



Rapid Evaluation of Livelihood Outcomes: Houaphan and Attapeu Provinces, Laos

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1. Evaluation Purpose

This evaluation will determine if and how many households have experienced improved well-being as a result of USAID LEAF's intervention in Houaphan and Attapeu provinces, Laos. The evaluation will support decision making and justification on the number of households to be included as USAID LEAF's achievement towards the performance target of indicator 4.2.1, number of households with improved well-being through sustainable natural resource management as a result of US government (USG) assistance, for reporting to USAID.

2. Evaluation Questions

Have the beneficiaries experienced or anticipated **improved well-being** as a result of USAID LEAF's assistance?

If so, does the improvement in well-being facilitate **sustainable natural resource management**?

2.1 Key Definitions

Improved well-being refers to betterment of lives or human welfare¹, which are categorized into three core areas:

1. **Opportunity**: jobs/service providers, agricultural/forestry production, payments, education or infrastructure
2. **Security**: land ownership/management rights, access and use rights, carbon rights, demographics, health, ecosystem services for water, food and health security
3. **Empowerment**: participation in decision-making regarding local land-use and development; building social capital to participate more effectively

Sustainable natural resource management is the management of the use and protection of natural resource, particularly forest, in order for communities to meet their present economic, social and cultural needs in ways that will sustain the resource for future needs. This includes activities that promote enhanced management of natural resources for one or more objectives, such as conserving biodiversity, sustaining soil or water resources, mitigating climate change, and/or promoting sustainable agriculture.

3. Project Background

3.1 Houaphan Province

3.1.1 Community Data

District	Cluster	Village	Households	Population
Xam Tai	Long Kiam	Sobpeng	62	375
		Tinphou	39	207
Viengxay	Nam Ngha	Naheua	38	254
		Naman	66	378
TOTAL			205	1,214

¹Lawlor et al. (forthcoming) Community participation and benefits in REDD+, summarized in Madeira et al. Sharing the Benefits of REDD+: The Nature Conservancy p.12

3.1.2 Development Problem and Hypothesis

3.1.2.1 Participatory Land Use Planning

All four target villages did not have land use plans that were recognized by the community members before the project was implemented. Though there were previous land use planning efforts and some recognitions of customary rights and usage among the villagers, there were no clear and effective boundaries separating agricultural fields, livestock raising area and use and protected forests. This lack of clarity resulted in forest encroachment, unsustainable harvesting of natural resources as well as conflicts between the local people and with the authorities.

USAID LEAF partnered with the Department of Forestry (DoF), Provincial Agriculture and Forestry Office (PAFO), District Agriculture and Forestry Office (DAFO) and offices of Natural Resource and Environment at provincial and district levels (PONRE and DONRE) to conduct participatory land use planning (PLUP) in the four target villages in 2014 and 2015.

It was expected that the PLUP process increased participation of local people in planning for natural resource use and conservation. Also the villagers' rights to utilize the farm areas and sustainably harvest forest products would be more secure. Finally, disputes regarding borders would be reduced.

3.1.2.2 Livestock Health Promotion

Two studies conducted by USAID LEAF on socioeconomic baseline and livelihoods assessment showed that livestock is an important source of income and nutrition for the four target villages. However, with the lack of technical skills and availability of medical supplies, there has been a high incident of diseases and deaths of farm animals, particularly during outbreaks.

USAID LEAF worked with government counterparts and village representatives to conduct activities designed at improving the health and grazing system of livestock in the four villages. Trainings were provided to Veterinary Volunteer Workers (VWW) in the beginning of 2015, followed by a study tour to successful livestock programs in Laos. Animal husbandry trainings were also organized with 53 interested villagers from the communities. A livestock medicine fund was then established and equipment provided.

Through participatory rural appraisal (PRA) activities, all four villages identified livestock healthcare as a way to improve their livelihoods. USAID LEAF hypothesized that if livestock are able to contribute more to the households' income, together with improved grazing practice and better land use planning, unsustainable use of forest resources would be reduced.

3.2 Attapeu

3.2.1 Community Data

District	Cluster	Village	Households (HH)	Population	HH participating in improved coffee processing	HH participating in improved forest management
Sanamxay District	Sompoy	Hat-Oudomxay	99	512		99
		Sompoy	286	1,513		286
		Tagao	63	337		63
	Nonghin	Nonghin	87	408	87	

Xaydonekhong	136	721	136	
Mathka	72	449		
Nongmouang	103	582		
Total	846	4,522	223	448

3.2.2 Development Problem and Hypothesis

3.2.2.1 Improved Coffee Processing

Robusta coffee is the main crop cultivated and the main source of income for local communities based in Nonghin and Xaydonekhong villages in Sanamxay District, Attapeu Province. During the final village consultation that occurred on 29th June 2015, the participants outlined that improving their current coffee processing methodology can generate more revenue as a result of better quality and prices of coffee beans sold to middlemen and local traders. Currently, farmers use the rice mill machine to remove outer layer of the coffee husk. This method is not really appropriate since the friction between the coffee beans are rather poor, therefore causing some losses due to the low generation of coffee dust and breakage of beans.

To address this problem, the procurement of a good quality huller machine was organized by the USAID LEAF team (delivery on 27 July 2015). One huller machine per village (total of 2 machines) was procured using diesel engine. The cost of one machine amounted to 600 USD and was purchased in Paksong District, Champasak province. The hulling price or the cost for using the machine will be set up at 200 LAK per kg (which is lower than the price when using the rice mill machine – 300 LAK per kg). Considering that average of 50 tons of coffee beans are processed each year per village, this permanent revenue will serve to purchase fuel for running the machine and to buy spare parts when needed. Basic training in accounting and bookkeeping is planned to be conducted on 7-8 September 2015 to two/three people selected by the village authorities. This will ensure transparency, sustainability and benefit to the whole community.

