forest degradation in the fifteen targeted villages in Vientiane Province.

Up to date, already four years plus after the project completion since July 2003 till the beginning of October 2007, the JICA Laos Office (hereinafter called the **client**) intends to conduct an ex-post evaluation study of its completed FORCAP project in terms of its **impact, sustainability and verify of terminal evaluation**. The result of this ex-post evaluation study will be used for better-informed decision-making of JICA based on the lessons learned from FORCAP project, and to be formulated similar programs and technical cooperation between two Governments in agriculture, forestry and rural development sector in the future, as well as to promote greater accountability.

Therefore, we would highly appreciate if you could give us your answers that will assist us in evaluating the **impact** and **sustainability** of the above-mentioned Projects thoroughly. As soon as you complete filling this questionnaire, please return yours answers back to us do not later then **November 19, 2007** using the following addresses:

To: Lao Management and Development Consultants Co., Ltd.  
Nongbone village, Saysettha district, Vientiane Capital, Lao PDR

- o by fax: (021) 453 149;
- o Phone: (021) 453 150; Mobile: (020) 5410 343
- o by email: [laomdc@laotel.com](mailto:laomdc@laotel.com); [laomdc@yahoo.com](mailto:laomdc@yahoo.com) or [thanomvongk@yahoo.com](mailto:thanomvongk@yahoo.com) or [thanomvong@hotmail.com](mailto:thanomvong@hotmail.com)

Contact persons: Ms. Phommavanh (020) 5679 829  
Mr. Lamphoun (020) 5428 987  
Mr. Khamkheng Yenna (020) 5426 466



**A. Background**

Name of informants:

Working place:

Contact address:

**B. VERIFICATION OF IMPACT**

(1) How far has the overall goal achieved since the terminal evaluation?

Q-1. Do the appropriate methodology and technology for sustainable individual plantations and community forests expanded to other villages in Vientiane province?

Please explain:

Q-2. Are there any visitors from other villages/institutions/projects to learn FORCAP experiences?

No.	Visitors from villages/institutions/project	No. of visitors who intended on	
		Methodology	Technology

Q-3. Are there any project in Vientiane province which utilizes the individual plantation and forest management methodology and technology of FORCAP?

Q-4. In what extension the income generation activities of FORCAP continue to be practiced?

Number of villagers of FORCAP who is using income generation models and the existing models

No.	Villages of FORCAP	No. of villagers who are using	Type of the existing of Income generation models

Q.4. In what extension the income generation activities of FORCAP continue to be practiced? Please Explain:

Please, explain

Q.5. Are there any modifications or improvement made on the manuals after the project termination? Please indicate clearly for your answer:

Please, explain

**(2) What are the factors which affects the achievement of overall goals**

Q-1. Are there any policy changes in province and MAF after the project completion? Please describe for your answer:

Please, explain

Q-2. Are there any changes in the government institutional set-up in province?

Please, explain

Q-3. Are there any changes in allocating budget in agriculture and rural development extension in Vientiane province?

Please, explain

Q-4. Are the FORCAP technology and methodology still effective in Vientiane province both in technical and financial aspects?

Please, explain

Q-5 what factors in the area effected overall goal of the project?

Please, explain

**(3) Are the unintended positive and negative effects observed?**

Q-5. Do the target villages achieve individual plantation and community forests after project termination and up to date?

No.	Forest categories	Since Termination of FORCAP		During Ex-Post Evaluation	
		Areas (Ha)	Hh involve	Areas (Ha)	Hh involve
1	Shifting cultivation area				
2	Individual plantation area				
3	Community forest				
4	Majority of planted tree				
5	Forest conservation				
6	Protected areas				
7	NBCA				

Q-6. Do any changes on relationship between villagers and PAFO/DAFO staff up to date?

Please explain:

Q-7. Are there any changes of working procedure/style of government staff?

Q-8. Are there any negative impacts on social and cultural of the target and other surrounded villages by applying FORCAP methodology and technology?

Q-9. Are there any negative impacts on economic and environmental condition in the target and surrounded villages?

