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Sustainable Natural Resource Management Project (SNRM)

SNRM MONITORING REPORT

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List of Acronyms and Abbreviations

C/P	Conterpart personnel
CPC	Commune people's committee
DARD	Department of Agriculture and Rural Development
DPC	District people's committee
HH(s)	Household
JICA	Japan International Cooperation Agency
LD	Livelihood development
MARD	Ministry of Agriculture and Rural Development
M&E	Monitoring and evaluation
NTFP(s)	Non-timber forest product(s)
PC	Provincial Co-ordinator
PDM	Project Design Matrix
PFES	Payment for Forest Environmental Services
PPC	Provincial people's committee
PRAP	Provincial REDD+ Action Plan
REDD+	Reducing Emissions from Deforestation and Forest Degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks.
SNRM	Sustainable Natural Resource Management Project
SUF	Special Use Forest
SUFMB	Special Use Forest Management Board
SUSFORM-NOW	Project for Sustainable Forest Management in the Northwest Watershed Area
VFPT(s)	Village forest patrolling team(s)
VND	Vietnamese dong

EXECUTIVE SUMMARY

1. INTRODUCTION

The purpose of this monitoring was to review the forest management and livelihoods development activity progress and results in the pilot communes of the Sustainable Natural Resource Management project (SNRM), and to provide feedback to the counterpart personnel of the SNRM.

The target area of the monitoring consisted in Pa Khoang commune (21 villages) of Dien Bien Phu city. The activities covered were all the activities implemented and/or supported by the Project under the components of ‘forest management’ and ‘livelihood development’.

After a series of preparations such as the monitoring framework development, questionnaire development, survey team organization, preparatory meetings, and pre-test of monitoring questionnaires, the actual data/information collection was conducted mainly through the questionnaire survey, interview, and secondary data in four rounds of monitoring in October 2018, April, October 2019 and May 2020. The activity was followed by data/information entry and analysis from these three rounds of monitoring.

2. SUMMARY OF ACHIVEMENT

The major findings of the four monitoring rounds are summarized as follows:

2.1. Forest management

Nearly 100% of forest land area with forest in both production forest and SUF already allocated. Production forest: **273.92 ha** (5875/QD-QBND of Dien Bien district in 14/12/2015). Special using forest management: **1,466.69ha**. Among of these area: 967.06 ha (938.88ha – Pa Khoang, 28.18 ha – Muong Phang) (Decision # 611/QD-UBND of Dien Bien PPC 24/7/2015, and 499.63ha in the decision # 274/QD-UBND in 02/4/2019 of Dien Bien DPC

Village communities and villagers, who were allocated with forest, received land use certificate for 50 years (for production forests) and have forest protection contracts (five years) with Muong Phang Special Use Forest Management Board (SUFMB) (for SUF).

Villagers in Pa Khoang Communes enjoy Payment for Forest Environmental Services (PFES) for nearly all the allocated forest area. Total PFES money paid in Pa Khoang Commune was 1,197.32 million VND. The PFES money was shared to each household in the community, and used for forest protection purpose.

SNRM supported Pa Khoang commune in setting up a village forest patrolling team (VFPT) in each village. These teams are still maintaining their activity on forest patrolling (average 9 times/month in 2019, and 7.7 times/month in 2020). They have close coordination with other agencies on forest protection. Almost VFPTs received allowance from 30% of PFES for encouraging them for forest patrolling.

In Pa Khoang Commune, there have been some cases of violation in forests designated for protection in recent years. Most of these cases were encroachment by animals (14 cases in 2019, no case in 2020) and illegal harvesting of timber & NTFPs (4 cases in 2019 and 4 cases in 2020) through they were regarded as not very serious.

The project supported 130 ha of natural forest regeneration in 7 villages in Pa Khoang commune. There was not any tending activities conducted because the project design without tending. The project support on installation of 12 signal boards in this area.

The project supported around 90.11ha of reforestation in 17 villages. Villagers didn't undertake tending activities regularly. The average survival rate of planted trees would be around 57%. The

main cause of the low survival rate was encroachment by animals. This problem didn't happen in 2020 when the trees are high enough. The average height of planted trees was about 1.40m.

The project supported on developing village regulation on forest protection and development in 21 villages. The copies in A3 size were sent to all households. A communication board with main content of the regulation was built in each village. Actually, the regulation was not follow well by villagers, especially on planted forest protection.

Village boundary was identified with the support of the project. Village boundary map was printed out for each village, and CPC. Villagers also recognize the village boundary on site thanks to the village boundary markers, which were installed along boundary.

2.2. Livelihood development

SNRM supported villagers with a variety of livelihood development activities. Those activities were intended to reduce pressure and overreliance on forests and forest resources.

Honeybee keeping was piloted in 40 households in 8 villages with 130 supported modern beehives. These households also received some equipment for apply techniques of honeybee keeping in modern beehives. The participants got higher income from modern beehive. The project is supporting on honey quality test for expanding market of Pa Khoang honey to whole country. The project also supported on registration of certificate of compliance with food safety regulation of Pa Khoang cooperative. From the support, Pa Khoang commune can registration Pa Khoang honey as OCOP, for enhancement of beekeeping in Pa Khoang commune and villagers can get higher income from this activity.

The Project implemented fish raising activity in 21 villages in Pa Khoang Commune. There are 153 households were supported 400,800 fingerling in 2017. Almost of participants are still maintaining fish raising. Base on the monitoring result in May 2020, among 133 interviewees, there was 83 households got income from fish raising. The average income from fish raising was estimated as VND 6.5 million per household. There was a high rate (62/83 households) of villagers said that they had positive net profit from fish raising. One third of them have met problems on fish raising, but they still want to keep this activity.

The project supported fruit tree planting in 21 villages in Pa Khoang commune. The average survival rate of the planted fruit trees was low at about 42.1%. The reasons of the low survival rate were encroachment by domestic animals and drought (169/188 of participants met this difficulty) in the past years. Some households have already harvested fruits, but just for home consumption. Almost of them (122/188 interviewees) continue to plant fruit trees in the future.

The Project delivered 16,160 kg of Guatemala and VA06 fodder grass to 404 households in 21 villages of Pa Khoang commune in 6/2018. The approximate survival rate of the delivered fodder grass for Guatemala was 66.17% and VA06 was 60.48%. 138 out of 154 interviewees have already harvested grass for livestock and fish.

In Oct and Dec 2017, the project supported 696,235 gam of vegetable seed to 1,474 household times for cultivation in winter and spring seasons. Species of vegetable include Kohlrabi, Brassica oleracea var aibolabra, Tungho / Garland Chrysanthemum, onion, garlic, Spinach, Broccoli, Zucchini. Nearly 100% of participant used vegetable for home consumption. Almost all the respondents are continuously cultivating vegetable in their own gardens.

Bamboo planting is new activity introduced by the project. In 2018, the project supported 6,720 bamboo seedling to 659 households in 21 villages. The survival rate of bamboo is so low (23.4%). The cause is villagers planted bamboo in dry soil.

396 Lao stoves delivered to 377 households in 21 village in 12/2017 and 6/2018 in Pa Khoang commune to reduce firewood consumption and collection time. In 2020, 89.5% of participants still use Lao stove everyday. Some Lao stove were broken, this rate was 10.1%. The project introduced other type of improve cook stove, which made of concrete. Villagers like this stove model and expand this stove model by themselves (237 households already did). The stove frames are using by other households for expanding this model.

The Project established village funds in all the project target villages. The participants of some livelihood development activities were expected to make repayment to these village funds. Currently, there are 21/21 villages still maintaining the village funds, but 01 village lost control their village fund. Villagers have loans for agricultural production such as pig, cow and fish raising from village fund with amount 241,014,300 VND. Village management boards have faced difficulties in management of the village funds. The project already introduced other format of accounting book for easier management.

The evaluation results based on the findings of the monitoring are summarized in the table below:

Monitoring item	Criteria	Evaluation indicator thresholds			Time	Source	Results 2018	Results April 2019	Results Oct 2019	Results May 2020
		Green	Yellow	Red						
1 Forest management										
101 Forest protection										
1-1 Forest allocation	Allocation of production forests and protection forests with actual forests to villages	All the forest lands with actual forests have been allocated.	Over 50% of forest lands with actual forests have been allocated.	Less than 50% of forest lands with actual forests have been allocated.	Only 1 st round	FMB DPC	All the forest lands with actual forests (273.92 ha) have been allocated.	All the forest lands with actual forests (273.92 ha) have been allocated. (5875/QD-QBND of Dien Bien district in 14/12/2015)	All the forest lands with actual forests (273.92 ha) have been allocated. (5875/QD-QBND of Dien Bien district in 14/12/2015)	All the forest lands with actual forests (273.92 ha) have been allocated. (5875/QD-QBND of Dien Bien district in 14/12/2015)
	Allocation of special use forests with actual forests to forest management boards	All the forest lands with actual forests have been allocated.	Over 50% of forest lands with actual forests have been allocated.	Less than 50% of forest lands with actual forests have been allocated.	Only 1 st round	SUFM B	967.06/1,466.69 ha (65.93%) of SUF in Pa Khoang was allocated	Special using forest: 1,466.69ha (100%). Among of these area: 967.06 ha (938.88ha – Pa Khoang, 28.18 ha – Muong Phang) (Decision # 611/QD-UBND of Dien Bien PPC 24/7/2015, And 499.63ha in the decision # 274/QD-UBND in 02/4/2019 of Dien Bien DPC.	Special using forest: 1,466.69ha (100%). Among of these area: 967.06 ha (938.88ha – Pa Khoang, 28.18 ha – Muong Phang) (Decision # 611/QD-UBND of Dien Bien PPC 24/7/2015, And 499.63ha in the decision # 274/QD-UBND in 02/4/2019 of Dien Bien DPC.	Special using forest: 1,466.69ha (100%). Among of these area: 967.06 ha (938.88ha – Pa Khoang, 28.18 ha – Muong Phang) (Decision # 611/QD-UBND of Dien Bien PPC 24/7/2015, And 499.63ha in the decision # 274/QD-UBND in 02/4/2019 of Dien Bien DPC.
1-2 Forest protection contract	Contract on protection of special use forests with community/organization	Contract on protection of all the forests have been made.	Contract on protection of more than 50% of the forests have been made.	Contract on protection of less than 50% of the forests have been made.	Only 1 st round	SUFM B	100% allocated SUF area (967.06 ha) was contracted with community and some agencies for protection	967.06 ha (65.93%) of SUF was contracted with community and some agencies for protection.	100% allocated SUF area (1,466.69 ha) was contracted with community and some agencies for protection	100% allocated SUF area (1,466.69 ha) was contracted with community and some agencies for protection

1-3 Payment of PFES	Payment of PFES on production forests and protection forests to villages	PFES are paid to all the forests.	PFES are paid to more than 50% of the forests.	PFES are paid to less than 50% of the forests.	Yearly	PFES Fund CPC VH	PFES area paid to all allocated production forest	212.75 ha of allocated production forest are paid PFES (77.66%)	212.75 ha of allocated production forest are paid PFES (77.66%) with 131.61 million VND.	212.75 ha of allocated production forest are paid PFES (77.66%) with 131.61 million VND.
	Payment of PFES on special use forests to forest management committees	PFES are paid to all the forests.	PFES are paid to more than 50% of the forests.	PFES are paid to less than 50% of the forests.	Yearly	PFES SUF MB	PFES area paid to all allocated SUF area	939.88 ha of allocated production forest are paid PFES (64.08%)	For PFES 2018: 939.88 ha of allocated production forest are paid PFES (64.08%) with 479.01 million VND. For 499.63ha which has just allocated in April 2019, Muong Phang MB already signed protection contract to communities, they will receive PFES money in 2020	For PFES 2018: 939.88 ha of allocated production forest are paid PFES (64.08%) with 479.01 million VND. For 499.63ha which has just allocated in April 2019, Muong Phang MB already signed protection contract to communities, they will receive PFES money in 2020
	Payment of PFES based on the forest protection contract to villages by forest management committees	PFES are paid to all the forests.	PFES are paid to more than 50% of the forests.	PFES are paid to less than 50% of the forests.	Yearly	CPC VH				
	Utilization of PFES for forest management and protection	Sufficient amount of PFES is utilized for village forest management	Some amount of PFES is utilized for village forest management	PFES is not utilized for village forest management	Monthly	CPC VH	PFES money in 21 villages is utilized for village forest management (Most of them use 30% of PFES money to support directly to VFPT)	Almost villages extracted 30% of PFES money for forest protection purpose, this amount will support directly to VFPT activities.	Almost villages extracted 30% of PFES money for forest protection purpose, this amount will support directly to VFPT activities.	Almost villages extracted 30% of PFES money for forest protection purpose, this amount will support directly to VFPT activities.

1-4 Compliance of village forest protection and development regulations	Forest conversion to agricultural lands, forest fire, encroachment by animals, hunting, illegal harvesting of timber and NTFPs	Almost no case found.	There are some cases but not very serious.	Very serious condition.	6 months	VH	There were 13 cases of forest violation, but these cases were not very serious	1,740.61 ha of forest area designed for protection in Pa Khoang. There were 15 cases of forest violation. Most of them are forestfire (4) and encroached by animal (8). There were 3 cases ranked as serious.	1,740.61 ha of forest area designed for protection in Pa Khoang. There was no more forest fire during last 5 months, but some forest violation cases still happened in Pa Khoang: encroached by animal (14), and illegal harvesting of timber and NTFP (4). There were 13 cases ranked as low serious and 5 ones was medium.	1,740.61 ha of forest area designed for protection in Pa Khoang. There was few forest violation cases happened in Pa Khoang. There was 4 cases of illegal harvesting of timber and NTFP. These cases ranked as low serious	
1-5 Enforcement of laws / regulations	Handling of illegal acts based on laws or village regulations by forest protection officers or villages	Handling is conducted for all the illegal acts.	Handling is conducted for more than 50% of the illegal acts.	Handling is conducted for less than 50% of the illegal acts.	6 months	VH CPC	12/13 cases of forest violation were handled. 1 case is handling.	Base on the report from villages heads, in last six months, there were 13 cases of forest violation in Pa Khoang (protection, regeneration and afforestation area). 1 case of forest conversion to cultivation land (Ten village) and 7 cases of illegal harvesting of timber and NTFP. Not all these cases were handled well.	4 cases of illegal harvesting were handled well (100%), but almost the violation case of encroachment by animal had just remind the owners of animal, some cases couldn't find the animal (handled 71.4%).	4 cases of illegal harvesting were handled	
1-6 Changes in forest conditions	Protection of forests	No significant change in forest area (-10% – +20%).	More than 20% of forest area is decreased.	More than 50% of forest area is decreased.	TBD	TBD					
	Forest decrease for road development, conversion to agricultural lands, natural disaster etc.	—	—	—	TBD	TBD	(Describe Deforestation Drivers)	(Describe Deforestation Drivers)	(Describe Deforestation Drivers)	(Describe Deforestation Drivers)	
102 Forest regeneration											

2-1 Compliance of forest regeneration procedure	Tending of reforestation and natural regeneration	Almost regularly, being implemented.	To some extent, being implemented.	Not implemented at all.	6 months	VHHH	130 ha was designed. Base on the design of natural regeneration, there is not any intervention after design (except installation 12 signal board in 7/7 villages)	130 ha was designed (Bo: 10.51haXom 1, 2, 3: 30.16ha Dong Met 1,2, Co Thon: 89.33ha). Base on the design of natural regeneration, there is not any intervention after design (except installation 12 signal board in 7/7 villages)	130 ha was designed (Bo: 10.51ha Xom 1, 2, 3: 30.16ha Dong Met 1,2, Co Thon: 89.33ha). Base on the design of natural regeneration, there is not any intervention after design (except installation 12 signal board in 7/7 villages)	130 ha was designed (Bo: 10.51ha Xom 1, 2, 3: 30.16ha Dong Met 1,2, Co Thon: 89.33ha). Base on the design of natural regeneration, there is not any intervention after design (except installation 12 signal board in 7/7 villages)
	Forest conversion to agricultural lands, forest fire, encroachment by animals, hunting, illegal harvesting of timber and NTFPs	Almost no case found.	There are some cases but not very serious.	Very serious condition.	6 months	VH HH	No case found	No case of violation found	No case of violation found	No case of violation found
2-2 Change in forest conditions	Forest recovery and regrowth	More than 50% of current vegetation (DT2) has changed into forest categories which is eligible to PFES.	Less than 50% has changed into forest categories or No significant changes in current forest category (DT2)	Vegetation has changed into lower level of vegetation (e.x.DTR) or other land use.	6 months	VH HH				
	Forest decrease for road development, conversion to agricultural lands, natural disaster etc.	—	—	—	6 months	VH HH	(Describe Deforestation Drivers)	(Describe Deforestation Drivers)		
103 Af/reforestation										

3-1 Compliance of village forest protection and development regulations	Tending of reforestation and natural regeneration	Almost regularly, being implemented.	To some extent, being implemented.	Not implemented at all.	6 months	VH HH	In 2017 and 2018, the project support seedling for planting in (74.55 ha + 15.56 ha) 90.11ha of production forest land and SUF land. There was not much tending activities implemented in afforestation area.	Not much tending activity was implemented in afforestation area	In Aug 2019, the project delivered seedling for villagers in 13 villages conducted supplement planting. Villagers had some tending activities to afforestation area, such as slashing/weeding (in 12 villages) supplement planting (in 13 villages) and fencing in some villages.	The planted tree was high enough, villagers in 13 out of 16 villages spend more labor on tending their afforestation area.
	Forest conversion to agricultural lands, forest fire, encroachment by animals, hunting, illegal harvesting of timber and NTFPs	Almost no case found.	There are some cases but not very serious.	Very serious condition.	6 months	VH HH	16 cases of planted forest violation were found. 15/16 case are encroachment by animal and 1/16 case is forest fire. These cases were very serious	There were 14 cases of encroachment by animal to afforestation area in last months. 12 of them was ranked as medium serious.	There were 14 cases of encroachment by animal to afforestation area in last 6 months. 10 of them was ranked as low and 4 medium serious.	No violation case happened in afforestation area in 2020
3-2 Change in forest conditions	Survival of planted trees	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months	VH HH	Around 69.65 % of planted tree were survived. (Estimated base on the afforestation monitoring report of Sub-DOF)	The survival rate of afforestation area was low: 42.16%.	Based on monitoring data from CPC staff, the survival rate of afforestation was 39.14%; but from the report of VFPT, this rate was around 50%.	the survival rate of afforestation was 57%. This rate is increased because the project supported supplement planting in 2019. Some area was considered as destroyed all by animal, but now it's growing again.
	Forest decrease for road development, conversion to agricultural lands, natural disaster etc.	—	—	—	6 months	VH HH	No violation case happened	No violation case happened	No violation case happened	No violation case happened
104 Scattered Planting										

4-1 Change in forest conditio ns	Survival of planted trees	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months	VH HH	In two years 2017 and 2018, the project supported 36,637 seedling to 838 households. The average height of the trees was 68.4cm (Michelia: 65.2cm; Canarium: 79.2cm; Dracontomelon: 55.9cm; Chukrasia: 74.8 cm). The survival rate was 69.1% ((Michelia: 73.6%; Canarium: 53.9%; Dracontomelon: 72.79%; Chukrasia: 74.68%).	The average height of the trees was 118.4cm (Michelia: 114.2cm; Canarium: 111.1cm; Dracontomelon: 122.2cm; Chukrasia: 126.2 cm). The survival rate was 64.4% ((Michelia: 67.3%; Canarium: 57.3%; Dracontomelon: 66.1%; Chukrasia: 65.0%).	The average height of the trees was 137.3cm (Michelia: 144.5cm; Canarium: 126.5cm; Dracontomelon: 133.5cm; Chukrasia: 138 cm). The survival rate was 66.8% ((Michelia: 69.5%; Canarium: 57.3%; Dracontomelon: 70.3%; Chukrasia: 69.3%).	The average height of the trees was 162cm (Michelia: 161cm; Canarium: 158cm; Dracontomelon: 154cm; Chukrasia: 176 cm). The survival rate was 65% ((Michelia: 69%; Canarium: 59%; Dracontomelon: 67%; Chukrasia: 65%).
	Forest decrease for road development, conversion to agricultural lands, natural disaster etc.	—	—	—	6 months	VH HH	Villagers faced to some violation cases of animal encroachment.	Villagers faced to some violation cases of animal encroachment.	Almost the tree was high enough; therefore, nearly there was not any violation to scattered planting.	Almost the tree was high enough; therefore, nearly there was not any violation to scattered planting.
106 Forest Patrolling										
	Regular forest patrolling by villages	Forest patrolling is conducted at least once a month.	Forest patrolling is conducted less than once a month.	Forest patrolling has not yet conducted.	Monthl y	VH VFPT	All VFPT in 21 villages conducted average 5.24 times a month.	Current members of VFPT in 21 villages is 258. They divided in 60 smaller groups for conducting forest patrolling. All VFPT in 21 villages conducted average 5.24 times a month (the same last monitoring)	Current members of VFPT in 21 villages is 251. They divided in 87 smaller groups for conducting forest patrolling. All VFPT in 21 villages conducted average 9 times a month (Nearly double compare to last monitoring). This was result of some villages includes villagers in forest patrolling.	Total member of VFPT in 21 villages was 268. In last 6 months of 2020, they conducted forest patrolling 7.7 times/month.