Regarding livelihoods, households will be able to generate higher income due to lower price of processing (100 LAK per kilo) and slightly higher market price (between 100 LAK to 500 LAK per kilo) as a result of better quality of the coffee beans. Concerning improved natural resource management, participating households will be less dependent on forest products for meeting their subsistence need such as timber, NTFP and wildlife as they will be able to generate more income with the use of the community huller machine.

3.2.2.2 Improved Forest Management

Deforestation and forest degradation is mainly coming from local farmers who clear land for agriculture and log forests to either satisfy their construction and energy needs or to satisfy demand from national and international timber markets. As such, they should also be the primary targets and beneficiaries of any REDD+ interventions. Also contributing to forest loss are illegal loggers and government entities and/or private companies who undertake infrastructure and/or concession based projects².

USAID LEAF has been in collaboration with local authorities to support the villages of Hat-Oudomxay, Sompoy and Tagao to reforest areas that have been subject to extensive deforestation as a result of local development. This firstly involved demarcating forest restoration zones in each village, and establishing sample plots and conducting an inventory of tree species, in order to determine the

² Extracted from “GIS and Remote Sensing Support for the Assessment of Historic Forest Cover Change and GHG Emissions in Sanamxay District” published by Forest Carbon, 2014

area to be restored through additional tree planting and natural regeneration. The third and final step in the process was the planting of tree seedlings in the forest restoration zones at the beginning of this year's wet season. A total of 3,500 seedlings were supported by USAID LEAF and planted by the local community over a restoration area of 1,072 hectares across the three target villages, including 7 hectares for enrichment planting and 1,065 hectares for natural regeneration (implementation on 1st June 2015). These seedlings included several local species of significant market value, which will help reverse the trend of deforestation in the project area, and create future income generation opportunities for rural households.

Building upon the above activity, Community Forest Management (CFM) training as well as regulations and guidelines establishment have been developed for the communities' management of the restored forest area, especially to members of the Village Forestry Unit (VFU) (implementation on 2-3 September 2015). A monitoring plan is plan to be developed with the local community to assess the long-term success of the forest restoration work.

The CFM training and development of the guideline has ensured that this activity goes beyond just tree planting. The villagers are participating in decision-making on natural resource management and have the most to gain from the reforestation are expected to be the stewards of the land, increasing the likelihood that the seedlings will grow and mature, and continue to provide income and viable eco-system services / benefits for generations to come.

4. Scope

The geographical scope of this evaluation is limited to the activities' targeted communities. Spillover effects to nearby communities will not be explored due to time and resource limitation. Because USAID LEAF is coming to an end, it is not possible to wait until all of the potential outcomes and impacts materialize. Neither can sustainability be directly studied. The best option at this time is to simply discuss these issues with the project beneficiaries and authorities who operate in the area.

5. Methodology

Considering the limitation of human resources, time, and factoring in muddy roads during the rainy season, it would not be possible to collect data from enough sampled beneficiaries to be able to statistically infer the results to the population. Therefore, data collection will be accomplished through a combination of interviewing key informants, field observations, resource mapping and transect walking.

Key informants include USAID LEAF Field staff, local government counterpart staff, village leaders and committees, VVW, Village Forestry Unit and community members. They will be selected through purposive and convenience sampling to learn from those who are directly involved with the project and others whom the evaluation team can reach during the short field trip.

Although the result of this evaluation will not be generalizable to the whole target population, there is an invaluable opportunity to learn about the outcomes and potentials of the activities, together with contributing to the knowledge on improving the livelihoods and natural environment in Houaphan and Attapeu Provinces.

6. Results

6.1 Houaphan

6.1.1 Participatory Land Use Planning

6.1.1.1 *Relevance*

According to several sources, conducting PLUP in the four target villages was an appropriate solution to the ongoing problem of deforestation and forest degradation. An official at Viengxay DAFO referred to a study which showed the quality of the forest in the area decreasing each year and a reason for this is the absence of proper land use zoning. So by conducting PLUP, he said “the future benefits of the environment will be guaranteed.”

A USAID LEAF staff mentioned that micro land use planning was conducted in the past in the target sites but because it did not engage communities in decision making, there was no ownership, understanding or practice. This was in line with what the people at Na Huea village had to say. “We have these zones from before but they were not clearly defined in terms of land use. We just talked about it and informally say something like this is yours and this is mine.” So from the beginning, PLUP was designed to tackle the lack of clarity and local participation in land use planning.

6.1.1.2 *Process*

A USAID LEAF Staff explained the PLUP model as a nine-step participatory process that should be conducted by a team of specialists and builds local capacity. While full participation is ideal, in reality several constraints must be taken into account including expertise, time, budget and legal framework. The PLUP activities in Xam Tai and Viengxay districts were both an improvement upon past micro land-use planning efforts, which was more of a top-down approach. However, there were some limitations during the PLUP process in Xam Tai, which was not as comprehensive as in Viengxay. Nevertheless, as will be covered later in this report, the project beneficiaries in both districts had a favorable view of PLUP and cited several benefits for their communities.

In Xam Tai, the PLUP process as recounted by the villagers and DAFO were similar:

1. Experts visited DAFO and together they met with the community members
2. Demarcate different land-use zones using map and surveys
3. Create or confirm rules and regulations for different zones
4. Report which include maps completed and shared
5. Final village meeting

In Viengxay, while the community members told a comparable story to Xam Tai, the DAFO staff was able to explain the process to a greater detail. This probably reflects the more comprehensive approach to PLUP in Viengxay. The steps were:

1. Setting up three teams working in parallel: one for zoning, one for analyzing socio-economic situation and development problems and one for conducting soil analysis.
2. Collect information and prepare technical materials
3. Meet with the communities
4. Demarcate village area and zoning
5. Analyze community problems
6. Setting up village level land use management committee
7. 3D mapping
8. Report writing

9. Final village meeting

6.1.1.3 Outcomes

Both the focus groups at Nahuea and Sopeng villages were able to sufficiently identify and explain the different types of land use zones in their village. But with the 3D map in Nahuea, this process was much faster and smoother because the informants were able to better visualize what the map represented compared to the people at Sopeng who relied on a small paper map found in the PLUP report.