**(4) What factors contributed to positive and negative impacts?**

Q-10. Are there any notable social/cultural change in the target Villages and surrounding area?

Q-11. Are there any environmental/climate change after the project completion?

:

Q-12. Did the transformation of FORCAP into PAFEC office affect the outcome of the FORCAP?

Q-13. Did the transformation of FORCAP office into PAFEC affect performance of PAFEC and PAFO?

Q-14. Are there any influence from other projects to the target villages and surrounding villages?

(5) What are the factors influenced the achievement of project overall goal?

Q-15. Are there any issues that influence the achievement of project goal?

Unintended positive impacts found, please explain:

Q-16. Policy support individual plantation and afforestation and income generation operation and management that impact to the project overall goal achievement

Individual plantation:

Afforestation:

Income generation models:

Q-17. Positive and negative effects observed from individual plantation and community forest and income generation models. *(Other negative impact from plantation and afforestation and income generation to the environment such as soil degradation by pesticide, fertilizer used, community life style...)*

Please describe:

(6) Are there any impact that has been expected at the time of terminal evaluation emerged?

Q-18. How FMS, FMT, PFC and income generation activities were formed and implemented up to date?

Please describe:

Please describe:

Q-20. What kinds of impacts occurred related to the performance of MAF, PAFO and DAFEO due to such arrangement?

Please describe:

**C. VERIFICATION OF SUSTAINABILITY**

(1) How has the counterpart agency been maintaining the project activities and services provided by the project?

Q-21. Is there sufficient budget and staff of the GoL for monitoring and extending activities in villages? Budget allocation for monitoring and supportive activities in villages per year?

Name of village	Total budget					Source of budget	For what purpose?
	2003	2004	2005	2006	2007		

Q-22. Have the financial and institutional arrangement been made for irrigation management and land allocation villagers' training? The mandate of Government officer devote for project monitoring effort;

Please describe:

Q-23. Are the equipment provided by FORCAP still utilized to maintain the activities?

Please describe:

No.	Training programmes	No. of attendant	From sector	Date	Funded by

Q-25. Was specific action plan made to carry out the activities? Activity record of plantation group;

No.	Activities	Purpose/description	In charge person	Remark

Q-26. Equipment maintenance and usage record in VDC and PAFO.

No.	Detail of maintained equipment	In charge amount (kip)	Date	In charge person

(2) Have the project outcomes been maintained since the termination of assistance?

Q-27. Are formed VDC in 15 target villages able to implemented village forest management plans (VFMPs)?

No.	Village	Implemented VFMPs			
		yes	Reason	No	Reason

Q-28. Case study of good practice of utilizing of appropriate method and technology;

Please describe:

Q-29. Case study of income generation models

Please describe:

Q-30. How are the trained Laotian counterparts in MAF and Vientiane Province making use of the knowledge and skills gained in FORCAP? (Focus group discussion)

- Numbers of trained FORCAP counterparts in MAF and Vientiane province who are making use of the knowledge and skill gained from the projects;
- Skill gained from the project
- Area of Applying
- The best practice of FORCAP methodology and Technology
- The areas need to be solving in order to maximize the project impact and sustainability?
- How functioning of FMS, FMT, PFC and PSS being applied in Vientiane province?
- Role and responsibility among above-mentioned different level? And what is the best practice of such extension offices?

Q-31. What factors are contributing to or inhibiting the project efforts for sustainability? What are the main obstacles to continue the activity for government staff?

Please describe:



Q-6.2 Numbers of staff assign for maintaining FORCAP outputs and their responsibility

Project output	Number of staff	Responsibility	Target village

(3) What factors are contributing to or inhibiting the project efforts for sustainability?

Q-32. What are the main obstacles to continue the activity for target villages?

Please describe:

Q-34. Budget allocation for follow up FORCAP's Outputs

No.	On purpose	2003	2004	2005	2006	2007	Remark

(4) Are there any sustainability that has been expected at the time of terminal evaluation emerged?