	Regular reporting by villages to forest protection officers	Report from forest patrolling team is made at least once a month.	Report from forest patrolling team is made less than once a month.	Report from forest patrolling team has not yet made.	Monthl y	CPC VFPT	10/21 VFPTs report on their forest patrolling once a month. All of them report forest management in their village in CPC monthly meeting	19/21 VFPT submit their forest patrolling report to forest ranger once a month. Forest ranger and Muong Phang MB staff shared that, they only received forest patrolling monthly report in 12/21 villages.	All VFPT had coordination to other agencies on forest patrolling. All of them had plan, 18/21 VFPT submit their forest patrolling report to forest ranger once a month.	21 VFPT had coordination to other agencies such as forest ranger, and Muong Phang SUFMB. They developed monthly plan and report for their patrolling activity.
	Forest change monitoring by forest protection officers based on report	Monitoring on all the reported forest changes is conducted.	Monitoring on more than 50% of the reported forest changes is conducted.	Monitoring on less than 50% of the reported forest changes is conducted.	Monthl y	CPC	1/10 submitted reports was completed for forest change monitoring	9/12 submitted report was completed for forest change monitoring. Forest ranger used report for monitoring forest change with the rate higher 80% in 5 villages.	Reports from 15/18 villages were met quality requirement. Forest ranger used report for monitoring forest change within 17 villages. There was not much forest changes in other villages	19/21 forest patrolling report was met quality requirement. Forest ranger and Muong Phang SUFMB staff used those report for monitoring forest change.
2-1 Activities for alternative income generation and food security										
201 Vegetabl e Cultivat ion	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months	SGL HH	In Oct and Dec 2017, SNRM in Dien Bien delivered 696,235 grams of vegetable seed to 746 household times for cultivation in Winter and Spring seasons. Almost of them 98.9% (189/191 interviewed households) are cultivating vegetable.	195/199 interviewed households continue vegetable cultivation.	186/189 interviewed households continue vegetable cultivation.	187/190 interviewed households continue vegetable cultivation.
	Sale of products	Already sold some	—	—	6 months	SGL HH	Most of households had plenty vegetable for their daily utilization 94.2% (180/191). Some households (13) sold their vegetable, they are from Sang village.	192/199 households reported that they have plenty vegetable for their daily using. 13/199 households sold their cultivated vegetable. Most of them come from Sang village.	186/189 households reported that they have plenty vegetable for their daily using. 6/189 households sold their cultivated vegetable. Most of them come from Ha, and Dong Met village.	184/190 households reported that they have plenty vegetable for their daily using. 17/190 households sold their cultivated vegetable. The sellers were in Pa Tra, Nghiu and Sang villages

	Annual income and expenditure for recent 3 months	Positive net profit	(Almost no net profit)	(Negative net profit)	6 months	SGL HH	The households who sold their vegetable got positive net profit with income per household was around 473,000 VND.	Income from selling vegetable was not much. The average income per household, who selling vegetable was 200,000 VND.	Income from selling vegetable was not much. The average income per household, who selling vegetable was 283,000 VND.	The average income per household, who selling vegetable was 323,000 VND.
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months	SGL HH	Nearly 100% (189/191) households will definitely be continued without any problem.	195/199 households reported that they will continue vegetable cultivation in coming time.	186/189 households reported that they will continue vegetable cultivation in coming time.	187/190 households reported that they will continue vegetable cultivation in coming time.
203 Fruit tree cultivation	Survival of planted trees (+reasons why not survived)	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months	SGL HH	Fruit tree planting was implemented in 21/21 villages. 16,307 seedling were delivered to 869 households for planting. The survival rate was 61.28% (max 72.62%, min 44.90%)	The survival rate was so poor in this year. Only 47.08% of fruit tree was survived.	The survival rate of fruit tree was nearly the same compare to last monitoring 47.53%.	The survival rate of fruit tree was nearly the same compare to last monitoring 42.07%.
	Harvesting of fruits (+reasons why not harvested)	Already harvested some	Not yet harvested (no fruits available yet)	Not yet harvested despite some fruits are ready to be harvested	6 months	SGL HH	The fruit trees are just planted one year, no fruit available yet.	Some households harvested fruit tree. The harvested amount was just plenty for their family using.	Some households harvested fruit tree (Peach and mango), but the amount was small just for their family using.	Some households harvested fruit tree (Peach and mango), but the amount was small just for their family using.
	Sale of products	Already sold some	—	—	6 months	SGL HH	N/A	No sale fruit in this year	No sale fruit in this year	No sale fruit in this year
	Annual income and expenditure for recent 3 months	Positive net profit	(Almost no net profit)	(Negative net profit)	6 months	SGL HH	N/A	No sale , therefore no income	No sale , therefore no income	No sale , therefore no income

	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months	SGL HH	High rate 76.26% (151/198) of participants want to plant more fruit tree, but they didn't know where to buy good seedling	143/202 households want to continue fruit tree planting with condition of support from project on fertilizer, seedling. Some other request technical training	82.1% of (138/168) household will continue fruit tree planting in coming time without any problem.	84.57% of (122/188) household will continue fruit tree planting in coming time without any problem.
204 Beekeeping	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months	SGL HH	The project support beehive and techniques of honeybee raising to 30 households in 3 village. 100% of them continue this activity.	16/26 (61.53%) interviewed households continually keeping honeybee in modern beehive	27/27 (100%) interviewed households continually keeping honeybee in modern beehive (92 ones)	31/35 (88.57%) interviewed households continually keeping honeybee in modern beehive (92 ones)
	Sale of products	Already sold some	–	–	6 months	SGL HH	The participants sold almost their collected honey (257/261 litters) with average price 140,000 VND/little	12/26 households harvested honey (97 litters). This amount was sold all.	27/27 households harvested honey (672.8 litters). This amount was sold all.	26/35 households harvested honey (353 litters). 24/26 households sold their honey with low price.
	Annual income and expenditure for recent 3 months	Positive net profit	(Almost no net profit)	(Negative net profit)	6 months	SGL HH	80% of participants shared that, they got positive net profit from honeybee keeping	They sold 97 litters and got income 19.7 million VND. Almost of them shared that they had positive net profit.	They sold 662.8 litters and got income 113.41 million VND (4.2 million/household). Almost of them shared that they had positive net profit.	They sold 325 litters and got income 39.34 million VND (1.63 million/household). Almost of them shared that they had positive net profit.
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months	SGL HH	100% of them will continue honeybee keeping. However, they are still faced to some difficult on bee keeping.	18/26 household continue beekeeping in modern beehive.	25/27 household continue beekeeping in modern beehive with only small issue on expanding the bee	31/35 household continue beekeeping in modern beehive with only small issue on expanding the bee
205 Fish raising	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months	SGL HH	In June 2017, the project delivered 400,800 fingerlings to 153 households for raising. 96.85% (123/127 interviewees) of households continuing the activity	122/128 (95.3%) households were continue fish raising.	117/133 (87.96%) households were continue fish raising.	126/132 (95.4%) households were continue fish raising.

	Sale of products	Already sold some	—	—	6 months	SGL HH	8.7% (11/127 interviewees) households already sold their fish.	14.8% (19/128 interviewees) households already sold their fish.	31.5% (42/133 interviewees) households already sold their fish.	62% (82/132 interviewees) households already sold their fish.
	Annual income and expenditure for recent 3 months	Positive net profit	Almost no net profit	Negative net profit	6 months	SGL HH	The average income was 2,740,910 VND/household. 7/11 households said that they had positive net profit.	The average income was 4,651,000 VND/household. 7/19 households said that they had positive net profit.	The income of 42 households from fish selling was 239.4 million VND. The average income was 5.7 million VND/households. 29/42 households said that they have net benefit from fish raising	The income of 82 households from fish selling was 537.3 million VND. The average income was 6.5 million VND/households. 62/82 households said that they have net benefit from fish raising
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months	SGLH H	96.85% of households said that they will continuous conduct fish raising due to the condition for this activity in Pa Khoang is good	127/128 (99.2%) households are going to continue raising fish	124/133 (93.2%) households are going to continue raising fish	123/132 (93.1%) households are going to continue raising fish
206 Bamboo Plantation (Taiwan Bamboo)	Survival of planted bamboo (+reasons why not survived)	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months	SGL HH	In May 2018, the project delivered 6,720 seedling of Bat Do bamboo to 659 households for planting. The survival rate of bamboo was 72.27%.	The survival rate of bamboo was 28.9%.	The survival rate of bamboo was 26.8%.	The survival rate of bamboo was 23.4%.
	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months	SGL HH	Almost participants continuous this activity.	165/194 (85%) households shared that they continue bamboo planting	105/169 (62%) households shared that they continue bamboo planting	140/190 (73.6%) households shared that they continue bamboo planting
	Sale of products	Already sold some	—	—	6 months	SGL HH	N/A	N/A	NA	NA

	Annual income and expenditure for recent 3 months	Positive net profit	(Almost no net profit)	(Negative net profit)	6 months	SGL HH	N/A	N/A	NA	NA
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months	SGL HH	Villagers want to expand this model, but they didn't know where to buy the seedling. They need the support from outsiders	165/194 (85%) households shared that they continue bamboo planting, but they look for the support from outsiders.	105/169 (62%) households continue bamboo planting in coming time.	140/190 (73.6%) households continue bamboo planting in coming time.
2-2 Agroforestry and alternative techniques										
210 Fodder grass cultivation	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months	SGL HH	In Jun 2018, the project delivered 16,160 kg of Guatemala and VA06 fodder grass to 404 households in 21 villages. Almost of them are continuing the activity.	Almost of them (136/163) are continuing the activity.	Almost of participants continue fodder grass cultivation	Almost of participants (136/162) continue fodder grass cultivation
	Survival of planted crops (+reasons why not survived)	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months	SGLH H	The survival rate was good (Guatemala: 87.86%; VA06: 80.77%)	The survival rate of fodder grass was high, 80.52%.	The survival rate of fodder grass was high 73.8%.	The survival rate of fodder grass was 66% for Guatemala and 60% for VA06.
	Amount of grass produced	Sufficient	Almost sufficient	Not sufficient	6 months	SGL HH	More than half of them (110/159) households already cut grass for raising animal/ fish. Average 33 days they cut once. A few of them (15) have sufficient grass for feeding their animal.	(135/163) households already cut grass for raising animal/ fish. Average 83 days they cut once. 50 households have sufficient grass for feeding their animal.	(112/136) 82.3% households already cut grass for raising animal/ fish. Average 25 days they cut once. 62 households have sufficient grass for feeding their animal.	(154/162) 95% households already cut grass for raising animal/ fish. Average 24 days they cut once. 80 households have sufficient grass for feeding their animal.
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months	SGL HH	159/159 (100%) households said that they will continuous cultivation grass.	120/163 (100%) households said that they will continuous cultivation grass.	99/136 (72.79%) households said that they will continuous cultivation grass.	136/162 (83.9%) households said that they will continuous cultivation grass.
2-3 Activities to reduce firewood consumption and collection time										

212 Improve d cooking stove	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months	SGL HH	The project supported 396 Lao stove to 377 households in 21 villages. 94. 20% (244/259) of them using Lao stove for cooking everyday.	358/369 (97%) households were using Lao stove for cooking everyday. 4 stoves were broken	262/314 (83.4%) households were using Lao stove for cooking everyday, the rest household using improved cook stove which the project had just introduced.	290/324 (89%) households were using Lao stove for cooking everyday,
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months	SGL HH	All of them confirmed that they will continuous using Lao stove for their daily cooking. No problem on using Lao stove was claimed.	There are some difficult on using Lao stove (86 households) such as only using small wood for cooking, a part of stove is easily broken.	273/314 households continues using Lao stoves without any problem	291/324 households continues using Lao stoves without any problem
	Expansion of the activity to non-participating HHs	Considerable number of HHs	Small number of HHs	No	6 months	SGL HH	46 households bought other type of improved cooking stoves, which introduced by CARE international organization.	There 11 households bought other type of stove "green generation" introduced by Care international	169/314 (53.8%) households were supported or made by themselves the improve cook stoves, which introduced by the project. Other households are using the frame to continue making this type of stove for their families.	237/324 (73.1%) households were supported or made by themselves the improve cook stoves, which introduced by the project. Other households are using the frame to continue making this type of stove for their families.
3 Village fund management										
	Existence of village fund	Yes	Yes but not function well	No	6 months	VH VMB	The project support to set up VF in 21 villages from 2017. The fund come from the contribution of villagers who participated on fish raising, fruit tree planting, Lao stoves, and other sources. The fund are available in all villages. The cash amount available in 21 VF was 143,728,304 VND	The fund are available in all villages. The cash amount available in 19 VF was 91,939,000 VND	The fund are available in 20 villages. The cash amount available in 20 VF was 360,185,680 VND	The fund are available in 20 villages. The cash amount available in 20 VF was 308,803,000 VND
	Record keeping	Yes	Yes but not satisfactory level	No	6 months	VH VMB	The income and expenditure books are recorded and keeping well.	The income and expenditure books are recorded and keeping well in 19 villages.	The project supported 20 villages on record VF income and expenditure to new accounting book format	The project supported 20 villages on record VF income and expenditure to new accounting book format

	Expense for VFPTs	Some cases of expense	Very few cases of expense	No expense at all	6 months	VH VMB	12/21 VMBFMLD pay VF money for VFPT with total amount in last months was 44,469,000 VND	VMB spent 75,077,000 VND for administration and support VFPT purpose	VMB spent 80,403,000 VND for administration and support VFPT purpose	VMB spent 128,848,000 VND for administration and support VFPT purpose
	Loans for new activities (+contents of the activities)	Some cases of loans	Very few cases of loans	No loans at all	6 months	VH VMB	The fund was used mainly for loan. There were 94 households are lending from VFs with amount 240,679,018 VND.	The lent amount was 259,938,000 VND	The lent amount was 260,245,300 VND. 98 household got loan. The average per loan was 2,655,564 VND	The lent amount was 241,014,300 VND.
	Status (Amount) of the fund	Tendency to increase	Almost no change	Tendency to decrease	6 months	VH VMB	14 VF increase, 3 no change, and 4 decrease	NA	3 VF increase, 8 no change, and 9 decrease	4 VF increase, 8 no change, and 8 decrease
	Outlook for continuation of the fund (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months	VH VMB	All VFMB confirmed that they will maintain their VF without any problem	19 VFMB confirmed that they will maintain their VF without any problem	20 VFMB confirmed that they will maintain their VF without any problem	20 VFMB confirmed that they will maintain their VF without any problem
4 Village Institutional Set up										
	Regular meeting VFMLD	At least once a month.	Less than once a month.	Not yet organized.	6 months	VH VMB	The project supported 21 villages on setting up VFMLD. Each VFMLD includes 5 members. They often have meeting for reflection every activities in their village. The leader share their report, idea in CPC monthly.	VFMLD often have meeting for reflection every activities in their village. The leader share their report, idea in CPC monthly.	VFMLDs had monthly reflection meeting. The content of this meeting focus on their village issues and some project relate activities such as monitoring, making cook stove, supplement planting... .The leader share their report, idea in CPC monthly.	VFMLDs had monthly reflection meeting. The content of this meeting focus on their village issues and some project relate activities such as monitoring, making cook stove, The leader share their report, idea in CPC monthly.

		Outlook for continuation of VFMLD (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months	VH VMB	VFMLD was set up for coordination all LD and FM activities in their village. Almost VFMLD's capacity are good. They will maintain these management boards without any difficult.	VFMLD was set up for coordination all LD and FM activities in their village. Almost VFMLD's capacity are good. They will maintain these management boards without any difficult.	VFMLD was set up for coordination all LD and FM activities in their village. Almost VFMLD's capacity are good. In coming time, some villages will be merged together, therefore they have to re-setting up VMBFMLD in their villages	VFMLD was set up for coordination all LD and FM activities in their village. Almost VFMLD's capacity are good. Some villages were merged together, therefore they already re-set up VMBFMLD in their villages
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I. INTRODUCTION

1. Background and purpose

This report presents the findings of the three round monitoring of the Project for *Sustainable Natural Resource Management project* (SNRM) (hereinafter referred to as ‘the Project’), which were conducted in Oct 2018, April, Oct 2019 and May 2020.

The Project funded by the Japan International Cooperation Agency (JICA) was being carried out since 2015 with the main purpose to promote participatory forest management and livelihood development for enhancing the national capacity for sustainable natural resource management. A vast range of achievements was made by the Project in Pa Khoang commune of Dien Bien Phu city, which was the Project’s target area.

The project consists of four components,

- ① Policy Support Component
- ② Sustainable Forest Management and REDD+ Component
- ③ Biodiversity Component
- ④ Knowledge Sharing Component

According to the design of the project, Dien Bien is one of four target provinces (Dien Bien, Lai Chau, Son La and Hoa Binh) where Component 2 “Sustainable Forest Management and REDD+” is carried out. Expected output of the component is Sustainable Forest Management, through development and implementation of Provincial REDD+ Action Plans (PRAPs), is promoted in the Northwest Provinces (Dien Bien, Lai Chau, Son La and Hoa Binh).

In the Component 2, an activity related to the M&E of the SNRM Project is indicated in the Project Design Matrix (PDM) as below:

2-1-2	Plan and implement REDD+ activities based on PRAP in a newly selected pilot commune.
2-1-2-14	Monitor and evaluate the results of the REDD+ activities.

As implied in the table above, the major purposes of the monitoring is to review the forest management and livelihoods development activities progress and results in the pilot communes in Pa Khoang commune, Dien Bien Phu city. The result of the monitoring can be used for consider addition technical support and extend some activities if necessary.

2. Scope

Monitor project activities were implemented from 7/2016 - 6/2018, and some addition activities from 7/2018 to 5/2020 in 21 villages of Pa Khoang commune

The activities covered by the monitoring were all the activities implemented and/or supported by the Project in the two parts; i.e. i) Forest management and ii) livelihood development (**Table 1**).