The transect diagrams of all the land use types were produced by the group in each village. The information was accurate and there appeared to be consensus among the group members. These diagrams can be found in appendix 8.3.

6.1.1.3.1 Improved Well-being

6.1.1.3.1.1 Opportunity

PLUP did not directly produce new economic opportunities for the community members except for promoting sustainable use of forest products and farm land. The villagers at Sobpeng said that after PLUP, “it is better than before. When people just clear land without a plan, we cannot find bamboo shoot or other food from the forest.” The authorities at both Xam Tai and Vienxay DAFO agreed that seasonal Non-Timber Forest Products (NTFP) such as mushrooms and bamboo shoots are allowed to be collected from the forest and provide nutrition and income for the households. Furthermore, a staff of Xam Tai DAFO believed the problem of people from other villages using the resources of the target villages should reduce with clearer zoning agreements.

For the most part, the people of Na Huea and Sobpeng stated that their main income is from livestock production. USAID LEAF’s livestock health promotion activity was designed to be complementary to PLUP for providing economic opportunities to the target families.

6.1.1.3.1.2 Security

Similar to the case of opportunity, PLUP did not directly affect land tenure, resource access or use rights. However, the clearer delineation of zones from participatory decision making resulted in better understanding and management of land and other natural resources. The target families in Sobpeng said that their lives are now better because “before, whoever wants to encroach on the forest can do it. Now we have rules and boundaries. We know how much [resources] we should use this year and next year. Before, nobody knew.” Along the same lines, the villagers at Nahuea said “our land use is more clearly defined. For example, this part is ... watershed forest, no one can clear it. Otherwise it will be dry without water to use and drink. Before, watershed area or high mountains can be cleared.” So in this case, better management is likely to contribute to securing sustainable ecosystem services.

6.1.1.3.1.3 Empowerment

It is clear that PLUP engaged the communities in decision making. Obviously, it is not possible to setup regulations or demarcate new zones that would change the boundaries of a national protected area but it appears the communities were given ample opportunities to provide inputs into zoning of other land use areas as well as fine tuning the regulations that would govern their use. At Sobpeng, the people declared that the PLUP team listened to them and that decisions on regulations and zones were only made with their consent. The families at Nahuea stated they made the decision on zoning “because this is our land. We know which areas are suitable for rearing animals, or serve as production, use or protected forest.” DAFO at Xamtai corroborated by stating

“the people decided for themselves the types of land use for each area. The technical people listens to the community members and see if it fits with the framework, then they delineated the land on a map.”

Apart from the effect of building local ownership, participation in land use planning may have contributed positively to other community dynamics, particularly in Sobpeng. The villagers talked about having “more cohesion in the village. We do it together ... Before this, 2-3 houses here and 2-3 houses there. There was no unity.” Also “with PLUP limiting unsystematic clearing of land, the people who did little [farming] before could do more depending on the capacity of each family.” When asked if they were unintended negative consequences, they said “When we arrange the forest into protected, use or production area, everyone has high responsibility. We are full and happy.”

6.1.1.3.2 Sustainable Resource Management

As seen from the evidences from the previous sections. PLUP has clearly defined land use boundaries through local participation. With a strong sense of ownership, the focus group discussion (FGD) participants reported that the community members no longer clear land arbitrarily and are respecting the rules and regulations. Both USAID LEAF staff and DAFO also agreed with this observation. When asked if there has been any changes since PLUP, one DAFO staff responded “land use is now within a boundary and the villagers are taking care of the forest. Conservation area is well protected and the villagers only use the area that is set up for use.” The villagers at Sobpeng said “with the map and regulations, it became more apparent. We follow this map.” The DAFO at Xamtai mentioned one caveat, which is a growing population means increasing pressure on the forest and believed that alternative income source(s) are needed to ensure sustainable natural resource use. The livestock activity may have provided an answer to this.

6.1.2 Livestock Health Promotion

6.1.2.1 Relevance

Both the socioeconomic baseline survey and livelihoods options report conducted by USAID LEAF in 2013 and 2014 showed that livestock is the main income generation for most of the families in the target communities in Viengxay and Xam Tai district. This was confirmed several times by the stakeholders during this evaluation. Informants in both Sobpeng and Nahuea village mentioned that livestock provided them with cash income for their families.

Representatives from DAFO in Xam Tai and Viengxay recalled outbreaks of livestock diseases in the recent past. One officer from Xam Tai said that the severity of the problem was exemplified by the district’s market not having enough meat. This was echoed by the target families, one from Nahuea said before, “the animals were sick and we lacked medicine.” So tackling the problem of animal health dealt directly with the main income source for the villagers who were combating animal sicknesses and deaths. A USAID LEAF staff mentioned that past projects on livestock health promotion did not provide the households with comprehensive training or sufficient medical instruments and supplies. An important assumption made by USAID LEAF was that if people were earning substantial income from livestock, they would not be interested in and have no time to heavily collect forest resources or clear forest land for farming cash crops.

6.1.2.2 Process

The process for promoting livestock health were confirmed by the stakeholders to have followed these steps:

1. 5 day training course on veterinary basics were conducted for Village Veterinary Workers (VW)

2. Provision of veterinarian instruments and supplies
3. 3 day study tour to Khammouan Province attended by the VVWs
4. 3 day training on animal husbandry for interested community members
5. Provision of livestock medicine and establishment of medicine fund
6. Provision of grass seeds for improved grazing

6.1.2.3 Outcome

6.1.2.3.1 Improved Well-being

6.1.2.3.1.1 Security and Empowerment

The livestock activity does not have a direct link to the security or empowerment aspect of well-being. Indirectly, the livestock activity was aimed at promoting a reliable income source so people do not clear forest land for farming cash crops, hence supporting sustainable ecosystem services, and building social capital on the technical knowledge of animal husbandry and livestock health. The alternative income generation hypothesis for reducing pressure on the forest will be discussed under Sustainable Natural Resource Management section but building social capital will be discussed here.