Q-35. to what extent of FMS, FMT, PFC and income generation activities have been sustained and expanded from the time of final evaluation? Have any plan for expanding and sustainability of FMS, FMT, PFC and income generation activities

Items	Description of the plan	Finishing date	Remark
FMS			
FMT			
PFC			
IG			

Q-36. Please describe about the transforming of AFCT?

Please describe:

Q-37. Please describe about AFCT operation and maintenance after transformed?

Please describe:

#### **Annex (4): List of people met**

##### List of the involved GoL key personnel

No.	Name and surname	Title	Organization	Contact number
1.	Mr. Khamthieng Phomsavath	Deputy Director General	NAFES	NA
2.	Ms. Thongsawath Boupha	Deputy Director of Extension and Project Management Division	NAFES	NA
3.	Mr. Bounlam	Acting Director	AFTC	NA
4.	Mr. Phetsamay Vongkhamountry	General Director	PAFO	NA
5.	Mr. Soum	Head of Provincial Agriculture and Forestry Office	PAFO	NA
6.	Mr. Somdy Syvone	Head of Vientiane Upland Development Center	VUDC	NA
7.	Mr. Daovieng Xaysana	Director of office	DAFEO Vangvieng	Office: (+856 23) 511025 Mobile: (+856 20) 5623 871
8.	Mr. Somsy Phommany	Director of office	DAFEO Hinheup	NA

**List of formal counterpart had involved during project intervention period (1999-2003)**

No.	Name and surname	FORCAP 1998-2003		2007		Contact number
		Title	Workplace	Title	Workplace	
1	Mr. Khampha	Project manager	FORCAP	Studying in China	Head of Research unit, NAFRI	Office:(+856 21) 770074; Mo: (+856 21) 5814591
2	Mr. Bounmanh Keomolakoth	Chief of HH	PSS Unit	Technical official	NAFRI	Mobile: (+856 20) 2416 205
3	Mr. Lattana	Chief of VV	PSS Unit	Deputy of director	AFTC	Mobile: (+856 20) 2412 256
4	Mr. Khamsana	Technical official	FORCAP	Chief of unit	AFTC	Mobile: (+856 20) 2435 018
5	Ms. Bounpheng Xayyavong	Counterpart	VV-DAFEO	Technical official	VV-DAFEO	Mo: (+856 20) 6520 698
6	Mr. Vong Inthavong	Counterpart	VV-DAFEO	Technical official	VV-DAFEO	Mobile: (+856 20) 5399 578
7	Mr. Oudong	Chief of Unit	Demonstrating forest unit	Studying in NOUL	Technical official, NAFRI	Office: (+856 21) 770074
8	Mr. Phetsakhone	Technician	FORCAP	Studying in Japan	Deputy project manager, FORCOM	Mobile: (+856 20) 2429 508
9	Mr. Somdy Sivone	Deputy project manager	FORCAP	Director	VUAFTC	(+856 020) 5818235

### List of AFTC personnel (2007)

No.	Name and surname	Responsibility	Highest education	Experience	Organization
1.	Mr. Bounlam	Director	Master degree	8 years	GOL
2.	Mr. Lattana	Deputy director	Higher diploma	8 years	GOL
3.	Mr. Khamsana	Head of admin	Diploma	2 years	GOL
4.	Mr. Loryang	Financial staff	Higher diploma	2 years	GOL
5.	Ms. Inthanou	Admin staff		5 years	GOL
6.	Mr. Somchay	Accountant staff	Diploma in financial	2 years	Hired staff
7.	Mr. Visith	Livestock technical staff	Diploma	6 years	Hired staff
8.	Mr. Kharn	Forester	Higher diploma	1 year	Hired staff
9.	Mr. Savath	Agro-culture technical staff	Diploma	1 year	Hired staff
10.	Mr. Lamlieng	Forester	High diploma	1 year	Hired staff
11.	Ms. Bountheun	Agriculture technical staff	Diploma degree	1 year	Hired staff
12.	Ms. Souda	Agro-culture technical staff	Diploma degree	1 year	Hired staff