Table 1 Activities covered by monitoring

1. Forest management	2. Livelihood development	3. Others (common)
1) Forest protection (patrolling)	1) Honeybee keeping	1) Village fund
2) Afforestation	2) Fish raising	
3) Forest natural regeneration	3) Fruit tree planting	
4) Scattered planting	4) Vegetable cultivation	
5) Village boundary	5) Fodder grass cultivation	
6) Village regulation on forest protection and development	6) Bamboo planting	
	7) Improve cook stove	

Besides that, the monitoring also finds status of some activities, which has the contribution from SNRM pilot activities.

1) Forest allocation
2) Forest protection contract
3) Payment of PFES

3. Methodology and process

The methodology of the monitoring are collection of secondary data and primary data:

- Secondary data: Expressed reports/documents from relevant departments
- Primary data
 - + Key person interview: District, commune, village staff and villagers
 - + Questionnaires (FM and LD)

Monitoring process included:

- Collect secondary data from relevant agencies
- Collect primary data:
 - + Develop questionnaires
 - + Training on using questionnaires
 - + Test questionnaires
 - + Conduct monitoring in 21 villages
 - + Data entry, analysis
 - + Reporting
 - + Sharing/ reflection

3.1. Preparation of monitoring plans

The following is the six steps taken for the preparation:

1) M&E framework development

The first step of this activity is to sort out items of data/information which need to be identified by the M&E as well as to set up criteria and indicators (C&Is) for the evaluation. A series of discussions were made between the long-term Japanese experts and the consultant team of the Component 2, and a matrix indicating the framework with the above mentioned necessary items was developed (**Appendix 1**).

2) Information collection method

According to the M&E framework, the information sources were divided into three groups; i.e. i) official organisations such as district people's committee (DPC), forest management boards, etc.

mainly for the Forest Management Component, ii) representatives of local organisations such as village heads and activity group heads, iii) participating households (HHs) for the project activities.

Questionnaires for each target group were revised from SUSFORM-NOW monitor one. That questionnaires were developed by the Provincial Co-ordinator (PC) with support from a Japanese consultant assigned for Dien Bien and Lai Chau provinces, particularly for the Livelihood Development (LD) Component (**Appendix 2**).

Regarding interviews from the participating households, a sampling survey by activity (e.g. fish raising, etc.) was conducted. The sample size per activity per village was set as i) ten (10) in case the number of the participating HHs is more than ten (10), ii) as many as possible in case the number of the HHs is less than ten (10). A group interview was also applied only for improved cook stove in terms of efficiency.

3) Survey team organisation

Enumerators were recruited from 13 extension workers who are working for the Project and currently work for the communes and district-level offices in Dien Bien districts. The monitoring team also included some staff come from Muong Phang Special Use Management Board and Pa Khoang CPC. The list of the enumerators is given in **Appendix 3**.

4) Preparatory meeting

Upon completion of the recruitment and the other arrangements, the meetings between the SNRM project staff and the enumerators were organised to share the detailed monitoring plan and to collect feedbacks mainly on the questionnaires from the enumerators. The meetings for each monitoring was conducted separately: Three preparatory meetings were conducted in 18/9/2018; 17/4/2019; 25/9/2019 and 15/05/2020

In the meetings, the following items were also discussed and confirmed; survey schedule, equipment and materials, transport, and appointments, etc.. The survey schedule in the communes was reviewed based on the enumerators' suggestion on their availability as well as the interviewees' farming season. As the results, there was some changes in monitoring process compared to the expected plans.

5) Pre-test of questionnaires and review meeting

The questionnaires were used for SUSFORM-NOW evaluation already, some interviewers used it fluently, and therefore the project only conducted pre-test questionnaires among interviewers. There was minor revision on wording in the questionnaires.

6) Data/information entry sheet development

While proceeding the above-mentioned preparations, the data/information entry sheet was developed with a spread sheet software (Microsoft Excel) by the PC, which was used for SUSFORM-NOW evaluation and revised for SNRM monitoring.

3.2. Conduct of monitoring

1) Conduct of monitoring

The data/information collection on forest management related items; i.e. i) Forest allocation, ii) Forest protection contract and iii) Payment of Payment for Forest Environmental Services (PFES) in each target district and commune. This task was mainly conducted by the PC with the support from relevant department on forest management.

The actual questionnaire survey was carried out almost following the schedule. The field survey was conducted in Pa Khoang commune from 19-29 September 2018 for the first monitoring; 18-24 April

2019 for the second round, 26 September to 2 October 2019 for the third round and 16 to 22 May 2020 for the fourth round (**Appendix 4**).

The PC and Administrative Assistant were responsible for supervising the work conducted by the enumerators, whilst the Japanese Consultant provided them with support, particularly in terms of the overall management of the activity.

2) Evaluation of results

Upon completion of the field survey, all the collected data/information were entered to the sheets by the SNRM project staff (PC and Administrative Officer).

The data/information entry was followed by the work related to data/information aggregation and analysis as well as report preparation. All the work was conducted by the PC and the Japanese Consultant with support from the Administrative Officer.

II. FINDINGS

1. FOREST MANAGEMENT

The project intervention on forest management in three main sections. i) Forest protection and management, ii) Natural regeneration, and iii) Af/reforestation, and iv) Scattered planting. These activities contribute to strengthen forest management capacity of local partners, improve knowledge and practice of villagers on forest protection and development and contribute to forest development and increase PFES payment for forest area.

1.1. Forest protection and Management

1.1.1 Brief Description

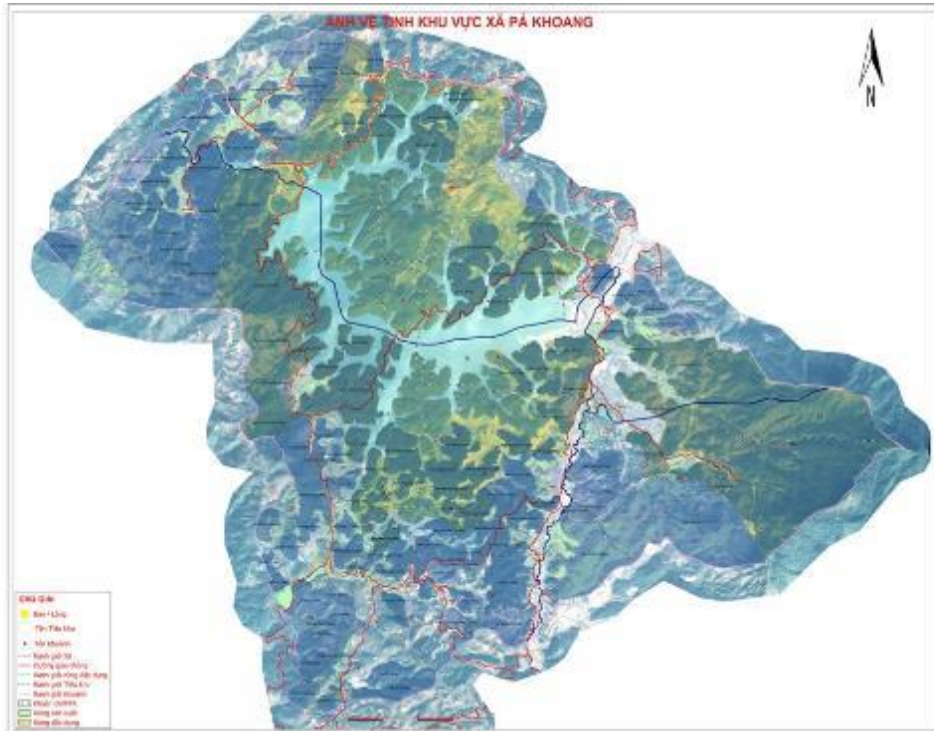
The SNRM Project supported Pa Khoang Commune in re-organizing village forest patrolling teams (VFPTs) in 21 villages (Decision 05/QD-UBND issued in 13 Jan 2017 of Pa Khoang CPC). Besides the technical training on forest patrolling for the VFPTs, the Project also supported them in some equipment for their better forest protection activities.

The Project supported Pa Khoang Commune in revision of the village regulations on forest protection and development (the original version was supported by SUSFORM-NOW project). The village regulation was discussed with villagers in each village, contributed by technical staff, reviewed by Dien Bien District Judicial Department and approved by Dien Bien DPC (Decision #1027/QD-UBND issued in 27 April 2018 by Dien Bien DPC). The approved village regulation on forest protection and development of 21 villages in Pa Khoang commune were printed for all households 01 copy in size A3, and each village on copy in size A0. The project also supported on building a communication board in each village with key information from the regulation.

The Project also supported 21 villages in designating the forest area for protection. The outcome of this activity was a map in each village with local name of forest area identified for protection. The VFPTs use this map for their forest protection and development activity. The village regulations on forest protection and development also mention the forest area that must be protected (**table 12**)

Table 2 Designated forest area for protection

	Total	Min	Max.	Ave.
Designated forest area for protection	1,740.61 ha	1.43 (Vang 1)	97.46 (Bo)	57.75



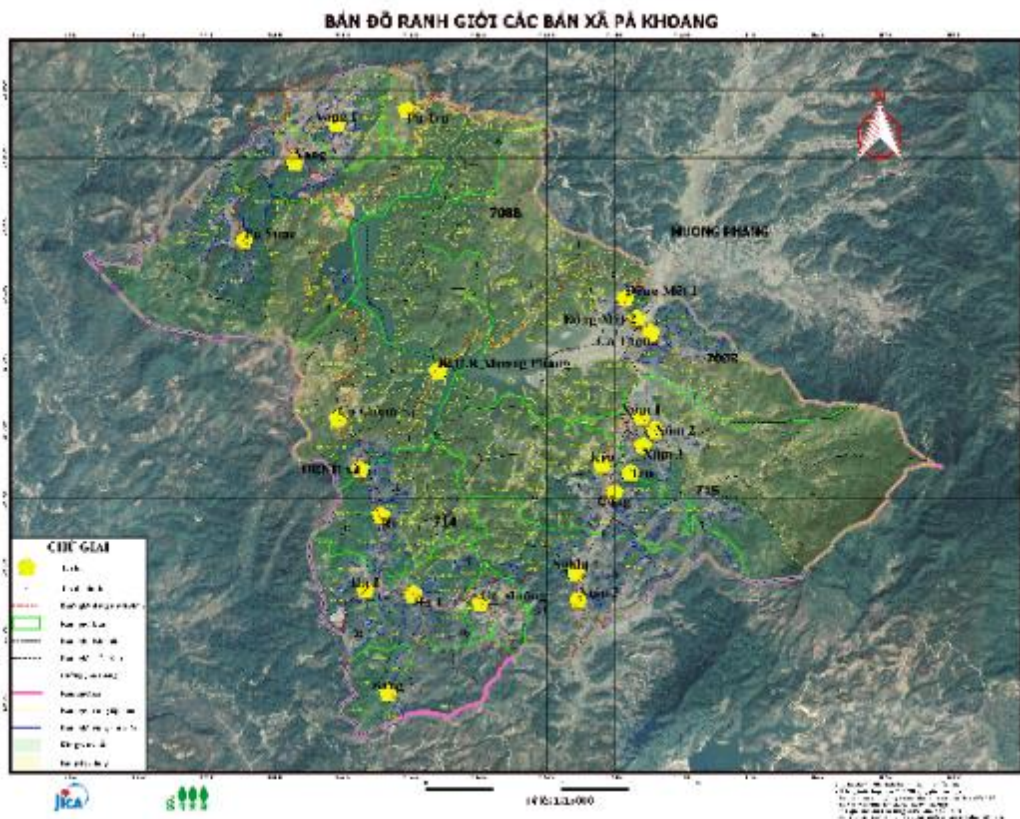
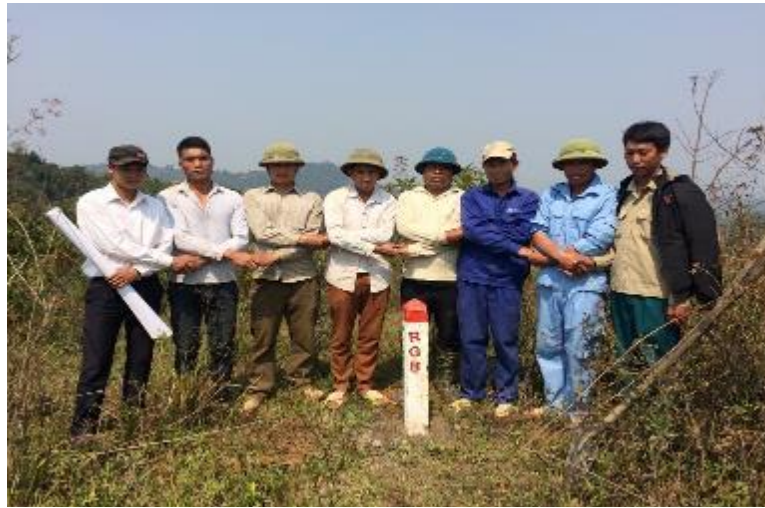
Picture 1. Map of local name of forest identified for protection

Production forest and SUF in Pa Khoang commune were allocated to 21 communities for protection. But actually, some areas were not clear on the field. Villagers didn't know which village those areas belong to. For better forest protection, forest patrolling by VFPT and villagers, village boundary should be developed

The project worked with Pa Khoang CPC on identifying village boundary between 21 villages. The activity was implemented under the technical support from Dien Bien district forest ranger station, Muong Phang SUFMB with the participation of Pa Khoang CPC staff, VMBFMLD, VFPTs and villagers. The village boundaries were identified based on some sources: map of allocated SUF, map of 3 types of forest, Pa Khoang commune administrative map, meeting with villagers, and on field identifying.

The project staff and technical officers worked together for identification village boundaries base on the available maps. They drew draft boundaries on satellite map and used it for discussion to village heads in 21 villages and CPC staff in a meeting at communal level. In the meeting, village boundaries were revised. The revised village boundary map was used for meeting with 6 villages groups. In these meeting, the participants identified the boundary and went to the field for confirmation. The agreement village boundary map was confirmed by Pa Khoang CPC and shared to all villagers in 21 villages of Pa Khoang commune.

This map contributes to forest protection and development activities in Pa Khoang commune. It's printed out in A0 size and delivered to 21 villages for VFPT and villagers using on forest protection, and some copies of the commune map with villages boundaries for Pa Khoang CPC management.



Picture 2. Pa Khoang commune’s village boundaries map

1.1.2 Main Findings and Issues

Forest patrolling

It is significant that almost all the villages in Pa Khoang Commune have been keeping the number of the VFPT members since the initial time of the Project until now (**Table 8**). The current members of the VFPTs in 21 villages in Pa Khoang commune was 268, average 12.7 people in a village. VFPTs in the communes are divided into smaller groups for forest patrolling. Each group has average 6 members. Those VFPTs have divided the team into smaller groups mainly because their forest area to be protected is very huge. Each group is assigned for forest patrolling in different forest area.

Table 3 Number of VFPT members and groups

	Jan 2017	Oct 2018	Apr 2019	Oct 2019	May 2020
VFPT members	266	248	258	251	268
VFPT groups	57	57	60	87	79
# of member in each group	4.6	2.7	3	4	6

VFPTs in Pa Khoang commune conducted forest patrolling in their allocated and protection contracted forest areas monthly. Comparing to last monitoring There were 2 villages answered that they didn't conduct forest patrolling because of they don't know where is their allocated forest (Vang 1). The data on the average times VFPTs conducted forest patrolling in 2018 and April 2019 was the same. From June 2019, some villages included villagers on forest patrolling such as Ten, Cong, Keo, Xom 1, Xom 2, Xom 3, Nghiu 1, Nghiu 2 and Vang therefore this figures was increased and the numbers of participants in one group increased, too. (Table 9).

Table 4 Implementation of forest patrolling (1)

Questions	Unit	Oct 2018	April 2019	Oct 2019	May 2020
Frequency (per month)	Times	5.24	5.24	9	8.7
Members (in a groups)	People	5.19	5.19	8	7.5

The project also supported VFPTs in 21 villages on the techniques of making forest patrolling plan and reporting. They already applied on developing their monthly forest patrolling plans (21 villages) and reports and send to forest ranger or Muong Phang SUFMB staff for coordination. These figures were improved. For forest patrolling monthly report, VFPT will develop and send to forest ranger or Muong Phang 21/21 village (Table 10).

Table 5 Implementation of forest patrolling (2)

					Payment (1,000 VND)			
	Oct 2018	April 2019	Oct 2019	May 2020	Oct 2018	April 2019	Oct 2019	May 2020
Co-ordination	16	17	21	21				
Patrolling plan	20	16	21	21				
Patrolling report	10	19	20	21				
Allowance/ year	20	19	19	20	5,185	6,424	12,313	14,910
Other cost/budget/year	3	5	6	0	1,533	1,533	Equip ment	Yearly meeting

The coordination between VFPTs and forest ranger/ Muong Phang SUFMB on forest patrolling was improved much compared to last years. It's only 16/21 villages in 2018, and in Oct 2019 and May 2020, this figure was 21/21. This was the result of reflection meeting between VFPT, village heads, and CPC on CPC monthly meeting.

For forest patrolling plan, after the training on forest patrolling of the project, almost VFPTs developed their plan for this activity and submitted to forest ranger and Muong Phang SUFMB (21/21). In last year, Vang 1 village shared that, they only had small area of production forest (1.43 ha) inside village, therefore they didn't develop forest patrolling plan. They could patrolling this area daily when they went to the field, but now, Vang 1 and Vang 2 villages merged together, their forest patrolling plan was developed.

For forest patrolling reporting, the VFPT leaders or village heads share to the commune-based forest rangers, Muong Phang SUFMB staff and CPC monthly in CPC meeting. They (21/21 villages) developed hard copy forest-patrolling report and submitted to commune-based forest ranger.

Payment to VFPT members was implemented in almost villages. Villages extracted 30% of PFES money for payment to forest patrolling activity. There were two village didn't pay to VFPT was Vang 1 (they got only small amount of PFES money) and Pu Sung villages (They didn't extracted PFES money, they shared to all households in the village). There was a few village having other payment to VFPT such as equipment, meeting...

Table 6 Co-ordination between forest ranger and other agencies on forest management

Questions	Unit	Oct 2018	Apr 2019	Oct 2019	May 2020
1) Coordination with other agencies	Village	21	21	21	21
2) Collection of forest patrolling reports	–	–	–	–	
- Number of villages	Village	10	12	18 (Nghju 1, 2, Ten)	21
- Frequency	times/month	1	1	1	1
- Completeness of reports	Village	1	8	15	20
3) Forest change monitoring	–	–	–	–	
- Implementation of monitoring	Village	21	9	17	16
- Ratio of implementation	–	–	–	–	
- 80-100%	%	-	5	7	14
- 50-80%	%	1	3	4	2
- Below 50%	%	-	1	6	
- Use of tablets	Village	1	5	11	9

The coordination between VFPT and commune-based forest rangers was confirmed by both forest rangers and Muong Phang SUFMB staff. All the forest rangers assigned to Pa Khoang commune have close co-ordination with village heads and VFPTs on forest management (**Table 11**).

Again, all the forest rangers collect forest patrolling reports from the VFPTs every month and use them for conducting forest change monitoring. Quality of forest patrolling was improved, it's only 1 completed report in Oct 2018, and increased to 15 completed ones in Oct 2019, and 20 villages completed report in May 2020.

With regard to forest change monitoring in Pa Khoang commune, commune-based forest ranger and Muong Phang SUFMB staff used tablets. The times of using tablets in 2019 (11 times) higher than 2018 (1 times) due to in 2019, the forest violation cases was higher than 2018, especially on forest fire. In 2020, they didn't use it much because there was not much forest change in 2020.



Picture 1. Forest ranger use tablet for forest change monitoring.

In April 2019, Only 16 out of 21 VFPTs had forest patrolling plan because some VFPT leaders and members went to other provinces for working. Their wives replaced them on forest patrolling, but they didn't do well this task. After discussion to CPC, some villages already re-established their VFPTs, therefore forest patrolling plan were developed and submitted on time. In 2020, all VFPT developed their forest patrolling plan.