Four livestock farmers and Six VVW (who are also livestock farmers themselves) were interviewed. All of them said they attended the trainings, have learned new skills and some are now applying them in animal husbandry and healthcare. Building better shelter for pigs, goats and chicken was mentioned. Mineral block were said to have been produced and consumed by animals. The VVW reported having already administered vaccine and medicines by choosing the right types and dosages and applied orally or through injection. Some VVWs also delivered goat kid and neutered pigs. In regarding the medicine fund, the evaluation team observed that both Nahuea and Sopeng's medicine cabinets were filled and records of use and sales were well kept. From the interview and observations, it seems the VVW have been effective in providing animal healthcare and that the medicine fund is operational. The overall social capital in terms of livestock production and healthcare appear to have been greatly improved from before.

6.1.2.3.1.2 Opportunity

The outcome of the livestock activity was significant in terms of improving animal health, which should lead to increased income for the target households. All ten informants from Sopeng and Nahuea reported improved animal health. Here is one account from Sopeng:

Before we just let the animals roam and they go separate ways. So it was difficult and took a lot of time to gather them. Now, with the new shelter and mineral block, they stayed close so it is easier to get them back into the shelter. For that we have more time to do other things. Animals feel like they have a home to come back to. Also, we can protect our investment because medicines are available to cure animal illnesses.

Another farmer who is also a VVW said of animal health care "before the training on VVW, there were many sick and dead animals but afterwards, I have been using vaccines and medicines to prevent and cure them, as well as growing grass for feed. So animal death has drastically reduced from before."

Authorities agreed that livestock health has been improved in their districts. Statistics from DAFO Xam Tai showed that animal death ratio were greatly reduced across almost all of the animal types in Tinpou and Nahuea. Some were very significant such as chicken death reduced from 43 percent in 2014 to 10 percent in 2015 in Tinphou and pig death reduced from 49 percent to 2 percent in Sopeng. Although the data has not been fully updated for 2015, the table provides a good

indication of improved animal health (appendix 8.4). The following was said by one of the representatives at Xam Tai DAFO.

There was a massive problem with animal sickness in Xam Tai district. ... Since the VVW program, trainings and provision of other inputs, we saw that the VVWs have been active. Vaccines was provided. Now the sicknesses have decreased ... We now see enough meat at the market, unlike before.

Better animal health should lead to increased income and nutrition from better productivity, less losses and investments. This was the case in the two villages the evaluation team visited. All ten informants stated that their income has either increased or is expected to increase once they are able to sell the animals. The reason provided for this was mainly due to improved animal health, which involves prevention or timely attention to diseases, better housing and feed, all of which leads to healthier and more productive animals.

6.1.2.3.2 Sustainable Natural Resource Management

In relation to reducing encroachment and overuse of forest resources, DAFO officials at Xam Tai discussed the need to promote alternative income generation. At Viengxay and Xamtai, the DAFO staff believes livestock may be a key to provide the target villages with additional income that may lead to reducing pressure on the forests. When asked if the expected increased income from livestock husbandry would affect the rate of forest product use, the ten informants' responses were ranged from stopping to use forest resources altogether to still collecting some but less than before to use for food but not for selling. Overall, there is a sense of optimism that livestock production—with better health care and husbandry techniques—will be the answer to poverty reduction and therefore reducing forest encroachment. Some of the target household representatives said that if they spend time on raising many animals, they would not have much time to do much else. The adoption of improved grazing has shown limited success due to a very dry rainy season. Many people reported that the grass did not have enough water to grow. However, some have already fed their animals with the newly planted grass. Also it is possible to retry during the next rainy season. From the interviews and observations, small scale livestock raising appears to be working as an income source so the community members would not have to overuse forest resources or clear forest land to farm cash crops. This activity goes hand in hand with PLUP, particularly for demarcating areas for livestock grazing, farming and conservation.

6.2 Attapeu

6.2.1 Improved Forest Management

6.2.1.1 Relevance

The Socioeconomic Baseline Survey conducted by LEAF in 2013 shows that timber extraction and conversion from subsistence to commercial farming, coupled with population increase are the main drivers of deforestation and forest degradation in Attapeu Province. The survey further states that tree planting and improving the management and regulations of forest use were proposed by representatives from Sompoy cluster. This together with a follow up village consultation before the improved forest management (IFM) activity was conducted guaranteed that the activity was relevant to the problem at hand. One of the community members told the evaluation team why he wanted to be part of the IFM activity.

I went on a study tour to Chiang Mai [Thailand] and I saw a national park there. It was shady and cool. It was beautiful. Nobody touched it. There are laws protecting it. So when the project came I proposed to do this and the project provided ... it will benefit the soil, sky and

weather. It will be cool and shady. It will prevent flood and drought. The weather will not be hot or dry. That's why we wanted this. The village decided to do this activity.

6.2.1.2 Process

The following steps were reportedly conducted according to USAID LEAF staff, Sanamxay DAFO and Sompoy community members.

1. Village consultation inquiring on the interest of the community members to participate in IFM activity in seven villages. Five villages accepted this proposal.
2. Meetings were held in all five interested villages. Then surveys and demarcation of forest restoration areas were completed. Maps were provided to the villages.
3. In three out of the five villages, enrichment planting was done in the designated areas while natural regeneration area (without planting) was demarcated.
4. A workshop on community forest management was held to discuss management and protection of the restored area including agreeing on the related regulations for the communities. At the time of the evaluation, the forest regulations were still being processed by relevant government authorities.