### List village chief of 14 target village

No.	Name and surname	Title	Village	Contact number
<b>Vangvieng District</b>				
1	Mr. Chanhmy Phengsalath	Chief of village	Houypamom	(+856 20) 2432 416
2	Mr. Phouthone Sengthavy	Chief of village	Thahuea-Neua	(+856 20) 2419 735
3	Mr. Sengdao Sengchanhphet	Chief of village	Thahuea-tai	(+856 20) 2404 339
4	Mr. Somephone Mithavong	Chief of village	Houaymo	(+856 20) 6705 582
5	Mr. Khamphoui Vinavongso	Chief of village	Nampath-tai	(+856 20) 5591 484
6	Mr. Khamsavai Khamthavixay	Chief of village	Houay-xi	(+856 20) 5814 041
7	Mr. Thongsavath	Chief of village	Phakoup	(+856 20) 5286 275
8	Mr. Pankham	Chief of village	Namphao	(+856 20) 5200 342
<b>Hinheup District</b>				
9	Mr. Xaysilor	Chief of village	Sivilai	(+856 20) 2004 428
10	Mr. Bounchanh	Chief of village	Nampad	(+856 20) 6656 287
11	Mr. Vang Her Xeng	Chief of village	Somsanouk	(+856 20) 5347 156
12	Mr. Khamlar Keosoudavanh	Chief of village	Phonethong	(+856 30) 5201 122
13	Mr. Bounnam Vongkhamchanh	Chief of village	Vangkhi	(+856 20) 5040 240
14	Mr. Phouthone	Chief of village	Taothan	(+856 30) 5256 516

TENTATIVE SCHEDULE OF VARDP EX-POST EVALUATION STUDY, VIENTIANE PROVINCE, LAO PDR

Person in Charge	Schedule	September							October							November							December, 2005																										
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
JICA	Explanation for Local Consultant	█																																															
Consultant	Preparation of Inception Report	█																																															
Consultant	Preparation of Evaluation Grid	█																																															
JICA	Check and Revise Evaluation Grid	█																																															
Consultant and JICA	Preparation of questionnaire	█																																															
JICA	Explanation for Lao Authorities	█																																															
Consultant	Revise of questionnaire before apply during field survey	█																																															
Consultant	Field Survey	█																																															
Consultant and JICA	Interview with Lao Authorities, ex-C/Ps	█																																															
Consultant	Data analysis	█																																															
Consultant	Report Writing	█																																															
Consultant	Discussion with Lao authorities	█																																															
Consultant	Revise of Report	█																																															
JICA	Sign on M/M	█																																															
JICA	Check and Editing of Final Report	█																																															
Consultant	Submission of Final Report	█																																															

the preparation of evaluation grid will be commenced after check and revise inception report by JICA expert

Activity can be completed during the weekend

The revision of questionnaire by consultant after get feedback from Lao authority and JICA expert; and training to evaluation team member

Joint Ex-post evaluation committee meeting in MAF on October 24, 2005

No weekend during working in the field

Starting date for field data gathering work



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18/08/2008

To whom it may concern  
JICA Laos Office  
Ban Sihom, Chanthabury District.  
Vientiane Capital.

**Subject: Third Party Review by External Experts / Ex-Post Evaluation on The Forest Conservation and Afforestation Project in Vientiane Province (FORCAP), Lao PDR (November 2007)**

Dear Mr. Sir/Madam

Thank you for assigning ENTERPRISE & DEVELOPMENT CONSULTANTS Co., Ltd. to comment on the report on the Ex-Post Evaluation on The Forest Conservation and Afforestation Project in Vientiane Province (FORCAP), Lao PDR (November 2007)

I am pleased to present the following comments.

With reference with the significance of the project it is clear that FORCAP has strengthened the capacity of the local administration for promotion of participatory forest management in order to reduce the trend of forest degradation on the targeted villages in Vientiane Province. The project has high relevance to the National Growth for Poverty Eradication Strategy (NGPES) and the five year plan for socio economic development of the country i.e., two of four main goals of the Ministry of Agriculture and Forestry: (1) sustainable forest management, and (2) stabilization of shifting cultivation. In addition, recently the Governor of Vientiane province announced that the two districts (Hinheup and Vangvieng) will be the growing territory for industrial and commercial tree plantations. This policy implementation would directly contribute to increase the forest cover in both target districts. It also was in line with Japanese Government's policy on ODA of technical cooperation in agriculture, forestry and rural development.