Each VFPT received 1 forest patrolling logbook from project, even Sub-FPD and FPDF delivered their own logbooks, but VFPTs didn't record well in these logbooks. The project staff and CPC already reminded them some times in CPC monthly meeting, but this was not changed much. It's better if Sub-FPD and FPDF participate on monitoring the recording on these logbooks.

Compliance of village regulation on forest protection and development

The project supported 21 villages on revising their village regulation on forest protection and development. Villagers know well the forest area are designed for protection in their village based on the forest allocation certificates and village boundary map. Total Forest area designed for protection in Pa Khoang commune was 1,740.61 ha. In 2018 and 2019, VFPT, forest ranger and villagers found some cases of forest violation. (Table 13).

Table 7 Violations in forests designated for protection in Pa Khoang Commune

Forest violation	unit	Oct 2018		Apr 2019		Oct 2019		May 2020	
		Detected	Handled	Detected	Handled	Detected	Handled	Detected	Handled
i) Forest conversion to agricultural lands	case	1	0	1	1	0	0	0	0
ii) Forest fire	case	0	0	4	4	0	0	0	0
iii) Encroachment by animals	case	0	0	8	4	14	10	0	0
iv) Illegal hunting	case	0	0	0	0	0	0	0	0
v) Illegal harvesting of	case	12	12	5	2	4	4	4	4

Forest violation	unit	Oct 2018		Apr 2019		Oct 2019		May 2020	
		Detected	Handled	Detected	Handled	Detected	Handled	Detected	Handled
timber & NTFPs									
vi) Others	case	0	0	0	0	0	0	0	0
Total	case	13	12	18	11	18	14	4	4

In 2018, there were 13 cases of violations in the forests designated for protection happened in Pa Khoang commune. These cases were ranked not very serious because most of them were firewood or none-timber product collection of villagers. 12/13 cases were handled.

In 2019 had long dry season, that was the causes of 5 cases of forest fire happened (in first six months). These cases happened in grass area with 2b forest status. These cases were controlled by forest rangers, VFPTs and villagers. There were 18 cases of forest violation in Pa Khoang (protection, regeneration and afforestation area). 14 cases of animal encroachment, and 4 cases of illegal harvesting of timber and NTFP. Not all these cases were handled well, most of animal encroachment cases were handled by reminding the owners of animal.

In 2020, there were some cases of illegal harvesting of timber and NTFP but it's not serious. All these cases were handled. This can be result of strengthen VFPT, and involvement villagers participation on forest patrolling.

1.1.3 Lessons learned

VFPT should be re-established regularly, because some members of VFPT often work far away from their home in other provinces. This affected to quality of forest patrolling activity.

Involvement of villagers on forest patrolling activity contributes on reduction of forest violation cases.

Village boundary should be identified, and village regulation on forest protection and development should be developed for each village for better forest protection. Villagers know well their forest land and forest, so that they can protect well.

1.1.4 Recommendation

Village regulation on forest protection and development should be re-communicated to villagers. The project already supported 21 villages on developing it, but re-communication to villagers on its contents is important for them follow better.

1.2 Natural regeneration

1.2.1 Brief Description

Forestry land in Pa Khoang commune occupies for 3,975.6 ha, of which:

Production forests: 1,534.39 ha

Forests: 553.80 ha

Forestry land without forest cover: 980.59 ha

Special use forests: 2,441.21 ha

Forests: 1,595.90 ha

Forestry land without forest cover 845.31 ha

Forestry land without forest cover occupies for 45.9%, thus, support for af/reforestation is the number one priority task of the project. Through the village meetings, the project has supported the local people to develop a 5-year plans (2016-2020) for 21 villages that approved by the CPC. The project will support af/reforestation by the local villager for two years from 2017 to 2018.

Since land areas of the local HHs are small, some of them are less than 0.5 ha and located far from each other. These areas are not enough to be eligible to be a forest plot, but in these areas the households are no longer cultivating agriculture crops, thus, the Project has conducted survey and decided to supply tree seedlings for them to do scattered tree planting. The selected tree species are high economic and multi-purpose values, which not only contribute to increase forest cover but also can bring benefits to the local HHs as NTFPs.

According to the project plan, in 2017, the project invited the consultant to conduct a field survey to select sites to for af/reforestation. Through the field surveys, discussion with villagers; analysis of natural condition, socio-economic factors and other lessons learned of other provinces, 115.15 ha have been proposed for af/reforestation. Pursuant to the Law on Forest Protection and Development in 2004, other documents issued by the Government, the MARD and Dien Bien PPC, the Project has developed a "design document on af/reforestation in Pa Khoang commune, Dien Bien district" and submitted to competent authorities for approval.

1.2.2 Main findings and Issues

In Pa Khoang commune, the project supported on designing 130ha of natural forest regeneration in 7 villages.

Table 8 Natural regeneration supported by Project

Description	Unit		Production forest	SUF	
				Xom 1, 2, 3	Dong Met 1,2, Co Thon
Number of village with natural regeneration	village	7	Bo		
Area of natural regeneration forest	ha	130	10.51	30.16	89.33

The project supported designing natural regeneration without any tending activity, therefore, in past time; there was not any tending activity to natural forest regeneration area, except protection. The project supported with 12 signboards.

Table 9 Tending to the natural forest regeneration area

Questions	Unit	Pa Khoang commune
1) No. of villages that applied any tending	Village	0
2) No. of villages by operation	Village	0
- Slashing/weeding	Times	0
- Supplemental planting	Times	0
- Fencing	Times	0
- Signboard installation	Board	12
- Others		0

Because of good protection by VFPT and villagers, therefore there was not any case of violation in the forests designated for natural regeneration (**Table 16**).

Table 10 Violations in forests designated for natural regeneration in Muong Phang Commune

Cases	Type of forest (production, SUF)	
	Protection	Production
1) Forest conversion to agricultural lands	0	0
2) Forest fire	0	0
3) Encroachment by animals	0	0
4) Illegal hunting	0	0
5) Illegal harvesting of timber & NTFPs	0	0
6) Others	0	0
Total	0	0

Because of there was not any case of violation in forest designated of natural regeneration in Pa Khoang commune, therefore the forest was growing well. Villagers protect forest natural regeneration area with intention of their forest will be allocated to their community soon, and they can get PFES money from that area.

1.2.3 Lessons learned

The collaboration and agreement, at the designing step, among villagers who have land adjacent to generation area, village management board and commune local authority is important. This is to avoid any conflict during implementation e.g. installation of signboards.

The regeneration areas must always be included in patrolled forest area of VFPTs and villagers.

1.2.4 Recommendation

Forest natural regeneration activity should be done in the first year of implementation phase. Project didn't spend much time for this activity. When do this activity soon, villagers will pay more attention on protection forest, and it will develop better.

At district/city level, they have budget for tending forest natural regeneration. The project should coordination to relevant department for getting tending budget. With tending activity, forest will develop better.

1.3 Af/reforestation

1.3.1 Brief Description

In Pa Khoang commune, forest land is 15,505ha, among of this area, there is 670ha belongs to households. This area often is barred land or villagers do crop cultivation. There is not any forest land area, which belongs to community, therefore afforestation activity only can focus on the households' land, where villager couldn't cultivate their crop anymore. It means that almost these area, the quality of soil already is very poor. One more issue was villagers did not have separate area for animal raising. It's high risk of animal will encroachment afforestation area. The project already asked the participants sign agreement on protection and tending afforestation area if they are supported.

The project supports villagers on designing, conduct training directly to the participants and support seedling. Villagers have to support project on designing on their field, prepare their land, digging holes, planting, tending and protection.

1.3.2 Main findings and Issues

Afforestation

The SNRM Project conducted its support in af/reforestation in the Pa Khoang Communes. In 2017, the project supported to design 115.15 ha, among of them 98.34ha was designed in production forest land and 16.81ha was in SUF land.

Table 11 Designation of af/reforestation area in production forest supported in 2017

Village	Species			# of slot (slot)	Area (ha)	# of seedling (tree)
	Michelia	Pinus	Schima wallichii			
Vang 1	9,204	18,397	-	34	24.86	27,601
Vang 2	529	1,059	-	3	1.43	1,588
Dong Met 1	559	-	1,117	1	1.51	1,676
Dong Met 2	3,675	-	7,347	11	9.93	11,022
Co Thon	976	-	1,944	3	2.63	2,920
Bo	2,819	-	5,639	8	7.62	8,458
Cong	2,862	-	5,718	12	7.73	8,580
Nghiu 1	3,200	-	6,400	14	8.99	9,600
Nghiu 2	793	1,584	-	4	1.80	2,377
Ten	2,884	5,764	-	13	7.79	8,648
Xom 2	1,895	-	3,788	7	5.12	5,683
Xom 1	499	-	999	3	1.35	1,498
Xom 3	403	-	806	2	1.09	1,209
Ha 2	3,695	7,383	-	12	9.99	11,078
Ha 1	-	3,609	3,609	10	6.50	7,218
Total	33,993	37,796	37,367	137	98.34	109,156

Table 12 Designation of af/reforestation area in SUF supported in 2017

Village	Species				# Slot (slot)	Area (ha)	# seedling (tree)
	Michelia	Pinus	Schima wallichii	Canarium			
Vang 1	548	1,095	-	-	1	1.48	1,643
Vang 2	2,434	4,870	-	-	7	6.58	7,304
Pa Tra	1,295	-	-	2,592	4	3.50	3,887
Co Cuom	370	740	-	-	1	1.00	1,110
Dong Met 1	774	-	1,599	-	1	2.16	2,373
Dong Met 2	799	-	1,547	-	4	2.09	2,346
Total	6220	6705	3146	2592	18	16.81	18,663

Base on the designed area, and the registration of villagers, the project conducted monitoring the hole digging of the participants, 74.55 ha was supported planting in both production forest and SUF land. (Table 19)

Table 13 Af/reforestation area supported by Project in 2017

No	Village	# HHs	Designed area (ha)		Planted area (ha)	Actual planted area			
			SUF	PF		SUF		Production forest	
						Area (ha)	Species	Area (ha)	Species
1	Vang 2	2	6.58	1.43	1.27	0.68	Michelia, Pinus	0.59	Michelia, Pinus
2	Pa Tra	10	3.5	0	3.16	3.16	Michelia + Canarium	0	
3	Dong Met 1	1	2.16	1.51	0.60	0		0.60	Michelia + Pinus + Schima wallichii
4	Dong Met 2	26	2.09	9.93	11.11	3.80	Michelia + Pinus + Schima wallichii	7.31	Michelia + Pinus + Schima wallichii
5	Co Thon	8	0	2.63	2.36	0		2.36	Michelia + Pinus + Schima wallichii
6	Ten	21	0	7.79	8.29	0		8.29	Michelia + Pinus
7	Cong	9	0	7.73	4.64	0		4.64	Michelia + Pinus
8	Ha 1	11	0	6.50	4.50	0		4.50	Michelia + Pinus + Schima wallichii
9	Ha 2	15	0	9.99	6.27	0		6.27	Michelia + Pinus + Schima wallichii

No	Village	# HHs	Designed area (ha)		Actual planted area				
			SUF	PF	Planted area (ha)	SUF		Production forest	
						Area (ha)	Species	Area (ha)	Species
10	Bo	10	0	7.62	5.49	0		5.49	Michelia + Pinus + Schima wallichii
11	Co Cuom	1	1	0	0.66	0.66	Michelia + Schima wallichii	0	
12	Vang 1	32	1.48	24.86	17.91	0		17.91	Michelia + Pinus
13	Xom 2	8	0	5.12	3.54	0.30	Michelia + Schima wallichii	3.24	Michelia + Schima wallichii
14	Xom 3	1	0	1.09	0.76	0.76	Michelia + Schima wallichii	0	
15	Nghiu 1	4	0	8.99	2.19	0		2.19	Michelia + Pinus
16	Nghiu 2	6	0	1.80	1.80	0		1.80	Michelia + Schima wallichii
17	Xom 1		3	1.35		0		0	
Total		165	16.81	98.34	74.55	9.36		65.19	

In 2018, the project didn't support afforestation in a large area as 2017, because serious problems on poor tending and protection was found in 2017. Based on this lessons learnt, the project selected the participating households who is eligible to fully involved in tending and protection of the afforestation area. The total designed area for afforestation in 2018 was only 12.54 ha. Among of them 7.99 ha in production forest land area, and 4.55 ha in SUF. The planted area in 2018 was 15.56ha (3.02ha was designed in 2017). (Table 20)

Table 14 Af/reforestation area designed and planted in 2018

No.	Household	Designed and planted area (ha)	Species		
			Michelia	Schima wallichii	Total
Production forest		7.99	4,295	4,295	8,590
I	Bo village	0.97	400	400	800
1	Ca Van La	0.5	139	139	278
2	Lo Van Hoan		139	139	278
3	Lo Van Cham	0.47	261	261	522
II	Nghiu 2 village	2.65	1,470	1,470	2,940
1	Ca Van Quyen	0.57	316	316	632
2	Ca Van Hoi	0.49	272	272	544
3	Quang Van Vui	0.86	344	344	688
5	Ca Van Cong		133	133	266
4	Lo Van Hac	0.73	405	405	810

No.	Household	Designed and planted area (ha)	Species		
			Michelia	Schima wallichii	Total
III	Vang 1 village	2.18	1,210	1,210	2,420
1	Quang Van Hung	0.72	400	400	800
2	Lo Van	0.17	94	94	188
3	Lo Van Hoc	0.26	144	144	288
3	Luong Van Un	0.29	161	161	322
4	Luong Van Song	0.24	133	133	266
5	Luong Van Mot	0.5	278	278	556
IV	Vang 2 village	2.19	1,215	1,215	2,430
2	Lo Van Binh	0.57	316	316	632
4	Quang Van Lam	0.56	311	311	622
4	Lo Van San	0.51	283	283	566
6	Lo Van Yen	0.55	305	305	610
Special use forest		4.55	2,525	2,525	5,050
I	Xom 1 village	2.93	1,626	1,626	3,252
1	Ca Van Chinh	0.79	438	438	876
2	Ca Van Phong	2.14	1,188	1,188	2,376
II	Keo village	0.78	433	433	866
1	Quang Van Xom	0.78	433	433	866
III	Vang 2 village	0.84	466	466	832
1	Luong Van La	0.84	466	466	832
Planted in designed area 2017		3.02	1,870	1,870	3,740
1	Luong Van Mang	0.91	570	570	1,140
2	Lo Van Son	1	600	600	1,200
3	Quang Van Huong	0.56	350	350	700
4	Lo Thi En	0.55	350	350	700
Total		15.56			

Besides that, in 2018, the project also supported 12,090 seedlings in 14 villages for supplement planting in planted area in 2017.

In 2019, the project didn't support on conducting afforestation in new area, but supplement planting in the both area planted in 2017 and 2018 with total delivered seedling was 7,250 (**table 21**)

Table 15 Supplement planting in 2019

No	Village	Household	Designed area (ha)	Species			Total
				Pinus	Michelia	Paramichelia	
1	Vang 1	Quang Van Quyet	1.36	100			100
		Quang Van Chua	0.33	150			150

No	Village	Household	Designed area (ha)	Species			Total
				Pinus	Michelia	Paramichelia	
		Quang Van Sieng	0.73	200			200
		Lo Van Inh	1.56	50	50		100
		Lo Van Lun	0.65	200			200
		Lo Van	0.88		100	100	200
		Lo Van Xom	1.06	400			400
2	Vang 2	Lo Van Ninh	0.57		200		200
		Luong Van Un	0.29		150		100
		Luong Van La	1.52		800		800
		Quang Van Ninh	0.59		250		250
3	Pa Tra	Lo Van Anh	0.75			200	200
		Quang Van Hoang	0.4			200	200
		Bac Cam Inh	0.37			200	200
4	Ha 1	Ca Van Pan	0.47	50	50		100
		Luong Van Dinh	0.22	50			50
		Lo Van Tien	0.3	100	50	50	200
5	Ten	Quang Van Hau	1	600	500		1,100
6	Bo	Luong Van Thanh	0.49		200		200
		Lo Van Cu	0.26		200		200
7	Xom 2	Lo Van Son	1.72	350			350
8	Xom 1	Ca Van Phong	2.14	300			300
9	Nghiu 2	Lo Van Quy	0.41		150		200
		Ca Van Hoi	0.49	100	100		200
		Quang Van Vui	0.43	250	250		500
10	Ha 2	Luong Van Mang	1.98		200		200
11	Nghiu 1	Quang Van Phan	0.82	50	50		100
12	Dong Met 1	Lo Van Oi	0.5		200		200
13	Dong Met 2	Luong Van Cuong	0.3		50		50
Total				2,950	3,550	750	7,250

Table 16. Summary of afforestation supported by project from 2017 – 2019

No	Description	2017	2018	2019	Total
1	Designed area	115.15	12.54	0	127.69
2	Planted area	74.55	15.56	0	90.11
2.1	<i>Michellia</i>	39,797	10,435	0	50,232
2.2	<i>Pinus</i>	46,093	0	0	46,093
2.3	<i>Schima wallichii</i>	38,388	10,435	0	48,823
2.4	<i>Canarium Tramdenum</i>	2,649	0	0	2,649
3	Supplement planting	0	12,090	7,250	19,340

Tending in Afforestation Area

The situation of tending in af/reforestation area was not good in last 4 years. Because most of afforestation area in Pa Khoang was damaged by animal, therefore villagers didn't tending to this

area anymore. Although, villagers already signed agreement on protection and tending afforestation area, but the encroachment of animal was out of their control. For the area that could recover, they applied the necessary tending such as slashing/weeding (**Table 23**). The project also supported on supplement planting and signboard installation in some area.

Table 17 Tending for af/reforestation area

Questions	Unit	Oct 2018	Apr 2019	Oct 2019	May 2020
1) No. of villages that applied any tending	Village	13	13	12	12
2) No. of villages by operation	–	0	0		
- Slashing/weeding	Times/ year	1.2	1.3	1.5	0
- Supplemental planting	Time	1	1	1	0
- Fencing	Village	0	2	2	12
- Signboard installation	Village	0	0	4	0
- Others	Village	0	0	0	0

The growing of planted forest was estimated via average height and survival rates of the tree. These indicators gathered through interviews with the village heads and VFPT leaders. The results clearly indicate that the survival rate of planted trees in the commune was low, most probably between 40-60%. (**Table 24**), the main problem in the low survival rate was caused by the damage by domestic animals.

Table 18 Average tree height and survival rates of planted trees in af/reforestation area

Tree species	Oct 2018		Apr 2019		Oct 2019		May 2020	
	Height (cm)	Survival rate (%)	Height (cm)	Survival rate (%)	Height (cm)	Survival rate (%)	Height (cm)	Survival rate (%)
Pinus sp.	42.8	~ 69.65 % ¹	75	43.3	118	42	129	49
Michelia sp	50.6		96	56.87	126	60	145	59
Schima wallichii sp	31.6		67	56.4	86	60	141	60
Canarium sp	NA		80	50	80	50	100	50

In 2018, most of afforestation area was not tended by villagers. In addition, it was encroached by animal. Base on the monitoring report from Sub-DOF, the survival rate was about 69.65%. Detail as below:

Afforestation in SUF

- Survival rate from 50-85% (compare to design 110 seedling/ha) in 2.9 ha.
- Survival rate from >85% (compare to design 110 seedling/ha) of 3.1 ha.

Afforestation in production forest

- Survival rate from <50% (compare to design 110 seedling/ha) in 15.62 ha.
- Survival rate from 50-85% (compare to design 110 seedling/ha) in 21.88 ha.
- Survival rate from >85% (compare to design 110 seedling/ha) in 13.00 ha.