6.2.1.3 Outcomes

According to a Sompoy Village Forestry Unit (VFU) member, 1,000 seedlings were provided by USAID LEAF and ten days were needed to plant them all in June 2015. Around 75 people helped with the planting. The survival rate was estimated to be 80 percent at the time the evaluation was conducted. Weeding has not been carried out and it was observed that the grass level was quite high. According to another VFU member, 46 hectares of degraded forest were planted in. Also, the ADB Biodiversity Conservation Corridors (ADB BCC) project provided seedlings for planting in another area and has created a nursery to provide seedlings for further planting.

6.2.1.3.1 Improved Well-being

6.2.1.3.1.1 Opportunity

USAID LEAF and DAFO staff at Sanamxay agreed that the trees planted were of market value. However, it was reported that they will take decades to come to maturity and be worth selling. The VFU members at Sompoy village had a slightly different idea. They knew the kinds of trees planted, which were Sepetir, *Pterocarpus macrocarpus*, *Dalbergia Cochinchinensis* and *Xylia xylocarpa*, will be worth a small fortune when they grow big. Nevertheless they were more focused on discussing conservation. When asked about the economic value of the trees, one of the members said “the forest will grow big and we will not use it.” However, when probed, the VFU member said that the USAID LEAF sponsored seedlings were planted in the village use forest area while the ADB sponsored ones were planted in the village conservation area so the *Dalbergia Cochinchinensis* trees planted in the village use forest will likely fetch a high price in the future if the state bids for and buys them and only with the consent of the villagers.

Forest restoration will also affect the availability of NTFPs. The community members said that mushrooms and other products are being collected from the forest. One VFU member said “when there is forest cover, the soil will be moist and mushrooms will grow. Without the forest, it will be too dry.” DAFO at Sanamxay agreed that it is possible for the villagers to collect many kinds of NTFP from the both the protected and use forest areas in their village.

With a proper set of regulations governing the use of the forest, it is possible that IFM will contribute to the availability of trees with commercial value and NTFP well into the future.

6.2.1.3.1.2 Security

The IFM activity has not directly changed the security aspect of well-being except for the revision of the target villages' regulation on forest management. At the time of the evaluation, the regulations were still being processed by the relevant government agencies and the VFU members stated that they have not yet seen it.

6.2.1.3.1.3 Empowerment

USAID LEAF and DAFO staff said the decision to engage in IFM, identification of the planting area, and maintenance and monitoring of the restored forests were made by the communities themselves. The evidence from the activity reports and discussion with the community members proved this to be true. A VFU member responded to the question about the decision maker who identified the planting area by saying "I decided. I took the technical staff from the province to get the GPS coordinates. They asked us if it is okay to plant here and we said yes, this is the most degraded area." The decision on tree species to plant were also agreed upon by the community members, one of whom stated "I coordinated with the project and PAFO. I told them which species are naturally appropriate to these areas." While IFM was not as participatory as PLUP in Houaphan, it still involved the community member in contributing to important decisions and planning for managing their natural resources.

6.2.1.3.2 Sustainable Natural Resource Management

IFM was aimed at sustainable resource management through forest regeneration and engaging the local communities. Both USAID LEAF and DAFO staff believed that the activity has reached its objective. When asked if people will still cut down the trees indiscriminately, one of the VFU members said that with the new regulations, it will be clear and people will not destroy the forest. He also shared his vision of the village in the future which the project has contributed to:

If the trees grow big, it will cover a large area ... Even wild animals will go there. Now, wildlife is almost extinct. Also, their seeds will fall and grow into new trees. The birds will eat the fruits and take the seeds to new places.

This will be good for the villages. We will have shade. It will be beautiful.

6.2.2 Improved Coffee Processing

6.2.2.1 Relevance

Coffee production is prevalent in all four villages in Nonghin Cluster according to the government agricultural staff members at the cluster and district level. The focus group discussion at Xaydonekhong and household survey supported this fact. When asked how many households farm coffee, the community members said all four villages in Nonghin cluster grew coffee and in Xaydonekhong village, "for all of us, the main occupation here is to farm coffee." The USAID LEAF Socioeconomic Baseline survey mentioned promoting coffee production as one of the ways to boost income.

However, the link between coffee promotion and natural resource management was not completely clear. Coffee farming may provide enough income so people will no longer need to engage in illegal logging, hunting or over use NTFP. On the other hand cash crop farming was mentioned as one of the drivers of deforestation in the Socioeconomic Baseline Survey. A USAID LEAF staff recalled the assistance on coffee production was meant to be implemented hand-in-hand with community agreements to no longer encroach protected forest areas. However, he continued to explain that due to the lack of certainty and long delays with ADB funding, which was meant to complement

USAID LEAF's investments, the resourcing and scheduling of activities were disrupted. During the evaluation, it was found that the ADB funding was finally approved and the activities will begin soon after. So while coffee promotion is highly relevant to improving people's livelihoods, the connection to sustainable natural resource management was not clearly evident at the time of the evaluation.

6.2.2.2 Process

The villagers at Xaydonekhong, USAID staff and DAFO officials agreed that the following steps took place

1. Data collection and consultation with the villages
2. Provision of the coffee huller machine with instructions on usage and maintenance
3. Meeting to establish a committee to manage the machine and associated regulations
4. Provision of bookkeeping training

6.2.2.3 Outcomes

Two coffee hullers were placed in Nonghin and Xaydonekhong village, one for each. The committees and regulations were setup. However, the machine at Xaydonekhong has not yet been assembled and used simply because the evaluation took place before harvest season, which is the end of the year. It is expected that the situation at Nonghin is the same. The machines belong to the community. Anyone can use it for a fee of 200 LAK per kilogram, which is cheaper than the 300-400 LAK per kilogram usually charged by private owners. A committee of four people has been setup in each village to manage the finance, use and maintenance of the huller. When a fee is paid, 60 percent is added to the fund for managing the machine and 40 percent goes to the four committee members for their time.