Regarding the success of the project, the project has attained outputs in accordance with the indicators specified in the project logical framework, which contributed to the achievement of the project propose, especially the completion of project activities at fifteen target villages and the mechanism for sustainable forest management and afforestation in two target districts. It is clear that the knowledge and techniques on sustainable forest management among the local administrators and villagers have been improved. The villagers successfully and continuously implemented the project activities, which had certain effects in reducing forest degradation and shifting cultivation. It confirms that the project intervention has had a positive impact in alleviating forest degradation. Although significant achievements have been obtained, there are some factors that inhibit impact and sustainability of the project i.e., lack of financial support from the Government, inadequate institutional arrangement and inadequate coordination and cooperation between central and local authority to follow up and maintain the project outcome after its termination. It is therefore all stakeholders as well as Japanese side should have had some measures to maintain the project's outcomes.

Concerning the evaluation process, the study was conducted by three sub-team members of the Lao team from the Ministry of Agriculture and Forestry, Japanese team and local consultant team with appropriate expertise and skills in the related areas. Multi-tools and methodologies



were applied in the mission. The evaluation questions are set properly in the evaluation grid and are in line with the evaluation proposes. Results of the evaluation are obtained based on the analysis both in qualitative and quantitative manner which reflect the reliability and validity of the evaluation. Although the improvement of the evaluation could be made, it proved that the evaluation process was conducted logically and objectively. The found result, conclusion, recommendation, lesson learnt were also reasonable which can be used for the improvement of project formulation and management and better cooperation with counterpart organizations.

Yours sincerely,

Vivath SAUVALY  
Consultant  
EDC Co., Ltd.

### Third Party Review by External Experts

Ex-Post Evaluation on The Forest Conservation and Afforestation Project in Vientiane Province (FORCAP), Lao PDR (November 2007)

#### 1. Evaluation Framework

Reference page No. of  
'JICA Project  
Evaluation Guideline'

B	(1) Time Frame of Evaluation Study	97
Viewpoint	<p>- Evaluation period i.e. preparatory period, on-site evaluation period and consolidation period is enough and appropriate to complete necessary activities prior to the engagement, during the field data collection and site visit and after the submission draft report.</p> <p>- Although the process and procedure of data collection was flexible enough on actual case and situation, it is recommended that well-planned schedules need to be prepared to avoid delay or to be able to get enough number of key informants and respondents within the time frame i.e the sample interviewed reach only 38.26% of the entire target groups (initial plan was 50%), thus to some extent, the accuracy and reliability of the obtained data was affected.</p>	
B	(2) Study Team	107
Viewpoint	Team members consist of three sub-teams joining the evaluation team members with appropriate expertise and skills in related areas.	
<p>Comments: All necessary activities were planned appropriately within the time limit and flexible and adjustable according to the actual situation. However the sample interviewed cover less than 50% of the entire target groups which somehow affect the evaluation results.</p>		

#### 2. Data Collection and Analysis

C	(1) Evaluation Questions	51
Viewpoint	<p>- Evaluation questions are in line with the evaluation proposes and set properly in the evaluation grid. Evaluation questions are connected with the evaluation criteria and narrowed down to more specific sub question to identify necessary information/data to be collected.</p> <p>- Questionnaire was designed specifically to fit with each interviewer groups.</p> <p>- Sub question in the evaluation grid/questionnaires are well set up to obtain necessary answers.</p> <p>- Evaluation grid does not reflect all necessary data and variable indicators specified in the Logical Framework.</p> <p>- Evaluation questions in the evaluation grid are not totally the same as in questionnaires.</p> <p>- The main questions in the questionnaire should be clearly distinguished and consistent with the sub-questions</p>	
A	(2) Data Collection	72
Viewpoint	Types of data collections methods are conducted based on the evaluation grid which include reviewing of related literature, interviewing, site visiting, focus group discussion etc, and are sufficient for obtaining answers for evaluation questions.	
B	(3) Measurements of Results	61
Viewpoint	<p>- Results of the evaluation are obtained based on the analysis of the data collected, which are reliable and accurate.</p> <p>- Achievement level of the overall goal is examined based on the total area of</p>	