Growth:

- The planted tree in SUF had average height was 0.4- 0.7 m.

¹ Estimated base on the afforestation monitoring report of Sub-DOF (2018).

- The planted tree in SUF had average height was 0.3- 0.75 m.

After monitoring with low survival rate of afforestation, the project already asked the participation of Pa Khoang CPC, village management board, VFPT on protection afforestation area, which supported by the project. As the result, some case of animal encroachment still happened, but not in big area anymore. VFPT in Bo village already asked the owner of animal had to pay for the lost in afforestation area.

In 2018 and 2019, the project supported on supplement planting. That was why the survival rate in 2019 was a bit improved. This indicator was around 50% according to the monitoring report in Oct 2019, and 55% in May 2020.

Thanks to the better protection, planted tree was growing with minimum affection from animal. The height of the tree in 2020 was around 1.3 meter in comparing to 1.0 meter in Oct 2019. In some good area, the Michellia was around 2.5 meter height. In damaged area by animal before, the planted trees are re-growing very well.

Compliance of village forest protection and development regulations for af/reforestation

The aforementioned serious damage on planted trees by domestic animals was significant in Pa Khoang.

In 2018, there was 16 cases of afforestation violation mainly was animal encroachment with two cases ranked as very serious. Almost these cases were detected by VFPTs and villagers, but none of them were handled.

In 2019, the same problem still happened. There were 14 cases of afforestation violation, all of them were encroachment by animal. Among of these them, there were 2 cases were ranked very serious. These cases were detected by villagers but no handling

In 2020, when the tree was high enough, villagers start fencing their afforestation area. That's why no encroachment by animal in 2020. (**Table 25**).

Table 19 Cases of violations in areas designated for af/reforestation

Cases	Case of violation				Handling			
	Oct 2018	Apr 2019	Oct 2019	May 2020	Oct 2018	Apr 2019	Oct 2019	May 2020
1) Forest conversion to agricultural lands				0	0	0	0	0
2) Forest fire	1			0	0	0	0	0
3) Encroachment by animals	15	14	14	0	0	0	0	0
4) Illegal hunting				0	0	0	0	0
5) Illegal harvesting of timber & NTFPs				0	0	0	0	0
6) Others				0	0	0	0	0
Total	16	14	14		0	0		0

The problem on afforestation in Pa Khoang was the encroachment by animal. Although villagers want to plant forest, the project already supported them on designing, technical training, and seedling,

villagers spent their labor to dig hole and planting, their planted tree still be lost by animal encroachment.

Villagers couldn't protect their afforestation area from animal. Villagers don't have separate area for domestic animal raising, they often free them on mountain without control. In addition, they didn't make fence for afforestation area, therefore animal easily damaged the planted trees.

The project already support every villages with village regulation on forest protection and development. Actually, this regulation was agreed by villagers, but they didn't change the practice on free their animal on mountain, therefore the planted tree continuous be damaged.

VFPT already worked hard to protect the planted tree. Some animal were caught when they entered to afforestation area, but it's difficult to ask the owner of animal pay the fine. VFPT reminds them many times, and this problem was improved a bit. Until now, some afforestation area already grow up well, it's no longer be affected by animal anymore.

1.3.3 Lessons learned

Conducting afforestation in the area, where villagers still free grazing animal. It's much difficult to protect new planted tree. It's better to support fence or ask villagers making fence before support seedling for planting. It's required a good collaboration between farmers themselves, different villages and commune leaders, too.

1.3.4 Recommendation

Villagers only conduct tending and fencing their afforestation area when the tree is high enough. Villager only can see the value of the high tree, therefore they pay more attention on tending and fencing. It's better if project pay more time ask villagers on making fence before seedling delivery.

CPC, village management board, and other relative agencies should raise awareness for the people, especially the ones who raise buffalo and cattle on new planted forest protection.

1.4 Scattered planting

1.4.1 Main findings and Issues

In 2017 and 2018, the project supported 36,637 seedling to 1,322 households times in 21 villages: Michelia (15,461), Canarium (8,317), Dracontomelon (6,472), Chukrasia (6,387). The project also provided technical training on scattered planting to villagers. The participants applied the techniques on planting.

In October 2018, the monitoring result showed that, the survival rate of scattered planting tree was not very high. It's around 70%. 4 villages reported that, the planted trees were damaged by domestic animal such as goats, buffalo and cow. Some village reported that the survival rate of Canarium Trandenum was low because of broken grafted branch.

In April and Oct 2019, village heads interviewing result showed that the survival rate of scattered planting was not very good (64.4% in April 2019, and 66.8% in Oct 2019). Some villages (5) still reported that the scattered planting was damaged by animal.

In 2020, there was not any report case of scattered planting violation, It can be the tree already high (around 160 cm) and villager pay more tending activity.

Table 20: Scattered planting status

Species	Quantity	Oct 2018		Apr 2019		Oct 2019		May 2020	
		Height (cm)	Survival rate (%)	Height (cm)	Survival rate (%)	Height (cm)	Survival rate (%)	Height (cm)	Survival rate (%)
Michelia	15,461	65.21	73.60	114.2	67.3	144.5	69,5	161	69.5
Canarium	8,317	79.27	53.91	111.1	57.3	126.5	57,3	158	59.1
Dracontomelon	6,472	55.92	72.79	122.2	66.1	133.5	70,3	154	66.7
Chukrasia	6,387	74.81	74.68	126.2	65.0	138	69,3	176	65
Average	36,637		69.1		64.4	137.3	66.8		65

It's the same afforestation problem. Scattered planting activity has relatively low survival rate due to the encroachment of domestic animal. Even though villagers made fence around the planted tree, or they planted inside their garden, the practice of free grazing animal without control affected to scattered planting activity.

The project already mobilize villagers on making fence around the trees, but it does not work with current animal raising practice. The survival rate 65% was not high, but almost planted tree already grow up, it does not be damaged by animal anymore.

1.4.2 Lessons learned

Planting location of scattered planting should be carefully considered to reduce the risk of losing, animal encroachment, drought and flooding.

1.4.3 Recommendation

Scattered planting was affected by animal encroachment as afforestation, too. The participants should pay more attention on protection such as fencing. In addition, implementation of village regulation on forest protection and development is important

2. LIVELIHOOD DEVELOPMENT

For contribution to forest management, the project implemented some Livelihood Development activities for reduction pressure to forest. These activities are divided into three categories; i.e. i) Agricultural production activities, ii) Activities to reduce firewood consumption and collection time; iii) Village fund.

2.1 Honeybee keeping

2.1.1 Brief Description

In Pa Khoang, honey is a valuable non-timber forest products source, bringing income to people. Honey used to be collected directly from the forest or from the round shape beehives (round shape beehives made of hollow woody stems, 60-80cm long, both sides covered with a small hole for the bees to fly out/in). However, the traditional way of harvesting honey of the local people (harvest all) destroyed and changed the structure of the bee colonies (abnormal colony of bees should have bee-eggs, larvae and bee nymphs). Therefore, beekeepers often encounter cases of bees flying away without return after harvesting honey, the time between honey harvesting times is long as the bees has to build again the wax and that affected to honey quantity.

Transformation of bee from round to square beehives helps farmers take care of and manage them in a sustainable way, increasing productivity and thereby increasing income and improving local people's livelihoods. Besides, the initiative in beekeeping will limit people to go to the forest to get honey, thereby mitigating the risk of forest fires, contribute to manage and protect forests in a sustainable way.

2.1.2 Main findings and Issues

The households who are currently using round shape beehives (traditional way) wish to participate in the modern beekeeping model. In 2017, the project selected 3 villages, 10 households per village were provided with technical support during the first year including Vang 1, Pa Tra and Dong Met 1 villages. In 2019, based on the performance of the first 3 villages, the project expanded to support to 10 more households in Co Cuom, Bo, Ha , Ha 2, and Xom 2 villages.

Table 21 Households participated on honeybee keeping in 2017

No	Vang 1	Supported beehive	Pa Tra	Supported beehive	Dong Met 1	Supported beehive
1	Lo Van Thuong	3	Bac Cam Inh	3	Luong Van Anh	3
2	Lo Van Lun	3	Quang Van Linh	3	Lo Van Ui	3
3	Quang Van Bich	3	Tong Van La	3	Cam Van Xuong	3
4	Lo Van Hoc	3	Lo Van Bua	3	Lo Van Hoa	3
5	Quang Van Truong	3	Quang Van Toan	3	Ca Van Huong	3
6	Lo Van Inh	3	Lo Van Yen	3	Cam Van Tam	3
7	Quang Van Huong A	3	Bac Cam In	3	Lo Van OI	3
8	Quang Van Huong B	3	Quang Van Hoang	3	Quang Van Banh	3
9	Quang Van Hung	3	Lo Van Binh	3	Luong Van Pang	3
10	Lo Van Thang	3	Lo Van Anh	3	Lo Van Lao	3

Table 22 Households participated on honeybee keeping in 2019

No	Household	Village	Supported beehive
1	Lo Van Hoan	Bo	4
2	Lo Van Cu	Bo	4
3	Cu A Di	Co Cuom	4
4	Luong Van Chung	Ha 1	4
5	Lo Van Mang	Ha 2	4
6	Bac Cam Thien	Ha 2	4
7	Luong Van Thiem	Xom 2	4
8	Luong Van Ha	Xom 2	4
9	Luong Van Thuong	Xom 2	4
10	Luong Van Hac	Xom 2	4

In 2018, after supporting beehive to 30 households in Vang 1, Pa Tra and Dong Met 1 villages. The project conducted a technical training course to all of them on honeybee keeping in modern beehive. The participants also supported with some main equipment for keeping bee, such as knife, hat, gloves, honey extractor, smoke can.

In 2019, the project expanded this model to 10 households in 5 villages: Bo, Ha 1, Ha 2, Xom 1, and Xom 2 (each household received 4 beehives). These households also received some equipment for apply techniques of honeybee keeping in modern beehive.

Table 23: Honeybee monitoring result

	Unit	Oct 2018	Apr 2019	Oct 2019	May 2020
# village	village	3	8	8	8
# household	household	30	40	40	35
Beehive supported by SNRM	Beehive	90	130	130	113
Beehive developed by villager	Beehive	28	7	19	73
# of bee net transferred to modern beehive	Beehive	44	48	71	98
# of modern beehive was harvested honey	Beehive	42	25	71	91

Not all households applied the new techniques of honeybee keeping. Some of them didn't know well the techniques, or they had to work far away from their houses, therefore there was not anyone can manage their bee. In 2018, 44 out of 90 modern beehives were used for beekeeping. This figure was a bit higher in 2019 with 71 out 130 beehives. In 2020, numbers of households, who can apply well new techniques of beekeeping was higher (98).

In 2018, villagers harvested honey from 42 out of 44 transferred beehives. In 2019, villagers can harvested honey from 71 modern beehives, and in 2020, this figure was 91. Base on monitoring result in Oct 2018, Apr and Oct 2019, and May 2020: 100% interviewed households continually keeping honeybee in modern beehive.

Table 24. Income from honeybee keeping activity

	unit	Oct 2018 (n=20)	Apr 2019 (n = 26)	Oct 2019 (n=27)	May 2020 (n=35)
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		Total	Average	Total	Average	Total	Average	Total	Average
# of household	Household	16		12		27		35	
Harvested honey (l)	Litter	261	16,3	97		672.8		353	
Sold honey	Litter	257	16	97		662.8		325	
Average price	Dong/litter		141,250		193.3		160.3	3,120	130
Income	1,000 VND	34,495	2,155	19,700	1,641	113,414	4,200	39,340	1,639
Positive net profit	household	16		11		26		24	
Almost no net profit	household	4		1		1		5	
Negative net profit	household	0		0		0		0	

In 2018, the participants sold almost their collected honey (257/261 litters) with average price 140,000 VND/litter. In 2019, the amount of harvested honey was higher. 27/27 interviewed households harvested 672.8 litters of honey, they sold all with average price was 160,000 VND/litter. Almost of them shared that they had positive net profit from honeybee keeping. In 2020, villagers collected honey in a short time because rainy season come soon. It's much lower compare to the collected amount in 2019. In addition, due to raining, therefore the quality of honey was not very good enough, therefore the average price was lowest in last three years.

Table 25. Difficulty and expanding honeybee keeping model

	unit	Oct 2018 (n=20)	Apr 2019 (n=26)	Oct 2019 (n=27)	May 2020 (n=35)
# Household continually keeping honeybee in modern beehive	household	6	16	27	28
Modern beehive	one	13	35	92	119
Traditional beehive	one	7			125
# Household borrow money from VF for bee keeping	household	0	0	0	0
# Household faced problems/constraints in honeybee keeping	household	18	24	7	17
# Household continue beekeeping in modern beehive	household	20	18	25	35

In 2018, the project has just introduced new techniques of honeybee keeping to villagers; they faced some difficulties such as bee transferring, feeding, management in rainy and winter season, etc. In 2019 and 2020, villagers only face to small issue on expanding the bee to other beehives. All of them want to apply new techniques of beekeeping in modern beehives.

Honey marketing

The issue of villagers, who participates on honeybee keeping model of the project, is honey market. The market for honey in Pa Khoang was not good. They only could sell honey to some intermediaries with low price. In addition, middlemen only want to buy honey with wax, because they believe that is real honey. Villagers are required to harvest honey without wax for ensure bee net is not affected, and they can harvest more honey in a short time. However, without bee wax, villagers faced difficulty on selling their product.

For contribution to solve this issue, the project already try to support villagers on honey marketing with some activities such as developing honey brand for Pa Khoang honey, finding honey markets, bottled honey in plastic bottle, install advertise board, printing card visit, display honey in Sakura even. Actually, these support already contributed some on honey selling in Pa Khoang. Villagers can

bottled honey in bottles with Pa Khoang honey brand and sell in other province with higher price. With honey brand, the buyers can carry honey to Ha Noi via airplane.

To support more on honey marketing, the project already conducted honey quality testing for Pa Khoang honey. With registered honey quality, villagers can sell it in other province, market with higher price. This also is the first step of OCOP registration of Pa Khoang CPC. The test result and certification in **Appendix 5**.

2.1.3 Lessons learned

Bee keeping should not only focus on honey productivity increasing. Honey marketing is important too. If villager can not sell their harvested honey, they will come back to their traditional honeybee keeping methodology.

2.1.4 Recommendation

The project had to spend much time on training villagers with new techniques of honeybee keeping: Training, study tour, field training, but some of them still did not follow well the techniques. The bee fly away in winter season or hungry, they separate when new queen bee is born. Villagers didn't pay attention enough to checking their bee. It's better if the participants pay to one person who have good techniques checking their bee regular.

Honey marketing can't success with only the support of the project. CPC, DPC, even PPC have to have policy, and investment on this activity, the result can be better.

2.2 Fish raising

2.2.1 Brief Description

Pa Khoang commune is potential area for development of fish raising with pond area of about 83.5 ha. Livestock (cattle, goat, and pig raising) and aquaculture together contributes 64.5 % to the economic structure of the commune annually (according to social survey data of Pa Khoang commune in 2016).

According to statement of staff of Dien Bien Aquiculture Center, the water source in Pa Khoang commune is relatively clean, less polluted, and the water source is mainly from the forests with the temperature varies from 22-28°C, which is very suitable for fish raising, especially grass carp. Although fish raising has been existing for a long time, farmers only rely on their own experience and that may lead to high/low fish stocking density in a pond. In addition, pond preparation, fish maintenance, and disease prevention have not been implemented well by the farmers due to lack of experience in application of technical measures.

In order to support the local farmers to do better fish raising, the Project has introduced a model of 50% grass carps, 20% of tilapia, 15% of mrigan carp, 10% of bighead carp, and 5% of carp fish with density of 2 fish/m². This method of polyculture can help saving cost of feed as the major feed for grass carp raising is grass; waste of this fish species can be feed of other fish varieties which living in different levels of water in the pond. The polyculture helps to generate incomes for the farmers at different times as each of fish variety has different growth. In addition, this polyculture is good method to prevent diseases.

The Project has received a lot of requests from the local people and Pa Khoang authorities for supporting them with fish raising. However, due to limited funding, the Project only provided the support to members of FPTs to motivate them participate in forest protection and management..

2.2.2 Main findings and Issues

153 households were supported 400,800 fingerling in 2017. The project also supported lime and medicine for pond preparation before putting fingerling to the ponds. The participants had to contribute 50% of fingerling cost to village fund

Table 26. Fish raising monitoring result

	unit	Oct 2018 (n=127)		Apr 2019 (n=128)		Apr 2019 (n=133)		May 2020 (n=132)	
		Quantity	Average	Quantity	Average	Quantity	Average	Quantity	Average
Supported fingerling	fingerling	345,200		322,300		356,850		326800	
# of hh had income from fish raising	Hh	11		19		42		82	
Average income from fish raising	1,000 VND	30,150	2,740.91	88,375	4,651	239,400	5,700	537,300	6,552
# of hh have benefit from fish raising	Hh	7		7		29		62	
# of hh still continue fish raising	Hh	120		122		117		126	
# of hh had a loan from the VF for fish raising	Hh	33		29		27		21	
# of hh faced problems/constraints in raising fish	Hh	97		106		74		15	
# of hh going to continue raising fish	Hh	123		127		124		120	

In 2018, there was 8.7% (11/127 interviewees) households already sold their fish after 1 year raising with total income was 30,150,000 VND. In 2019, there were 31.5% (42/133 interviewees) households already sold their fish. Among of them, there were 29 out of 42 sellers told that they had benefit from fish raising.

The participants (97/127 in 2018, and 74/133 in 2019) faced to some difficulty on fish raising such as heavy raining, disease, and not enough food for fish in dry season and fish was died by cold weather.

In 2018, there was 7 households and 16 ones in 2019 didn't continue fish raising because of flood broke their ponds, fish were died by disease, didn't have money for buying fingerling. 27 households borrowed money from VF for fish raising. These households borrowed the amount they have to contribute to VF.

In 2019, almost of them (124/133 interviewees) continue fish raising in coming time due to the condition for this activity in Pa Khoang is good. Some households don't raise fish anymore because they have to return ponds to their brothers, their pond banks were broken, and some households don't have enough money to buy fingerling.

In 2020, there was 120/132 households shared that they continue fish raising in coming time. There were 12 households said that they didn't raise fish anymore due to long dry season without any rain in 2019 was reason of not enough water in their pond for fish raising. Other households said that they didn't have enough fund for buying fingerling.

Fish selling

Fish in Pa Khoang is famous, but fish selling is a problem to villagers. Nearly every households in Pa Khoang have fishponds; therefore, they couldn't sell fish to each other. If they want to sell fish, they have to call to middlemen, who will buy fish with low price. Other option of fish selling is carrying fish to Dien Bien Phu city for selling to intermediaries there, and the price is low, too, because the fish is not alive when they carry long way to city. Villagers will get low price from dead fish.

Villagers in Sang village option carry their agricultural products to sell in a roadside market near the village. The products are from fish raising, animal raising, and gardening. Almost buyers are teachers and travelers, who often go across Sang village. When selling fish and other products here, villagers can sell with higher price in comparing to selling in Dien Bien Phu city.

The issue on selling fish in roadside market is the same selling in Dien Bien Phu city. Villagers couldn't keep fish alive; therefore the price was still low (of course that, it's a bit higher than in Dien Bien Phu city). In addition, they couldn't sell big amount of fish here, due to the numbers of buyer daily in roadside market is limited. Another issue was they only could sell their product in dry days, and couldn't in rainy days, because they didn't have market tent. Villagers requested project supporting a market tent, and some equipment for fish selling, and other products.

SNRM project already supported Sang village some equipment for selling fish and other local product in roadside market following:

02 portable water containers (for keeping fish) is made of steel with size 1.2m length, 0.8m width, and 0.3m height.