6.2.2.3.1 Improved Well-being

6.2.2.3.1.1 Opportunities

Two key opportunities expected to be created by the improved coffee processing are cost saving and increased price of processed coffee. The FGD at Xaydonekhong revealed the community members will be paying 200 LAK instead of the 300 LAK that are currently being paid to private machine owners to do the same job. Moreover, the other machines that are being used in the village are smaller models that were designed mainly for rice. According to the villagers, the provided coffee huller will produce better processed coffee with less contamination of husks and other impurities. So the price they will fetch is expected to be 12,000 LAK compared to 11,000 LAK per kg of processed coffee that they are currently getting from using the rice mills to process the coffee.

A short survey was conducted with ten households in Xaydonekhong. Although not generalizable, the average household was expecting to produce 530 kg of coffee in 2015. Using this estimate to calculate the total net income increase from the cost saving and higher price, the average household would have a net income increase of roughly 72 USD per year compare to before. Considering the average income per household for Xaydonekhong village is 544 USD per annum according to the socioeconomic baseline survey, this is a 13 percent increase. However, some limitations must be noted. First, a number of better off households already own rice mills that they are using to process coffee. It was reported by the villagers that there are currently 13 rice mills in the village though they are smaller in size compared to the coffee huller provided by the project. So these families will most likely continue to use their own mill and not benefit from the coffee huller. Another limitation is the machine's capacity. The community members believed that it will not be enough to serve everyone in the village, especially during periods of high coffee price where most people would like to sell

their produce quickly to the market. Some may choose to pay private mill owners rather than queuing up to use the communal machine.

6.2.2.3.1.2 Security and Empowerment

Improved coffee processing does not have any direct links to the security and empowerment aspect of well-being except the establishment of the management committee, whose members are trained and coached to financially and operationally manage the machine. This can be considered as building social capital.

6.2.2.3.2 Sustainable Natural Resource Management

As explained in the relevance section, the connection between improved coffee management and sustainable natural resource management is a tenuous one. Because conversion of land for farming cash crops such as coffee is one of the most prevalent causes of deforestation in the area, it is not certain if promoting better coffee processing will impact improved management of forests and natural resources, unless there are strong land use management regulations and practices in effect.

7. Conclusion

In Hoaphan Province, the data from Sobpeng and Nahuea villages shows that Participatory Land Use Planning resulted in the community members being empowered to make decisions on land use zoning and regulations, hence creating local ownership of the plans and securing ecosystem services and forest product for long term use. To complement PLUP, the livestock promotion activity established an animal healthcare system in the target villages that is accessible to those living in and nearby the communities. This supported opportunities for an alternative income source that is expected to result in less pressure on the forest. Therefore, assuming the situation is similar in the other two project villages of Tiphou and Naman, USAID LEAF is including 205 households in Houaphan as having improved well-being through sustainable natural resource management as a result of USG assistance.

In Attapeu, improved forest management clearly contributed to sustainable natural resource management in Sompoy village through enrichment planting, natural regeneration and revision of the regulations on the village forest. In regarding well-being, the tree species planted were of economic value, though they will require decades to grow and any commercial benefits will be for the next generation. Nonetheless, according to the village forestry unit, improving the quality of the forest and regulations will ensure sustainable use of forest products well into the future. Moreover, important decisions on where the trees were planted and how to make the regulations applicable were made by the community members. From secondary data and accounts of government and project staff, it is assumed that the situation is similar in Hat-Oudomxay and Tagao villages. Therefore, USAID LEAF will be including 448 households in these three villages as having improved well-being through sustainable natural resource management as a result of USG assistance.

In regarding the improved coffee processing activity in Xaydonekhong and Nonghin villages, because the machine has not yet been assembled and used and the unclear link between coffee promotion and sustainable natural resource management, the 223 households will not be included as target achievement for the indicator.

In total, 653 households from Laos are included as having improved well-being through sustainable natural resource management as a result of USG assistance.

8. Appendices

8.1 Data Collection Tools

8.1.1 Houaphan Data collection Tools

Village level Data Collection

PLUP

Expected result

- Participation
 - Delineation of different types of land use
 - Rules and regulations
- Security
 - Rights to use resources in usable forests
 - Rights to farmland

Data collection

- Land use map
 - Ask the community to show or draw it
 - Observe maps, displays, rules and regulation documents
- Transect map/diagram
 - Explain for each land use
 - Purpose
 - Benefits
 - access
 - Rules regulations
- Focus group discussion –may split into men and women
 - General
 - Please tell me about the PLUP process from the beginning to the end.
 - What was your involvement in the PLUP activity?
 - Is your level of involvement more or less than land use planning activities in the past?
 - Has there been any changes in your life because of PLUP? If yes, what are the changes? If no, why not?
 - Specific
 - Who (village representatives or GO) decides what kind of land use is practiced on a given area?
 - How was the size and location of each land use area determined?
 - Do you have any land to farm on? Has the status and size of your farm land changed since PLUP?
 - If yes, what rights do you have over your farm land? (land use, tenure, sell, inherit)
 - What rights do you have to collect, use or trade forest resources from the usable forest area?
 - Now that PLUP is completed, do you think the conserved area will be encroached upon?
- Land use walk
 - If feasible walk to see each type of land use,
 - take photos
 - probe
 - observe boundary markers, signs of encroachment

- Equipment and supplies
 - Flipchart paper (4 per village), color markers, camera