	forest coverage in 2007 compared to the area of the area of forest coverage at the time of project termination in 2003 <i>only</i> . It is recommended that <b>verifiable indicators</b> as indicated in the project logical framework be used as indicators to measure the project results and being compared with targets as well.	
C	(4) Examination of Causal Relationship	62
Viewpoint	<p>- <i>Casual question</i> on the effects resulted from the projects were used to obtain the answer relating to the impact of the project. However some <i>Casual questions</i> were still vague and unclear. It is recommended to set up the questionnaire clearly to find out whether the observed effects were created by the project only or also by other projects. As in Q3.</p> <p>- The effects for the beneficiaries resulted is analyzed in both “quantitative and qualitative manner” by comparison and proved interrelation between outputs and overall goal.</p>	
<p>Comments:</p> <p>. Logical framework is a very important which includes the narrative summary, verifiable indicators, means of verification and important assumptions. It is therefore the evaluation grid should be more in line with the logical framework to reflect all necessary data and indicators to measure the project results and used for comparison with targets as well because the reliability and validity of the results of the evaluation depends largely on the reliability and validity of information/data collected through questionnaire.</p> <p>To avoid confusion and to obtain the precise data/information, the questions should be more specific, distinguished and consistent enough with the sub-questions.</p> <ul style="list-style-type: none"> <li>- The three main following questions in the questionnaire for GoL have the same meaning; therefore, they should be clearly distinguished from each other. (2) <b>What are the factors which affects the achievement of overall goals</b>, (4) <b>What factors contributed to positive and negative impacts?</b>, (5) <b>What are the factors influenced the achievement of project overall goal?</b></li> <li>- The main questions should be consistent with the sub-questions i.e. in Q 5: <b>Do the target villages achieve individual plantation and community forests after project termination and up to date?</b> This sub question is not relevant to main question (3) <b>Are the unintended positive and negative effects observed?</b> Achievement in term of individual plantation and community forests after project termination and up to date are not considered as <b>unintended</b> effects. They are <b>expected</b> effects resulted from the project interventions</li> <li>- The main questions in the questionnaires also need to clearly set up to assess the contribution of the project to the improvement of the institutional capacity of the implementing agency.</li> <li>- The main question (5) <b>What are the factors influenced the achievement of project overall goal?</b> should specifically define “external factors” rather than mentioning only “factors” to avoid confusion. (as JICA evaluation guideline)</li> <li>- The question regarding any notable social/cultural/environment change in the target villages and surrounding needs to specifically define “<u>mainly due to the project</u>” as to set the focus on the changes resulted from the project interventions.</li> <li>- Evaluation questions in the evaluation grid are not totally the same as in questionnaires. For example, the question about the utilization of the manuals by the government shown in the evaluation grid was not included in the questionnaire.</li> </ul>		

### 3. Evaluation Results

B	(1) Impact	57, 85-86
Viewpoint	-The results are fully addressed both direct and indirect impact, that include sufficient perspective for evaluation of ‘Impact’: such as the achievement level of the overall goal, positive or negative changes resulted from the project intervention, external factors affected the achievement of the Project Overall Goal and the improvement of the institutional capacity of the implementing	