03 air compressors

01 water tank made of brick size 1.5 m x 1.8 m x 1m with iron net cover on the top

01 roadside market tent with size 3m x 8m x 2.5m

Villagers in Sang village already used the support for selling their product. For fish selling, villagers can sell fish with big amount thanks to the water tank and 02 portable water containers with air compressors. These equipment help villagers keep fish can alive some days; therefore, they can sell with higher price.

This is a good model of selling local product, villagers in Ha village requested project to support a tent, too. The project already support a roadside market in Ha village with the same equipment of Sang village. Villagers in Ha village start their agricultural products selling in this market.

2.2.3 Lessons learned

Conducting fish raising activity is easy to have good achievement in the area with good natural condition for this activity like Pa Khoang commune. Villagers have a lot of ponds around Pa Khoang lake, but they also have lot of pond with water come from streams, which leads from forest. The project support villagers with fish raising and communication to them the linkage between forest and water resource for their living and fish raising. Step by step, they know well and have better their responsibility on forest protection, not only for a long term on environment purpose, but for their short term one like their food, their income.

2.2.4 Recommendation

When conducting fish raising activity, the project already ask extension worker checking villagers' ponds and ask them prepare their ponds before delivery fingerling. After delivery, some households reported that their fish was died. The project conducted checking, the fish was put in a temporary and

dirty ponds, that was the main reason of the fish dead. For the households who lost their fish with causes of dead, they didn't contribute the left contribution amount to village fund, and nobody or agencies had further pushing, out of insist them contribution. In this case, should have more participation from CPC, and village management board.

2.3 Fruit tree planting

2.3.1 Brief Description

Fruit tree cultivation is one of the activities that attracted many households to participate in (869/984). Pa Khoang commune is very potential area for cultivation of a number of fruit tree species such as plum, peach, lime, and pomelo, etc., thanks to the hot and humid climate (heavy rains, and fertile soil), but most fruit tree species are native. Besides, the local people do not have the habit of fertilizing, pruning, and creating canopy for trees. Measures to prevent some common diseases/pets for trees are not available so fruit quality is relatively low.

In order to maximize the participation of households, especially poor households, the project provided 10 fruit trees per household for free. Any HHs wishing to plant more than 10 trees have to contribute 50% of the cost of the fruit trees from the 11th one forward to the Village Fund.

2.3.2 Main findings and Issues

Fruit tree planting activity was implemented in 21 villages of Pa Khoang commune. 16,307 fruit tree seedling delivered to 869 households. Result of monitoring in Oct 2018 and Oct 2019 is following:

Table 27: Fruit tree monitoring in Oct 2018

	unit	Total	Pomelo	Mango	Plump	Peach	Persimmon	Pear	Lemon
# of hh received seedling	hh	198	113	103	134	116	36	32	114
# of seedling	Tree	4,362	657	529	1,127	1,000	318	154	577
# of survival tree	Tree	2,673	473	342	506	661	182	90	419
Survival rate	%	61.28	71.99	64.65	44.90	66.10	57.23	58.44	72.62
# of hh conduct tending	hh	165							
# of hh face difficult	hh	151							
# of hh continue planting fruit tree	hh	151							

Table 28: Fruit tree monitoring in Oct 2019

	unit	Total	Pomelo	Mango	Plump	Peach	Persimmon	Pear	Lemon
# of hh received seedling	hh	168	111	101	97	96	21	32	97
# of seedling	Tree	3,406	595	501	558	790	203	238	521
# of survival tree	Tree	1,619	369	267	132	307	83	161	300
Survival rate	%	47.53	62	53.3	23.6	38.8	40.8	68.6	57.5
# of hh conduct tending	hh	159							
# of hh face difficult	hh	129							
# of hh continue planting fruit tree	hh	138							

Table 29: Fruit tree monitoring in May 2020

	unit	Total	Pomelo	Mango	Plump	Peach	Persimmon	Pear	Lemon
# of hh received seedling	hh	188	90	100	121	109	41	20	109
# of seedling	Tree	4,179	632	548	1,040	999	303	78	579
# of survival tree	Tree	1,833	394	301	227	341	160	30	330
Survival rate	%	43.8	62.3	54.9	26.6	34.1	52.8	34.1	56.9
# of hh conduct tending	hh	179							
# of hh face difficult	hh	169							
# of hh continue planting fruit tree	hh	159							

Base on the monitoring above, almost of households reported that they conduct tending fruit tree such as putting fertilizer, watering, and fencing. However, there were a big number of participants faced to difficulty on fruit tree planting such as drought, insect, and encroachment by animal. Most of them want to continue fruit tree planting, but there was a number of participants said that they didn't plant fruit tree anymore because of they didn't have seedling, couldn't protection, lacked of water.

The big issue on fruit tree planting in Pa Khoang was low survival rate of planted fruit tree. The project support seedling for planting in 2017, the result of monitoring in Oct 2018 showed that the survival rate was 61.28%, it was 47.53% in Oct 2019, and 43.2% in May 2020 . The main cause was long dry season in 2019. There was no water, and villagers planted fruit tree in mountain was the main cause of died fruit tree.

In 2019, some households harvested fruit tree (peach and mango), but the amount was small just for their family using.

The biggest issue on fruit tree planting in Pa Khoang was encroachment by insect and animal. In addition, most of participants did not tend well fruit tree. They did not put fertilizer or watering enough. Only some households, who invested much on buying seedling tending well their fruit tree.

The project already conducted a study tour to a good model of fruit tree planting in Tua Chua district, where villagers planted big area of fruit tree with good tending. The participants committed that they will apply techniques of fruit tree planting in their fruit tree garden. Some household with big garden of fruit tree with good tending already harvested fruit.

2.3.3 Lessons learned

The project already provided technical training on fruit tree planting and tending, but not all of them apply well. More monitoring and support will fill this gap.

Animal encroachment on fruit tree always need a strict regulation and strong collaboration between villagers, village management boards and local commune authority

2.3.4 Recommendation

Villagers didn't pay enough attention on tending and protection their new planted tree. Animal still encroach to fruit tree. The survival rate of fruit trees was very low (43.8). The project had to buy fruit

tree seedling with a high price, but villagers didn't tend and protect well their trees. More support monitoring from village management board, CPC and extension workers can improve this.

2.4 Bamboo planting

2.4.1 Brief Description

Bamboo planting is a new activity that the project introduced to villagers. The regulation of bamboo planting was nearly the same fruit tree planting. The participants have to contribute 50% of seedling cost to village fund from the eleventh seedlings up. However, this activity was new to villagers, that why all of participants only registered 10 seedling.

2.4.2 Main findings and Issues

In 2018, the project supported 6,720 bamboo seedling to 659 households in 21 villages. Interviewed participants 3 times has result following:

Table 30. Bamboo planting monitoring result

	Unit	Oct 2018	Apr 2019	Oct 2019	May 2020
# of interviewee	Hh	194	194	169	190
# of delivered seedling	tree	1,940	1,925	1.680	1900
# of alive tree	tree	1,402	556	451	445
# survival rate	%	72.27	28.9	26.8	23.42
# of hh conduct tending	Hh	156	151	134	179
# of hh face difficult	Hh	126	178	151	169
# of hh continue bamboo planting	Hh	158	165	105	159

The survival rate of bamboo is so low compare to last monitoring 10/2018 (26.8% compare to 72.3%), but and very low rate in May 2020 (23.42%), and . It means that, the survival rate was not changed much anymore. The main causes of low survival rate was planting in drought land without watering and encroachment by animal. It take time for bamboo grows up for villagers can get income from bamboo shot.

The big issue of bamboo planting was low survival rate. This issue come from villagers planting in mountain, where the soil is dry. In this area, there are many termites, this insect bitted almost planted bamboo.

Nearly, there was no solution for the problem of bamboo planted in dry soil without watering. Villagers only found that their bamboo was bitten by termites when it already died. The survival rate didn't reduce mush from Apr to Oct 2019, it means that bamboo will not be died more. It's a good new after 2/3 of bamboo died.

2.4.3 Lessons learned

2.4.4 Recommendation

Villagers received 10 seedling without any payment, that can be the cause they planted in the area with poor quality soil. They didn't pay enough tending such as watering or protection. It's better if project ask villagers contribute half of price to village fund.

2.5 Fodder grass cultivation

2.5.1 Brief Description

Buffalo and cow farming is popular in Pa Khoang commune. But local people still practice traditional ways of animal raising, they release their animal freely to forest, that's why they couldn't control disease and the development of their animal. This practice also is the cause of many forest areas are facing trees being destroyed due to free grazing by the local people, especially, to the newly planted forests. Therefore, fodder grass cultivation plays a very important role in making stable source of food for cattle, especially, during cold season. This helps reducing free grazing to community forests, saving time for grass collection, and contributing to increase household economy. The fodder grass cultivation is considered as an essential activity

2.5.2 Main findings and Issues

The project delivered 16,160 kg of Guatemala and VA06 fodder grass delivered to 404 households in 21 villages of Pa Khoang commune in 6/2018.

Table 31. Fodder grass monitoring result

	Unit	Oct 2018 (n=159)		Apr 2019 (n=163)		Oct 2019 (n=136)		May 2020 (n=162)	
		Quantity (kg)	Survival rate (%)	Quantity (kg)	Survival rate (%)	Quantity (kg)	Survival rate (%)	Quantity (kg)	Survival rate (%)
Guatemala fodder grass	Kg	380	87.86	11,435	80.52	640	73,3	850	66.1
VA06 fodder grass	kg	5,980	80.77			4,070	73,9	5,134	60.4
# of hh already cut grass for feeding animal	hh	110		135		112			154
Regularly harvest fodder grass	day	33.23		83		25			23
Get sufficient amount of grass	hh	15		50		62			80
Problems/constraints in cultivating fodder grass	hh	75		105		63			98
Continue cultivating fodder grass	hh	131		120		99			136

The survival rate of fodder grass was not very high, more than 60% in the result of monitoring in Masy 2020. Almost of households already cut fodder grass for feeding their animal. Half of participants said that they have enough grass for their animal. Around 33 days in 2018 and 25 day in 2019 and 23 days in 2020, they cut grass for animal eating once. The participants said that they face some difficulties on fodder grass cultivation such as dry land, encroached by animal, lacking fertilizer. More than half of participants (136/162 (83.9%)) said that they will continue fodder grass cultivation and they can expand the area of grass by themselves.

2.5.3 Lessons learned

Almost fodder grass grows well, villagers already cut for feeding their animal. However, some households cultivated grass in poor soil without fertilizer. Some households didn't tend well therefore

their grass is small or encroached by animal. The number of villagers, who received fodder grass was limited with small amount (40kg). The project encouraged them expand this model to other households or larger area.

2.5.4 Recommendation

No recommendation in this activity.

2.6 Vegetable cultivation

2.6.1 Brief Description

Vegetable cultivation is not a popular activity in mountainous area, because of local people lack of land and water for cultivation. Most of them often go to forest and collect wild vegetable in forest. But wild vegetable is not enough for human demand, therefore some of them already plant vegetable with local species. Almost of local vegetable species is planted in winter season. Project's support for vegetable cultivation for the purpose of diversifying and increasing income sources for the participated households, and contributing to reduce dependence of household economy to forest income source. The supported vegetable species is not only for planting in winter and spring season, but for summer and autumn seasons, too.

2.6.2 Main findings and Issues

In Oct and Dec 2017, the project supported 696,235 gam of vegetable seed to 1,474 household times for cultivation in 2 crops of 4 seasons. Species of vegetable include Kohlrabi, Brassica oleracea var aibolabra ,Tungho / Garland Chrysanthemum, onion, garlic, Spinach, Broccoli, Zucchini

Table 32: Monitoring result of vegetable cultivation in 191 households in Oct 2018

Vegetable species	unit	Garlard	Brassica	Kohlrabi	Onion	Garlic	Zucchini	Broccoli	Spinach
# of household received seed	hh	97	85	53	151	142	66	82	66
Quantity of seed	bag/kg	117	91	53	75.5	70.9	67	94	67
# of hh is cultivating vegetable	hh	69	46	29	130	126	22	62	42

Table 33: Monitoring result of vegetable cultivation in 188 households in May 2020

Vegetable species	unit	Garlard	Brassica	Kohlrabi	Onion	Garlic	Zucchini	Broccoli	Spinach
# of household received seed	hh	113	82	11	132	147	57	97	62
Quantity of seed	bag/kg	130	108	14	66	73.5	66	110	65
# of hh is cultivating vegetable	hh	16	6	1	66	30	0	14	8

The species of vegetable, which is easily to keep its seed for planting in next crop, cultivate continuously in next crop. For the species, which is difficult to keep its seed or the taste is not very delicious to village didn't be cultivated in next crops such as Kohlrabi, Zucchini, Brassica, and Spinach.

The monitoring result in the table below shows that, almost participants have plenty vegetable for daily using (180/191 households in 2018 and 186/189 households in 2019). A few households didn't have enough vegetable for their family using because they cultivated but it didn't grow up, or they didn't have seed for cultivation.

Most of participants cultivation vegetable for daily utilization, therefore there was not much households have vegetable for selling. Most of sellers in Sang village, where they can sell their product in roadside market near their village.

97/191 households in 2018; 69/188 one in 2020 said that they faced to some difficult on vegetable cultivation such as lack of seed, fertilizer, insect and mainly by lack of water.

Most of participants continue vegetable cultivation. A few households didn't cultivate the supported vegetable species anymore because they want to plan local vegetable.

Table 34: Vegetable cultivation monitoring in 2018 and 2019.

	Unit	Oct 2018 (n=191)		Apr 2019 (n=199)		Oct 2019 (189)		May 2020 (188)	
		Quantity	Average	Quantity	Average	Quantity	Average	Quantity	Average
Family utilization	Hh	180		192		186		183	
Selling	Hh	13		13		6		17	
Income from selling (VND)	1,000 đ	6,150	473	2,600	200	1,700	283	5500	323.5
Difficult	hh	97		75		88		69	
Continue vegetable cultivation in coming time.	hh	189		195		186		186	

Nearly there is not any problem to vegetable cultivation, but the purpose of the project on increasing income sources was not achieved. There was not much household selling their product. The project already conducted a study tour to Tua Chua district, where there is a cooperative buys vegetable from coordinated households for selling to school and some agencies. The project also support a roadside market in Sang village for them can sell their vegetable there with higher price. Another roadside market in Ha village is under construction for helping villagers in some village can sell vegetable and other products to buyers.

2.6.3 Lessons learned

No lessons learned in this activity.

2.6.4 Recommendation

Pa Khoang commune now belongs to Dien Bien Phu city with much investment on infrastructure, tourist and travelers will go across the commune more and more. The way of villagers' cultivation their vegetable without any pesticide is impressed by outsiders, they want to buy that product. It's good if villagers can sell their product at roadside market, they can get more income from this activity.

2.7 Lao-type cook stove distribution

2.7.1 Brief Description

Reduction of firewood consumption will help to save time for firewood collection by the household while limiting the use of firewood from protected and natural forests that managed by village and CPC, contributing to forest protection and development. From success of SUSFORM-NOW project, SNRM applied the model of support Lao stove to villagers

2.7.2 Main findings and Issues

The project supported 396 Lao stoves to 377 households in 21 villages in 12/2017 and 6/2018. The participants had to contribute 70,000 VND a stove to village fund. Base on the monitoring result, in 2018, there was 94.20% (244/259) of participants using Lao stove for cooking everyday, this figure in Oct 2019 was 83.4%. In 2018, nearly there was no problem on using Lao stove on cooking, but in Oct 2019, and May 2020, the monitoring result show that, some Lao stoves already were broken. When using Lao stove, all of participants agreed that, they could save 30% of firewood and time for cooking.

Table 35. Lao stove monitoring result

	unit	Oct 2018 (n=259)		Apr 2019 (n=369)		Oct 2019 (n=314)		May 2020 (n=324)		
		Quantity	Ratio (%)	Quantity	Ratio (%)	Quantity	Ratio (%)	Quantity	Ratio (%)	
Frequency of Lao stove using										
Almost every day	hh	244	94.20	358	97	262	83.4	290	89.5	
Sometimes	hh	10	3.86	9	2.4	25	7.9	7	2.1	
Rarely	hh	1	0.38			0		0	0	
Not yet all	hh	4	1.54	4	1	27	8.5	34	10.4	
Save time for cooking	hh	259								
Save wood	hh	259	70		70		70		70	
Difficulty when using Lao stove	hh	28	10.81	86	23.3	63	20	89	27.4	
Continue using Lao stove	hh	257	99.22	366	99.1	273	86.9	291	89.8	
Expand to other household	hh	46	17.76	11	2.9	169	53.8	225	69.4	

The issue was it only can be used for cooking small pans, and villagers have to cut firewood into small and short pieces, and its firewood place is easily broken. Lao stove is difficult to buy for villagers because of it is ordered from Lao, it's not available in Dien Bien markets. That's why villagers couldn't expand this model.

With the same purpose, in Son La and Lai Chau provinces, SNRM project developed a model of improved cook stove, which made of cement, stone, sand and iron bar. That stove type is solid and strong enough, villagers can cook with bigger pans, and they don't have to cut firewood into small piece. SNRM staff in Dien Bien already leant and expanded this improve cook stove model to households in Pa Khoang village, Dien Bien Phu city, with three stove frames that collected from Lai Chau.

Villagers were requested to contribute to village fund, and their labor to develop cook stove if they want to participate to this activity. This was a new cook stove model to villagers, therefore the project couldn't conduct this activity in whole commune, but selected villages, where village head and villagers really ready to apply the new thing. At the beginning, 4 villages were selected for introduction this type of cook stove, but villagers in 3 villages want to apply. They are Dong Met 2, Xom 2 and Nghiu 2. After that, village heads in other villages saw the stove model and requested the support from project to their villages. 5 villages more were selected for support. They are Bo, Xom 1, Xom 3, Ha 2, Vang 1 villages. Base on the budget planning, the project only can support 90 cook stoves in total.

The project supported iron bars, cement, villagers contributed sand, stone and labor to making improve cook stove. Villagers also have to contribute 1/3 cook stove cost equal to 100,000 VND to village fund.

Besides supporting material, the project provides technical support on making improve cook stove. In each village, the project staff did a sample stove, the participants came and learnt on how to making cook stove. It's a simple techniques to making that type of improve cook stove, therefore villagers can make by themselves from the material which supported by the project and their own contribution. The cook stove frames were transferred among the participated households for making stoves. 90 selected households already made their stoves and using for cooking daily thanks to the support of the project on material and techniques and their contribution.

Neighbors of the selected households like the new improve cook stove model. They also learnt on making the stove. They prepared material and made stoves by themselves. Base on the monitoring result of the project in Jan 2020, beside 90 households were supported on making improve cook stoves by the project, 91 other households already made stoves without the support from project (table 1 below). The stoves frames are still transferring to other households in Pa Khoang commune for making new improve cook stoves.

Table 36 . Household with improve cook stove

No	Village	Total No of HHs	# of stove with project support	No of stove without project support	
				Jan 2019	May 2020
1	Vang 1	42	4	1	1
2	Vang 2	50	0	1	1
3	Dong Met 2	73	15	5	8
4	Xom 1	54	9	1	15
5	Xom 2	66	15	0	1
6	Xom 3	60	10	2	3
7	Ten	39	0	1	1
8	Nghi 1	59	8	30	25
9	Nghi 2	46	8	44	49
10	Ha 2	34	6	5	30
11	Bo	35	5	0	0
12	Co Cuom	57	0	1	1
13	Sang	28	10	0	0
Total		643	90	91	135

The project already expanded Lao stove model to villagers, but they couldn't expand that model due to villager have to buy that stove type, they can't develop by themselves. In addition, Lao stove isn't available in Dien Bien market anymore. Villager can save firewood when using Lao stove. The problem is they only can cook with small pans and the firewood have to be cut in small pieces.