Livestock

Expected results

- Better animal health
- Increased income
- Better grazing system

Data collection

- Interviews (VWV, livestock farmers) -home visits
 - General
 - What was your involvement in the livestock improvement activity?
 - Has there been any changes in your life because of the livestock activity? If yes, what are the changes?
 - Specific
 - Did you attend the livestock trainings (VWV, study tour, animal husbandry)? Which ones?
 - What did you learn from it?
 - Have you used any new skills that you had learned from the training?
 - Has the livestock fund been established? Is it functional?
 - Have any equipment related to livestock management been placed?
 - Are improved grazing techniques being practiced? How?
 - Do you think the training, VWV program and improved grazing system will lead to better animal health?
 - Do you think better animal health will lead to improved income?
 - If you make more money from livestock, would you collect, use or sell the same amount of forest product?
- Observation:
 - Individual
 - livestock health
 - probe on vaccination, housing, feed
 - signs of diseases
 - Community
 - grazing area
 - Documents on livestock fund
 - Equipment and supplies
- Equipment and supplies
 - Printed interview form in Lao for each interviewer, Camera

Implementer Level Data Collection

Interview

PLUP

- Please tell me about the PLUP process from the beginning to the end
- What was your role in the PLUP activity?
- Who (village representatives or GO) makes the decision on demarcation and setting rules and regulations for the different kinds of land use?
- What rights do the villagers have over their farm land?
- What rights do the villagers have to collect, use or trade forest resources from usable forest areas?
- How do you see the PLUP affecting people's livelihoods?
- How do you think PLUP will affect the use of natural resources and conservation?

Livestock

- What was your role in the livestock activity?
- How effective do you think the livestock trainings (VWV, study tour, animal husbandry) were?
- Have the livestock funds been established? Is it functional?
- Have the equipment been placed?
- Are improved grazing techniques being practiced? If yes, how will this affect the forest?
- Do you think these activities will lead to better animal health?
- Do you think better animal health will lead to improved income?
- Do you think increased income from livestock will affect the intensity of natural resource use?

8.1.2 Attapeu Data collection Tools

Village level Data Collection

Improved Forest Management

Expected results

- Opportunities
 - Income from NTFP collection
- Participation
 - Demarcation of forest area
 - Development of rules and regulations
 - Choosing species with market value
 - Maintenance of reforested area

Data collection

- Forest map
 - Forest and reforested areas
 - Sample plots
 - Areas with NTFP
- Focus group discussion
 - Please tell me about the process to improve the forest?
 - Were there any trainings (reforestation technique, community based forest management) provided to you?
 - If yes, what did you learn? What skills from training have you applied?
 - Who decided (GO or Villagers) which area will be reforested as opposed to other land use?
 - Who decided what kind of trees will be planted?

- What rights do you have over the reforested area?
- Are there trees that are planted which will provide benefits to the community?
 - What are they?
 - Are there any other forest products that you can find naturally in the forest?
 - Do you consume or sell these products?
 - Do they provide significant proportion of income or food for your family?
- Are there rules and regulation on using the reforested area?
 - What are the rules and regulations?
 - Who came up with these rules and regulations?
- What is the job of the Village Forestry Unit?
 - Who are the members of the VFU?
 - Do they have meetings or other activities? What are they?
 - Have they been trained? On What topic? By Whom?
- How is the reforested area maintained?
- Has there been any changes in your life since the improved forest management activity?
- Do you think the restored area will be encroached upon? What about before?
- Do you think the quality of the forest has really improved from this activity?
- Observation:
 - Maps; rules and regulation documents
 - Reforested area; boundary markers; sample plot; signs of encroachment; trees and other NTFP with market value
- Equipment and supplies
 - Flipchart and markers, Camera

Coffee Processing

Expected result

- Opportunity
 - Reduced input cost (200 LAK per kg from 300 LAK per kg)
 - Increased income (100? – 500 LAK per kg)
- Less dependent on forest products

Data collection

- Focus group discussion
 - Please tell me about the coffee hulling process using the machine.
 - How does it work?
 - How is it different to what you were doing before (i.e. rice mill)?
 - How many households are using the coffee huller?
 - Has anyone received training (on how to use the machine and bookkeeping)?
 - Have you used any new skills that you learned from the training? What are they?
 - What is the cost for using the machine? What was it before?
 - What is the price for the hulled coffee? What was it before?
 - How many kilograms of coffee does each household sell per year on average?
 - If I was a living here and I wanted to use the coffee huller, what do I need to do?
 - How is the coffee huller managed?
 - Who maintains it?
 - Are there any parts that needs to be replaced regularly? (e.g. belts, oil)
 - If it is broken, how would you fix it?
 - Where does the money for fuel and maintenance come from?

- Do you keep records?
 - Financial
 - Operational
- Has there been any changes in your life since the coffee huller is placed in your village?
 - If yes, what are the changes? If no, why not?
- If you are earning more from coffee production, does this affect how much forest products you collect and use?
- Observation
 - The coffee huller
 - demonstration
 - Documents on setting up the committee
 - Financial and operational records
- Equipment and supplies
 - camera

Implementer Level Data Collection

Interview

Improved Forest Management

- Please tell me about the IFM process from the beginning to the end
- What was your role in the IFM activity?
- Who (village representatives or GO) makes the decision on demarcation and setting rules and regulations for the forest?
- What rights do the villagers have on using the reforested area (collect NTFP, timber)?
- Do you think IFM will affect people's livelihoods? How?
- How do you think IFM will affect the use of natural resources and conservation?

Coffee Processing

- What was your role in the coffee huller provision?
- How is the coffee huller being managed?
- Have the committee for the machine been established? Is it functional?
- Are the villagers keeping operational and financial record for using the coffee huller?
- Do you think the coffee huller will lead to improved income and/or reduction of input costs?
- If yes, do you better income will affect the intensity of natural resource use?