	<p>agency due to the project.</p> <ul style="list-style-type: none"> <li>- Grounds for judgment are not fully stated in a convincing manner. Evaluation results should have more specific concrete evidence to prove that the impact was resulted from FORCAP rather than from other projects.</li> <li>- It is recommended that sources of the numerical data obtained be stipulated clearly i.e., from field survey or document review.</li> </ul>	
B	(2) Sustainability	58, 85-86
Viewpoint	<ul style="list-style-type: none"> <li>- The results fully addressed sufficient perspectives for evaluation of 'Sustainability': the activities to be continued and outcomes to be produced in terms of 1) organizational aspect, 2) environmental aspect, 3) utilization of the center's facilities and equipments, 4) marketability and economic terms, 5) institutional and management aspect and 6) financial aspects.</li> <li>- Grounds for judgment are stated in a convincing manner.</li> <li>- The sustainability of society, culture and environment needs to be addressed and reported in a simple and clear way to understand, i.e., it is not clearly indicated whether environment aspect is sustainable or not.</li> </ul>	
B	(3) Factors Promoting Sustainability and Impact	85-86
Viewpoint	<ul style="list-style-type: none"> <li>- Promoting factors on 'impact' and 'sustainability' are analyzed properly based on the information obtained through evaluation process.</li> <li>- However, the analysis covers only 2 factors. It is recommended to look at one aspect in both promoting and inhibiting perspectives, regardless the extent of their influence. The analysis can be more comprehensive by covering more aspects. More specific concrete evidence drawn from survey results should be shown.</li> </ul>	
B	(4) Factors inhibiting sustainability and impact	85-86
Viewpoint	<ul style="list-style-type: none"> <li>- Inhibiting factors on 'impact' and 'sustainability' are analyzed properly based on the information obtained through evaluation process.</li> <li>- However, the analysis covers only 2 factors. It is recommended to look at one aspect in both promoting and inhibiting perspectives, regardless the extent of their influence. The analysis can be more comprehensive by covering more aspects. More specific concrete evidence drawn from survey results should be shown.</li> </ul>	
B	(5) Recommendations	87-88
	<ul style="list-style-type: none"> <li>- Recommendations are made thoroughly based on the information obtained through the process of data analysis and interpretation that are specific, practical and feasible. However it is recommended that the recommendations be prioritized with a time frame (e.g., in a short term or longer term) to be useful for feedback and follow-ups</li> <li>- Recommendations are provided only as measures to be taken by NAFES, AFTC, Vientiane PAFO/Vangvieng and Hinheup DAFOS and target village authority. It will be very useful to also provide suggestions and advices to all stakeholders and other organizations concerned rather than limited to certain groups only.</li> </ul>	
B	(6) Lessons Learned	62
Viewpoint	<ul style="list-style-type: none"> <li>- Lessons learned are made thoroughly based on the information obtained through the process of data analysis and interpretation.</li> <li>- Lesson learnt are also obtained from case studies that are convincing and useful for feedbacks, being generalized for wider applicability.</li> </ul>	
<p>Comments: Evaluation results should have more specific and concrete evidence to prove that the impact was resulted from FORCAP rather than from other projects.</p>		

#### 4. Structure of report

B	(1) Witting Manner	89,103
Viewpoint	Acceptably clear and understandable with major points described and logical enough to communicate with the third party, who was not involved in the evaluation process.	
B	(2) Presentation of Primary Data and Utilization of Figures	89, 103
Viewpoint	<ul style="list-style-type: none"> <li>- Sufficient primary data collected from the questionnaire and interviews are presented properly in the report.</li> <li>- Figures and tables are utilized effectively to present statistics and analysis results. However, the sources of data presented need to be quoted clearly.</li> </ul>	
Comments:		

#### 5. Overall review based on 'criteria for good evaluation'

B	(1) Usefulness	13-14
Viewpoint	Most of the evaluation results are clear, useful and utilized for the decision making of the organizations concerned.	
B	(2) Impartiality and independence	13-14
Viewpoint	As information/data obtained from various stakeholders well as from persons and organization concerned, therefore, the impartiality is assured.	
B	(3) Credibility	13-14
Viewpoint	The evaluators have specialized knowledge, are well informed and capable of producing reliable information. The evaluation process was transparent and appropriate criteria of judgment were used.	
B	(4) Participation of partner countries	13-14
Viewpoint	Active participation from stake holders is anticipated.	
Comments:		