By using new improve cook stove type; villager can solve the gaps of Lao stove. They can cook from small to big pans, saving firewood, reduction labor for collecting firewood, contribution to forest protection. Villager can make the stove by themselves with small cost. That's why this type of improve cook stove continues be expanded to other households and villages in Pa Khoang commune.

2.7.3 Lessons learned

Lao stove was introduced by SUSFORM-NOW, It's good on reduction cooking time and saving firewood. There is an issue that it's small, therefore villager couldn't cook big pan. It's easily broken, and difficult to expand. Introducing the improved cook stove, which made of concrete can solving this problem. Villager happily to make the stove by themselves without any support from project.

2.7.4 Recommendation

A recommendation to Pa Khoang CPC, they should include the task "expanding new type of improve cook stove" to whole commune and assignment their staff follow up.

2.8 Village fund management

2.8.1 Brief Description

In order to contribution to forest management, and livelihood development of local people, the project has discussed with local partners about setting up village funds in the target villages. Village Funds are formed based on contribution from beneficiaries of the project in Pa Khoang commune. When target households received supports in kind from the project such as fingerlings, fruit tree seedlings, improved cook stoves, etc. they have to contribute a part of cost to village fund. Now, village fund are existing in 21 target villages of Pa Khoang commune, they are operating under management of VMBFMLDs. In addition, a Village Fund Management Regulation is also formulated to ensure that the Fund is managed and used in an effective and transparent manner.

2.8.2 Main findings and Issues

Table 37. Contribution to village fund

Activity	Amount have to pay	Paid amount	Rate (%)
i) Fish raising	305.451.250	259.255.625	85
ii) Fruit tree planting	131.840.750	106.706.250	81
iii) Improve cook stove	23.240.000	23.170.000	100
iv) Other (PFES, loan interest, fine...)		39.744.447	
Total	460.532.000	428.876.322	93.12

The contribution to village fund in 21 villages in Pa Khoang commune mainly come from three activities: fish raising, fruit tree planting and Lao stove. In some villages, village fund includes 30% of PFES money (Bo, Dong Met 1 and Ten villages), loan interest, and fine of forest violation.

For fish raising, villagers contributed 85% of the amount they have to pay. Some households have just contributed half amount because they were lost from fish raising by disease, and flood.

VMBLDFM in these villages already agreed for those households don't have to contribute the left amount.

For fruit tree planting activity, villagers contributed with a lower rate (81%). Some households lost from serious drought, bitten by termites don't contribute more. It's the same as fish raising, they don't have to contribute more with the agreement of VMBLDFM.

For Lao stove, 100% of participants contributed to village fund.

Table 38. Status of village fund

	Oct 2018 (n=21)	Apr 2019 (n=21)	Oct 2019 (n=21)	May 2020 (n=21)
# Village with exist VF	21	21	21	21
# Village keep a record of the village fund	21	21	20	20
# Village with cash on hand	20	19	16	20
Amount of cash (VND)	143,728,304	91,939,000	99,930,380	67,788,150
Amount of loans	240,679,018	259,938,000	260,245,300	241,014,300
Total VF	384,407,322	350,877,000	360,185,680	308,803,000

21 villages have existing village funds. However, in 2019, one bookkeeper in Co Thon village has gone to other province for working without handover cash and accounting book, therefore village head can't control their village fund. Around 2/3 of village fund money is for loan. Villagers get loan for investment on livelihood development, education, health care and house building.

Village fund trending status

In 2018, the project conducted monitoring village fund in Jan 2018. In Oct 2018, after monitoring, the status of village fund changed much. The households hadn't contribute to village fund already contributed more. That's reason of 14 villages fund increased. In 2019, there was no more contribution from villagers, but some village with loan interest, therefore village fund increased in 3 villages. Although nearly almost villages already extracted 30% of PFES for VFPT's activities, but this amount was not enough, so they spent village fund for forest patrolling activity. In 2020, village fund continuous be reduced with some more year end village meeting was conducted with budget come from this fund.

Table 39 Assessment on village fund status in amount

Oct 2018			Oct 2019			May 2020		
Increase	No change	Decrease	Increase	No change	Decrease	Increase	No change	Decrease
14	3	4	3	9	9	5	8	8

2.8.3 Lessons learned

There was an issue on village fund management in Pa Khoang commune. That was bookkeepers couldn't control cash on hand and loan amount. The project already introduce accounting book with income and spending books, but they often recorded wrong book, or they didn't record on those book, but their own notebook.

For solving this issue, the project already introduced other format of accounting book. They can record every transaction in a book with different columns. The project staff already trained them on recording and support village by village with hope that they can management their village fund without mistake.

2.8.4 Recommendation

According to the monitoring result, some villages with village fund NO CHANGE want to spend all the fund to some party of village meeting because they didn't know how to use the fund. Some villages which already merged to other villages also want to spend all their fund with villagers in their former village. They didn't want to share their fund to villagers before they didn't belong to their village. It should be had the participation from CPC in these cases.

III. RECOMMENDATIONS

Recommendations were compiled based on the outcomes of the monitoring result sharing workshops and monthly PPMU meetings as below:

1. Forest management

- It's better to select VFPT members, who has plan working long time in village. If a member go to other province for working, it affects to forest patrolling activity.
- It is difficult to implement and achieve forest management related activities, particularly af/reforestation. It takes much time and labour for planting, but the planted area can be easily encroached and the trees are browsed by domestic animals. Apply strictly village regulation on forest protection and development can solving this problem.

2. Livelihood development

- The participants of beekeeping haven't seen the true benefit from honey marketing. Their product is still sold with low price, and difficult on selling honey without bee wax. The involvement of Pa Khoang cooperative and Pa Khoang CPC should be enhanced. The project is going to support them on honey quality registration, the next step is registration honey is OCOP of Pa Khoang commune. When the honey is registered, it can be sold on every market.
- Bamboo planting is new to villagers. Bamboo should be planting in wet soil, but actually, villagers planted in dry soil without watering. That is the main cause of dead bamboo.
- Improve cook stove, which made of concrete is a good model of stove. Many households already expanded this model by themselves without project support. Pa Khoang CPC and village head should mobilize other households do by themselves, too.

3. Village fund management

- Until now, village fund is only under the management of VMBFMLD with minimum involvement of Pa Khoang CPC. CPC only received few report from village heads. Pa Khoang CPC should assign a staff on overall management village fund in 21 villages.

4. Overall management

- No comment on overall management from PPMU, CPC and VMBFMLD.

Appendix 1. M&E matrix

Monitoring item	Criteria	Evaluation indicator			Timing
		Green	Yellow	Red	
1 Forest management					
101 Forest protection					
1 Forest allocation	Allocation of production forests and protection forests with actual forests to villages	All the forest lands with actual forests have been allocated.	Over 50% of forest lands with actual forests have been allocated.	Less than 50% of forest lands with actual forests have been allocated.	6 months
	Allocation of special use forests with actual forests to forest management boards	All the forest lands with actual forests have been allocated.	Over 50% of forest lands with actual forests have been allocated.	Less than 50% of forest lands with actual forests have been allocated.	6 months
1-2 Forest protection contract	Contract on protection of special use forests with households	Contract on protection of all the forests have been made.	Contract on protection of more than 50% of the forests have been made.	Contract on protection of less than 50% of the forests have been made.	6 months
1-3 Payment of PFES	Payment of PFES on production forests and protection forests to villages	PFES are paid to all the forests.	PFES are paid to more than 50% of the forests.	PFES are paid to less than 50% of the forests.	6 months
	Payment of PFES on special use forests to forest management committees	PFES are paid to all the forests.	PFES are paid to more than 50% of the forests.	PFES are paid to less than 50% of the forests.	6 months
	Payment of PFES based on the forest protection contract to villages by forest management committees	PFES are paid to all the forests.	PFES are paid to more than 50% of the forests.	PFES are paid to less than 50% of the forests.	6 months
	Utilization of PFES for forest management and protection	Sufficient amount of PFES is utilized for village forest management	Some amount of PFES is utilized for village forest management	PFES is not utilized for village forest management	6 months
1-4 Forest patrolling	Regular forest patrolling by villages	Forest patrolling is conducted at least once a month.	Forest patrolling is conducted less than once a month.	Forest patrolling has not yet conducted.	Monthly
	Regular reporting by villages to forest protection officers	Report from forest patrolling team is made at least once a month.	Report from forest patrolling team is made less than once a month.	Report from forest patrolling team has not yet made.	Monthly
	Forest change monitoring by forest protection officers based on report	Monitoring on all the reported forest changes is conducted.	Monitoring on more than 50% of the reported forest changes is conducted.	Monitoring on less than 50% of the reported forest changes is conducted.	Monthly
1-5 Compliance of village forest protection and development regulations	Forest conversion to agricultural lands, forest fire, encroachment by animals, hunting, illegal harvesting of timber and NTFPs	Almost no case found.	There are some cases but not very serious.	Very serious condition.	6 months
1-6 Enforcement of laws / regulations	Handling of illegal acts based on laws or village regulations by forest protection officers or villages	Handling is conducted for all the illegal acts.	Handling is conducted for more than 50% of the illegal acts.	Handling is conducted for less than 50% of the illegal acts.	6 months
1-7 Changes in forest conditions	Protection of forests	No significant change in forest area (-10% – +20%).	More than 20% of forest area is decreased.	More than 50% of forest area is decreased.	TBD
	Forest decrease for road development, conversion to agricultural lands, natural disaster etc.	—	—	—	TBD
102 Forest regeneration					
2-1 Compliance of village forest protection and development regulations	Tending of reforestation and natural regeneration	Almost regularly, being implemented.	To some extent, being implemented.	Not implemented at all.	6 months
	Forest conversion to agricultural lands, forest fire, encroachment by animals, hunting, illegal harvesting of timber and NTFPs	Almost no case found.	There are some cases but not very serious.	Very serious condition.	6 months
2-2 Change in forest conditions	Forest recovery and regrowth	More than 20% of vegetation has changed into forests.	No significant changes in vegetation (-20% – +20%).	More than 20% of vegetation has changed into lower level of vegetation or other land use.	TBD

Monitoring item	Criteria	Evaluation indicator			Timing
		Green	Yellow	Red	
	Forest decrease for road development, conversion to agricultural lands, natural disaster etc.	—	—	—	TBD
103 Af/reforestation					
1-3-1 Compliance of village forest protection and development regulations	Tending of reforestation and natural regeneration	Almost regularly, being implemented.	To some extent, being implemented.	Not implemented at all.	6 months
	Forest conversion to agricultural lands, forest fire, encroachment by animals, hunting, illegal harvesting of timber and NTFPs	Almost no case found.	There are some cases but not very serious.	Very serious condition.	6 months
1-3-2 Change in forest conditions	Survival of planted trees	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months
	Forest decrease for road development, conversion to agricultural lands, natural disaster etc.	—	—	—	6 months
104 Scattered Planting					
1-3-2 Change in forest conditions	Survival of planted trees	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months
	Forest decrease for road development, conversion to agricultural lands, natural disaster etc.	—	—	—	6 months
2 Livelihood development					
2-1 Activities for alternative income generation and food security					
201 Vegetable Cultivation	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months
	Sale of products	Already sold some	-	-	6 months
	Annual income and expenditure for recent 3 months	Positive net profit	(Almost no net profit)	(Negative net profit)	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
202 Watermelon Cultivation	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months
	Sale of products	Already sold some	-	-	6 months
	Annual income and expenditure for recent 3 months	Positive net profit	(Almost no net profit)	(Negative net profit)	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
203 Fruit tree cultivation	Survival of planted trees (+reasons why not survived)	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months
	Harvesting of fruits (+reasons why not harvested)	Already harvested some	Not yet harvested (no fruits available yet)	Not yet harvested despite some fruits are ready to be harvested	6 months
	Sale of products	Already sold some	-	-	6 months
	Annual income and expenditure for recent 3 months	Positive net profit	(Almost no net profit)	(Negative net profit)	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
204 Beekeeping	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months
	Sale of products	Already sold some	-	-	6 months
	Annual income and expenditure for recent 3 months	Positive net profit	(Almost no net profit)	(Negative net profit)	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months

Monitoring item	Criteria	Evaluation indicator			Timing
		Green	Yellow	Red	
205 Fish raising	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months
	Sale of products	Already sold some	-	-	6 months
	Annual income and expenditure for recent 3 months	Positive net profit	Almost no net profit	Negative net profit	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
206 Bamboo Plantation (Taiwan Bamboo)	Survival of planted bamboo (+reasons why not survived)	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months
	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months
	Sale of products	Already sold some	-	-	6 months
	Annual income and expenditure for recent 3 months	Positive net profit	(Almost no net profit)	(Negative net profit)	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
207 Mushroom Production	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months
	Sale of products	Already sold some	-	-	6 months
	Annual income and expenditure for recent 3 months	Positive net profit	Almost no net profit	Negative net profit	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
2-2 Agroforestry and alternative techniques					
208 Agroforestry/contour grass cultivation	Survival of planted trees (+reasons why not survived)	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months
	Harvesting of fruits (+reasons why not harvested)	Already harvested some	Not yet harvested (no fruits available yet)	Not yet harvested despite some fruits are ready to be harvested	6 months
	Sale of products	Already sold some	-	-	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
209 NTFP Plantation	Survival of planted trees (+reasons why not survived)	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months
	Harvesting (+reasons why not harvested)	Already harvested some	Not yet harvested (no fruits available yet)	Not yet harvested despite some fruits are ready to be harvested	6 months
	Sale of products	Already sold some	-	-	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
210 Fodder grass cultivation	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months
	Survival of planted crops (+reasons why not survived)	Survival rate (70 – 100%)	Survival rate (40 – 70%)	Survival rate (< 40%)	6 months
	Amount of grass produced	Sufficient	Almost sufficient	Not sufficient	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
211 Compost Fertilizer Production	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months

Monitoring item	Criteria	Evaluation indicator			Timing
		Green	Yellow	Red	
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
2-3 Activities to reduce firewood consumption and collection time					
212 Improved cooking stove	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
	Expansion of the activity to non-participating HHs	Considerable number of HHs	Small number of HHs	No	6 months
213 Biogas plant construction	Continuation of the activity (+ reasons why not continue)	Ratio of HHs continuing the activity (70 – 100%)	Ratio of HHs continuing the activity (40 – 70%)	Ratio of HHs continuing the activity (<40%)	6 months
	Outlook for continuation of the activity (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
	Expansion of the activity to non-participating HHs	Considerable number of HHs	Small number of HHs	No	6 months
3 Village fund management					
	Existence of village fund	Yes	Yes but not function well	No	6 months
	Record keeping	Yes	Yes but not satisfactory level	No	6 months
	Expense for VFPTs	Some cases of expense	Very few cases of expense	No expense at all	6 months
	Loans for new activities (+contents of the activities)	Some cases of loans	Very few cases of loans	No loans at all	6 months
	Status (Amount) of the fund	Tendency to increase	Almost no change	Tendency to decrease	6 months
	Outlook for continuation of the fund (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months
4 Village Institutional Set up					
	Regular meeting VFMLD	at least once a month.	less than once a month.	not yet organized.	6 months
	Outlook for continuation of VFMLD (+ reasons why not continue)	Will definitely be continued without any problem	Will possibly be continued / Not known	Will not be continued	6 months

Appendix 2. Questionnaires

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT**QUESTIONNAIRE**

Part	1 Forest Management
Target interviewees	Village heads and VFPT heads
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From:	To:
	Venue		
Interviewer	Name		
	Position and office		
Interviewees	1) Name/Position/Tel.	/	/Tel:
	2) Name/Position/Tel.	/	/Tel:
	3) Name/Position/Tel.	/	/Tel:

SECTION 1: FOREST PROTECTION – FOREST PATROLLING

1-1 Number of VFPT members

- 1) Initial number: people (*when the VFPT was established*)
 2) Current number: people

1-2 How many forest patrolling groups are there in the VFPT? groups

1-3 How large is the forest area in your village?

- Total: ha
- Production forest: ha (Forest area with PFES paymentha)
- SUF: ha (Forest area with PFES paymentha)

1-4 Does your VFPT conduct forest patrolling?

Yes No

- If 'No', why?

1-5 How often does your VFPT conduct forest patrolling? times / month

1-6 How many members usually join the forest patrolling on average? people

1-7 Does your VFPT have any coordination with other agencies on forest patrolling?

Yes No

- If 'Yes', which agencies?
- If 'No', why?

1-8 Does your VFPT have a monthly patrolling plan?

Yes No

- If 'No', why?
- If 'No', how do you arrange the schedule of forest patrolling?

1-9 Does your VFPT prepare patrolling reports?

Yes No

- If 'Yes', **reconfirm the frequency of forest patrolling with the report**

..... days / month or year

- If 'No', why?

.....

- If yes, where or to whom is the report submitted?

.....

- If yes, how often is the report submitted? times / month or year

1-10 Any allowance is paid to the VFPT members?

Yes No

- If 'Yes', how much? VND per month (or a year)

- If 'No', why?

.....

1-11 Any other cost/budget is paid for forest protection related activities?

Yes No

- If 'Yes', what kind (meetings, materials, etc.)?

.....

- If 'Yes', how much? VND per month or year

- If 'No', why?

.....

SECTION 2: FOREST PROTECTION – COMPLIANCE OF VILLAGE FOREST PROTECTION AND DEVELOPMENT REGULATION

2-1 Is there any forest area designated for protection in your village which was supported by the SNRM Project?

Yes No

- If 'Yes', how large is it? ha

2-2 Has there any case of violations in forests designated for protection happened for recent years?

Cases	Type of forest (protection, production, SU)	Occurrence		Seriousness ranking
		Yes	No	
i) Forest conversion to agricultural lands				
ii) Forest fire				
iii) Encroachment by animals				
iv) Illegal hunting				
v) Illegal harvesting of timber & NTFPs				
vi) Others				

Note: In case that data related to the violations such as number and scale (area, etc.) of cases are available, please collect them.

- Overall assessment (*tick just one item*)

- i) Almost no case found (Not serious at all)
- ii) There are some cases (Not very serious)
- iii) Very serious

2-3 Who mostly detected the violation(s)?

- VFPT Forest protection officer(s) Villagers Others

SECTION 3: FOREST PROTECTION – ENFORCEMENT OF LAWS/REGULATION

3-1 Has/have there any case(s) of violation(s) detected in all the forest areas [i) forests designated for protection, ii) natural regeneration, iii) af/reforestation] for recent years been properly handled?

Forest area	No. of cases		Ratio of handling (%)
	Detected	Handled	
i) Forest conversion to agricultural lands			
ii) Forest fire			
iii) Encroachment by animals			
iv) Illegal hunting			
v) Illegal harvesting of timber & NTFPs			
vi) Others			
Total			

Note: The columns for 'No. of cases (detected and handled)' shall be filled in case the data are available, otherwise just the estimated ratio (%) can be given.

- Has any penalty been ever imposed to the above handled case?
 - Yes No
 - If 'Yes', what were the major contents of penalty?
 - Fine in cash Fine in kind Others (Specify:
 - If 'No', why?

3-2 Who usually participate in handling the violations and what are their roles?

- Name:
- Position and office:
- Roles:

SECTION 4: NATURAL REGENERATION – COMPLIANCE OF VILLAGE FOREST PROTECTION AND DEVELOPMENT REGULATION

4-1 Is there any forest area under natural regeneration in your village which was supported by the SNRM Project?

- Yes No
- If 'Yes', how large is it?:ha

4-2 Do the villagers apply any tending to the area?

- Yes No
- If 'Yes', what kind of operations and how often?
 - Slashing/weeding: Frequency:

- Supplemental planting: Frequency:
- Fencing: Frequency:
- Signboard installation: Frequency:
- Others (): Frequency:
- If 'No', why?
.....