8.2 Schedule and Informants

Date	Activities	Informants
1-Sep	Tom travel to Vientiane and meet with SNV Laos	
2-Sep	Tom travel to Xiengkhuang and then to Houaphan	
3-Sep	Lee, Souly and Tom travel to Xam Tai; Tom interview Lee and Souly	USAID LEAF staff
4-Sep	Briefing, preparations and interviews with DAFO	DAFO Staff
5-Sep	Travel to Soppeng village and collect data	PLUP participants, VVW and livestock farmers
6-Sep	Travel back to Viengxay	
7-Sep	Briefing and interview with DAFO staff, then travel to Naheua village	DAFO staff
8-Sep	Collect data in Naheua village	PLUP participants, VVW and livestock farmers
9-Sep	Data compilation	
10-Sep	Travel back to Xam Neua	
11-Sep	Tom travel to Xiengkhuang	
12-Sep	No activity	
13-Sep	Tom travel to Pakse via Vientiane	
14-Sep	Tom travel to Attapeu; Tom interview Anolay	USAID LEAF staff
15-Sep	Travel to Sanamxay district then briefing and interview with DAFO Sanamxay	DAFO staff
16-Sep	Travel to Sompoy village and collect data on improved forest management. Average road condition. Distance of 25 km from district center to village.	Village Forestry Unit members
17-Sep	Travel to Xaydonekhong village and collect data on coffee processing. Distance of 45 km from district center to village. Average road condition. Travel back to Attapeu Province.	Coffee Huller Management Committee, village authorities and other community members
18-Sep	Travel back to Paksé and flight to Vientiane Tom travels back to Bangkok.	

8.3 Transect Diagrams

8.3.1 Nahuea

Topic/land use	Agriculture land	Fruit tree growing area	Village Use Forest	Animal raising/grazing area	National Protection Forest
Purpose	Rice, maize	Fruit, cassava	Timber, wood	Animal habitat and food	-National border with Vietnam -biodiversity and watershed (partly) conservation -NTFP
Benefits	Food, income, animal feed	Food, income, alcohol	Build house, animal shelter, fences and others	Food and income	Conserve biodiversity, -natural beauty -watershed protection -environmental protection -NTFP ->income and food
Rules and regulations	No unsystematic clearing, prevent fire, use based on labor force	Tax per year if a household wants to use an area	No clearing, no cutting but with specific consideration authorized by village authority	Prevent wildfire	-No cutting or clearing. -NTFP use is okay -Timber use but need approval from DAFO/PAFO for specific family housing and public construction -No trading timber
Access	Everybody. Every year, there is an agreement by the village in a sharing system	Everyone can use but depends on labor force. "Permanent" plot.	Everybody depends on needs	Everyone	-everyone can collect NTFP for consumption but if they want to collect large scale for selling or timber, they need permission

8.3.2 Sobpeng

Topic/land use	Agriculture	Village Use forest	Village Protection forest (Pa pong gan)	Restoration forest (fallow)	Village protected forest (pa san guan –conservation)	Industrial crop land
Purpose	Rice, maize and cassava	NTFP, timber	Protect watershed and landslide	Soil restoration Growing Mai Hiam for selling to Vietnam to make crate and Mak Kao (vernica montana)	Biodiversity conservation	Chinese lemongrass
Benefits	Food, income, animal feed	Handicraft (weaving) Building house Food	“	Better soil quality and income	NTFP Wildlife habitat Food -Timber (for community only)	Income
Rules and regulations	Use according to capacity (number of labor)	Not allowed to clear or cut a lot, Need permission from village head Can collect NTFP	No clearing, no cutting. Only collect NTFP	Shared among village members and determined time for using. Community decision to harvest or clearing	Prohibited from clearing -can collect NTFP -No hunting -No cutting -with some exceptions e.g. timber for school or community office	-based on number of labor force
Access	Communal (collective) land. Everyone ca use. Divided through agreements	Everyone	Everyone	Everyone	Collective property. Need community approval	-shared based on labor force

8.4 Animal Health Data for Sobpeng and Tinpou Village



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ



ເມືອງຊຳໃຕ້

ອົງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງ

ເລກທີ/ຫກ

ຊຳໃຕ້, ວັນທີ 04 /ກັນຍາ, 2015

ຂໍ້ມູນກ່ຽວກັບການລ້ຽງສັດບ້ານ ຕີນພູ ແລະ ບ້ານ ສີບເບັ້ງ ກຸ່ມລ້ອງແກ້ມເມືອງຊຳໃຕ້ ປີ 2014, 2015

I. ບ້ານສີບເບັ້ງ						
ສົກປີ 2014			ສົກປີ 2015		ສົມທຽບ % ການຕາຍ	
ຊະນິດສັດ	ຝຸງສັດ	ຈ/ນສັດຕາຍ	ຝຸງສັດ	ຈ/ນສັດຕາຍ	ສົກປີ 2014	ສົກປີ 2015
1	2	3	4	5	6=3/2	7=5/4
ງົວ	152	8	181	3	5.26	1.66
ຄວາຍ	133	26	160	4	19.55	2.50
ໝູ	285	140	310	5	49.12	1.61
ແບ້	1	0	24	0	-	-
ເປັດ	188	87	250	11	46.28	4.40
ໄກ່	164	105	1500	89	64.02	5.93
II. ບ້ານຕີນພູ						
ງົວ	211	6	129	1	2.84	0.78
ຄວາຍ	107	2	88	2	1.87	2.27
ໝູ	42	15	93	12	35.71	12.90
ແບ້	77	11	162	4	14.29	2.47
ເປັດ	30	13	300	31	43.33	10.33
ໄກ່	650	274	1005	131	42.15	13.03

8.5 Photos



PLUP map at Sobpeng Village



Newly built animal shelter at Sobpeng Village



3D PLUP map at Nahuea Village



Planted tree at Somпой Village



Medicine cabinet at Sopeng Village



Coffee Huller at Xaydonekhong Village



Account of medicines at Sobpeng Village