4-3 Has/have there any case(s) of violation(s) in areas designated for natural regeneration happened for recent years?

Cases	Type of forest (protection, production, SU)	Occurrence		Seriousness ranking
		Yes	No	
i) Forest conversion to agricultural lands				
ii) Forest fire				
iii) Encroachment by animals				
iv) Illegal hunting				
v) Illegal harvesting of timber & NTFPs				
vi) Others				

Note: In case that data related to the violations such as number and scale (area, etc.) of cases are available, please collect them.

- Overall assessment (*tick just one item*)
 - i) Almost no case found (Not serious at all)
 - ii) There are some cases (Not very serious)
 - iii) Very serious

4-4 Who mostly detected the violation(s)?

- VFPT Forest protection officer(s) Villagers Others

SECTION 5: AF/REFORESTATION – COMPLIANCE OF VILLAGE FOREST PROTECTION AND DEVELOPMENT REGULATION

5-1 Is there any forest area under af/reforestation in your village which was supported by the SNRM Project?

- Yes No
 ● If 'Yes', how large is it?:ha

5-2 Do villagers apply any tending to the area?

- Yes No
 ● If 'Yes', what kind of operations and how often?
 - Slashing/Weeding: Frequency:
 - Supplemental planting: Frequency:
 - Fencing: Frequency:
 - Signboard installation: Frequency:
 - Others (): Frequency:
 ● If 'No', why?

5-3 What are the approximate average tree height and survival rates of forest trees planted in af/reforestation area?

Tree species	Tree height (m)	Survival rate (%)
i)		
ii)		
iii)		
iv)		
v)		
vi)		

5-4 Has/have there any case(s) of violation(s) in areas designated for af/reforestation happened for recent years?

Cases	Type of forest (protection, production, SU)	Existence		Seriousness ranking
		Yes	No	
i) Forest conversion to agricultural lands				
ii) Forest fire				
iii) Encroachment by animals				
iv) Illegal hunting				
v) Illegal harvesting of timber & NTFPs				
vi) Others				

Note: In case that data related to the violations such as number and scale (area, etc.) of cases are available, please collect them.

- Overall assessment (*tick just one item*)
 - i) Almost no case found (Not serious at all)
 - ii) There are some cases (Not very serious)
 - iii) Very serious

5-5 Who mostly detected the **violation**(s)?

VFPT Forest protection officer(s) Villagers Others

SECTION 6: SCATTERED PLANTING – COMPLIANCE OF VILLAGE FOREST PROTECTION AND DEVELOPMENT REGULATION

6-1 Is there any household received seedling for scattered planting in your village which was supported by the SNRM Project

Yes No

- If 'Yes', how many seedling?:
- How many households received seedling?

6-2 Do villagers apply any tending to the scattered planting tree?

Yes No

- If 'Yes', what kind of operations and how often?
 - Slashing/Weeding: Frequency:
 - Supplemental planting: Frequency:
 - Fencing: Frequency:
 - Others (): Frequency:
- If 'No', why?

.....

6-3 What are the approximate average tree height and survival rates of forest trees planted?

Tree species	Tree height (m)	Survival rate (%)
i)		
ii)		
iii)		
iv)		
v)		
vi)		

6-4 Has/have there any case(s) of violation(s) in areas designated for scattered planting happened for recent years?

Cases	Type of forest (protection, production, SU)	Existence		Seriousness ranking
		Yes	No	
i) Forest conversion to agricultural lands				
ii) Forest fire				
iii) Encroachment by animals				
iv) Others				

Note: In case that data related to the violations such as number and scale (area, etc.) of cases are available, please collect them.

- Overall assessment (*tick just one item*)
 - i) Almost no case found (Not serious at all)
 - ii) There are some cases (Not very serious)
 - iii) Very serious

6-5 Who mostly detected the **violation**(s)?

VFPT Forest protection officer(s) Villagers Others

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT**QUESTIONNAIRE**

Part	1 Forest Management
Target interviewees	Forest protection officers
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From:	To:
	Venue		
Interviewer	Name		
	Position and office		
Interviewee	Name and Tel. no.	Tel:	
	Period being officer	Since: Month Year ,	months

SECTION 1: FOREST PROTECTION – FOREST PATROLLING

1-1 Do you have any coordination with other agencies on forest management?

Yes No

- If 'Yes', which agencies?

.....

1-2 Do you collect forest patrolling reports from the village?

Yes No

- If 'Yes', how often?

.....

- If 'Yes', are they complete?

Yes No

- If 'Yes', ***confirm with the reports***
- If 'No', why and how?

.....

1-3 Do you conduct forest change monitoring based on the reports?

Yes No

- If 'Yes', what is the ratio of implementation for the total number of reports?

i) 80 – 100% ii) 50 – 80% iii) below 50%

- If 'Yes', do you use a tablet?

Yes No

- If 'Yes', how often?

.....

- If 'No', why?

.....

SECTION 2: FOREST PROTECTION – ENFORCEMENT OF LAWS/REGULATION

2-1 Has/have there any case(s) of violation(s) detected in all the forest areas [i) forests designated for protection, ii) natural regeneration, iii) af/reforestation] for recent years been handled according to the relevant laws?

Forest area	No. of cases		Ratio of handling (%)
	Detected	Handled	
i) Forest conversion to agricultural lands			
ii) Forest fire			
iii) Encroachment by animals			
iv) Illegal hunting			
v) Illegal harvesting of timber & NTFPs			
vi) Others			
Total			

Note: The columns for 'No. of cases (detected and handled)' shall be filled in case the data are available, otherwise just the estimated ratio (%) can be given.

- Has any penalty been ever imposed to the above handled case(s)?
 - Yes No
 - If 'Yes', what were the major contents of penalty?
 - Fine in cash Fine in kind Others (Specify:)
 - If 'No', why?

2-2 Who usually participate in handling the violations and what are their roles?

- Name:
- Position and office:
- Roles:

2-3 Do you usually encourage the villagers to conduct tending (slashing/weeding, etc.) in natural regeneration and af/reforestation areas?

- Yes No
- If 'Yes', how and how often?
- If 'No', why?

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT**QUESTIONNAIRE**

Part	2 Livelihood development
Activity	2-1 Honeybee keeping
Target interviewee	Village head
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From: To:
	Venue	
Interviewer	Name	
	Position and office	
Interviewee	Name and Tel. no.	Tel:

- 1 Number of households participate model (*Honeybee keeping in modern beehive*)
- 1) Initial number: HHS
 - 2) Current number: HHS
- 2 Supported beehive
- 1) Beehive provided by the SNRM Project (initial inputs):
 - 2) Beehive made by villager:
 - 3) Transferred bee from traditional beehive to modern ones:
 - 4) Number of beehive could be harvested honey
 - 5) Total sold honey litter. Average priceVND. Income..... VND
- 3 Are the participants continually keeping honeybee in modern beehive?
- Yes No
- If 'Yes', how many households? HHS
 - If 'No', why?
- 4 Are there any problems/constraints in honeybee keeping in modern beehive?
- Yes No
- If 'Yes', what are the problems/constraints?
.....
- 5 Do you think honeybee keeping in modern beehive will continue in the selected households?
- Yes No
- If 'No', please specify the reason.
.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....

.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT**QUESTIONNAIRE**

Part	2 Livelihood development
Activity	2-2 Honeybee keeping
Target interviewees	Participants
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From:	To:
	Venue		
Interviewer	Name		
	Position and office		
Interviewee	Name and Tel. no.	Tel:	
	Period participate model	Since: Month Year ,	months

- 1 Supported beehive
 - 1) Beehive provided by the SNRM Project (initial inputs):
 - 2) Beehive made by villager:
 - 3) Transferred bee from traditional beehive to modern ones:
 - 4) Number of beehive could be harvested honey
 - 5) Total sold honey litter. Average priceVND. Income..... VND
- 2 Average income and cost of honeybee keeping for recent years
 - i) Positive net profit ii) Almost no net profit iii) Negative net profit
- 3 Are you still keeping honeybee?

Yes No

 - If 'Yes', how many? Traditional beehive Modern beehive.....
 - If 'No', why?
- 4 Have you ever had a loan from the village fund for bee keeping?

Yes No

 - Why?
- 5 Are there any problems/constraints in keeping bee?

Yes No

 - If 'Yes', what are the problems/constraints?
.....
- 6 Are you going to continue keeping bee in modern beehive?

Yes No

 - If 'No', why?
.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT

QUESTIONNAIRE

Part	2 Livelihood development
Activity	2-3 Fish raising
Target interviewee	Village head
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From: To:
	Venue	
Interviewer	Name	
	Position and office	
Interviewee	Name and Tel. no.	Tel:

1 Number of households participate the model in the village

- 1) Initial number: HHs
- 2) Current number: HHs

2 Are the participants continually raising fish?

Yes No

- If 'Yes', how many households? HHs
- If 'No', why?

.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT**QUESTIONNAIRE**

Part	2 Livelihood development
Sub-activity	2-1-3 Fish raising
Target interviewees	Participants
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From:	To:
	Venue		
Interviewer	Name		
	Position and office		
Interviewee	Name and Tel. no.	Tel:	

1 When and how many fingerings did you receive from the SNRM Project?

- When: Month Year
- How many (in total): fingerings

2 Repayment of the cost for fish farming (contribution) to the village fund?

- When?: Month Year

➤ Have you made full repayment?

Yes No

● If 'No', why?

.....

- How much?: VND

3 How much is the average annual sale from fish farming for recent years?

- VND / year

4 Average income and cost of fish raising for recent years

- i) Positive net profit ii) Almost no net profit iii) Negative net profit

5 Are you still raising fish?

Yes No

● If 'No', why?

.....

6 Have you ever had a loan from the village fund for fish raising?

Yes No

● Why?

.....

7 Are there any problems/constraints in raising fish?

Yes No

● If 'Yes', what are the problems/constraints?

.....

8 Are you going to continue raising fish?

Yes No

- If 'No', why?

.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....

.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT**QUESTIONNAIRE**

Part	2 Livelihood development
Activity	2-2 Agroforestry
Sub-activity	2-2-1 Fruit tree cultivation
Target interviewees	Participants
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From:	To:
	Venue		
Interviewer	Name		
	Position and office		
Interviewee	Name and Tel. no.	Tel:	

1 Growth of fruit seedlings and use of fruits

➤ Date of seedlings provided: Month Year

Kind	No. of seedlings received	No. of seedlings survived	Survival rate (%)	Remarks (reasons of low survival rate, etc.)
i)				
ii)				
iii)				
iv)				
v)				

2 Are there any problems/constraints in cultivating fruits?

Yes No

- If 'Yes', what are the problems/constraints?

.....

3 Are you going to continue cultivating fruits?

Yes No

- If 'No', why?

.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....

(End of document)

**MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT
QUESTIONNAIRE**

Part	2 Livelihood development
Activity	2-2 Agroforestry
Sub-activity	2-2-1 Bamboo planting
Target interviewees	Participants
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From: To:
	Venue	
Interviewer	Name	
	Position and office	
Interviewee	Name and Tel. no.	Tel:

4 Growth of bamboo seedlings and use of fruits

➤ Date of seedlings provided: Month Year

Kind	No. of seedlings received	No. of seedlings survived	Survival rate (%)	Remarks (reasons of low survival rate, etc.)
i)				

5 Are there any problems/constraints in cultivating bamboo?

Yes No

● If 'Yes', what are the problems/constraints?

.....

6 Are you going to continue cultivating bamboo?

Yes No

● If 'No', why?

.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....
.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT**QUESTIONNAIRE**

Part	2 Livelihood development
Activity	2-2 Agroforestry
Sub-activity	2-2-2 Fodder grass cultivation
Target interviewees	Participants
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From:	To:
	Venue		
Interviewer	Name		
	Position and office		
Interviewee	Name and Tel. no.	Tel:	

1 Fodder grass provided by the SNRM Project and their survival rates

➤ Provision date: Month Year

Kind	Quantity of seeds/cuttings provided	Survival rate (%)	Remarks (reasons of low survival rate, etc.)
1) Mulato	g		
2) Guatemala	stems		

Note: The '*survival rate*' shall be estimated; e.g. according to the number of stems or the farming area remained, etc..

2 Do you regularly harvest the fodder grass?

Yes No

● If 'Yes', how often?

.....

● If 'Yes', do you get sufficient amount of grass?

Yes No

● If 'No', what are the reasons?

.....

3 Have you ever sold the harvest?

Yes No

● If 'Yes', how much is the average annual income from the harvest for recent years?

VND

4 Are there any problems/constraints in cultivating fodder grass?

Yes No

● If 'Yes', what are the problems/constraints?

.....

5 Are you going to continue cultivating fodder grass?

Yes No

- If 'No', why?

.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....

.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT**QUESTIONNAIRE**

Part	2 Livelihood development
Activity	2-2 Agroforestry
Sub-activity	2-2-3 Vegetable cultivation
Target interviewees	Participants
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From: To:
	Venue	
Interviewer	Name	
	Position and office	
Interviewee	Name and Tel. no.	Tel:

1 Vegetable seeds provided by the SNRM Project and current cultivation

➤ Provision date: Month Year

Kind	Quantity of seeds provided	Current cultivation	Remarks (reasons why not cultivate, etc.)
i)		Yes <input type="checkbox"/> No <input type="checkbox"/>	
ii)		Yes <input type="checkbox"/> No <input type="checkbox"/>	
iii)		Yes <input type="checkbox"/> No <input type="checkbox"/>	
iv)		Yes <input type="checkbox"/> No <input type="checkbox"/>	
v)		Yes <input type="checkbox"/> No <input type="checkbox"/>	

2 Do you get sufficient amount of vegetable for self-consumption?

Yes No

3 Have you ever sold the harvest?

Yes No

- If 'Yes', how much is the average annual income for from the harvest for recent years?

VND

4 Are there any problems/constraints in cultivating vegetable?

Yes No

- If 'Yes', what are the problems/constraints?

.....

5 Are you going to continue cultivating vegetable?

Yes No

- If 'No', why?

.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....
.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT

QUESTIONNAIRE

Part	2 Livelihood development
Activity	2-3 Activities to reduce firewood consumption and collection time
Sub-activity	2-3-1 Distribution of Lao-type cookstove
Target interviewees	Participants (Group interview)
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From: To:
	Venue	
Interviewer	Name	
	Position and office	
Interviewee	No. of participants	people (pp)

1 How often do you use the cookstove?

i) Almost everyday: pp ii) Sometimes: pp iii) Rarely: pp iv) Not at all: pp

● If 'Not at all', please specify the reason.

.....

2 Are there any problems/constraints in using the cookstove?

Yes: pp No: pp

● If 'Yes', what are the problems/constraints?

.....

3 Are you going to continue using the cookstove?

Yes: pp No: pp

● If 'No', please specify the reason.

.....

4 Are there any households in the village who procured any types of improved cookstoves by their own and use them (without support from the Project)?

Yes No

● If 'Yes', how many households and what types of cookstoves?

➤ HHs

➤ Type:

.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....

(End of document)

MONITORING ON ACTIVITY PROGRESS AND RESULTS OF SNRM PROJECT**QUESTIONNAIRE**

Part	3 Village fund
Activity	N.A.
Sub-activity	N.A.
Target interviewee	Village head and/or accountant
Village / Commune	Village, Commune

Interview	Date and time	/ /2018, From:	To:
	Venue		
Interviewer	Name		
	Position and office		
Interviewee	Name and Tel. no.		Tel:
	Position		

1 Does the village fund established for the SNRM Project still exist?

Yes No

● If 'Yes':

i) How much is the balance in cash? VND

ii) How much is the amount of loans? VND

● If 'No', please specify the reason.

.....

2 Do you keep a record of the village fund?

Yes No

● If 'No', please specify the reason.

.....

3 Repayment by 1st cycle sub-group members directly supported by the Project

Activity	No. of HHs participated	No. of HHs fully repaid	Ratio of full repayment (%)	Remarks (reasons of low repayment ratio, etc.)
i) Pig raising				
ii) Cow raising				
iii) Fish farming				
iv) Mushroom cultivation				
v) Fruit tree cultivation				
vi) Distribution of Lao-type cookstove				

Note: 'Fruit tree cultivation' is not an activity for revolving system but some households who received more than 10 seedlings are subject to repay the cost to the fund.

4 Currently, are there loans for any activities?

Yes No

● If 'Yes':

i) For what activities?

ii) Number of loans:

iii) Average amount of the loan: VND

iv) Average ratio of full repayment:%

5 What is the degree of needs on loans in the village?

i) High ii) Moderate iii) Low

● Reasons:

.....

6 What is the status of the village fund for the recent years?

i) Tends to increase ii) Almost no change iii) Tends to decrease

7 Are there any problems/constraints in managing the village fund?

Yes No

● If 'Yes', what are the problems/constraints?

.....

8 Do you think you will continue the village fund?

Yes No

● If 'No', please specify the reason.

.....

RECOMMENDATION

Do you have any recommendation for SNRM in next phase

.....
.....

(End of document)

Appendix 3. List of enumerators

No.	Name	Post	Organisation	Part	Round
1	Ms. Tran Thi Thanh Xuan	Technical officer	Agriculture Extension Station, Dien Bien District	LD	1,2,3,4
2	Mr. Quang Van Thu	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	FM	1,2,3,4
3	Mr. Tran Hong Quang	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	FM	1,2,3,4
8	Ms. Dieu Thi Dam	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	LD	1,2,3,4
2	Ms. Luong Thi Huong Lan	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	LD	1,2,3,4
3	Ms. Lo Thi Nhung	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	LD	1,2,3,4
4	Mr. Lo Van Ai	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	FM	1,2,3,4
5	Mr. Lo Van Xuan	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	FM	1,2,3,4
6	Mr. Do Van Tien	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	FM	1,2,3,4
7	Ms. Dieu Thi Cuong	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	LD	2,3,4
8	Mr. Le Trung Hieu	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	FM	2,3,4
9	Mr. Lo Van Chinh	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	LD	1,2,3,4
10	Mr. Nong Xuan Vinh	Commune-based forest ranger	Forest Ranger Station, Dien Bien District	FM	1,2
11	Mr. Nguyen Dinh Cong	Commune-based forest ranger	Forest Ranger Station, Dien Bien District	FM	2,3
12	Mr. Nguyen Huu Long	Commune-based forest ranger	Forest Ranger Station, Dien Bien District	FM	1
13	Mr. Lo Van Sam	Agriculture Extension staff	Pa Khoang CPC	LD	1,2,3,4
14	Mr. Ca Van Chung	Vice-chairman	Pa Khoang CPC	LD	1,2,3,4
15	Mr. Lo Van Thiem	Farmer Union	Pa Khoang CPC	LD	1,2,3,4
15	Ms. Ngo Thi Mai Lam	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	LD	4
16	Mr. Nguyen Thanh Trung	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	LD	4
17	Mr. Quang Van Linh	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	LD	4
18	Mr. Nguyen Quang Hai	Technical officer	Muong Phang Special Use Forest Management Board (SUFMB)	LD	4

Note: FM – Forest management, LD – Livelihood development

Appendix 4. Field survey schedule

1) The first round monitoring schedule

No	Date	Time	Village	Place	Participant	Group
1	19/9/2018	Morning	Vang 1	Village head house	42	1
		Afternoon	Vang 2	Mr. La's house	50	2
2	20/9/2018	Morning	Pu Sung	Mr. Rau's house	73	1
		Afternoon	Pa Tra	Village head house	18	2
3	21/9/2018	Morning	Dong Met 1	Village head house	80	1
		Afternoon	Dong Met 2	Village head house	73	2
4	22/9/2018	Morning	Co Thon	Village head house	41	1
		Afternoon	Xom 1	Village head house	54	2
5	23/9/2018	Morning	Xom 2	Village head house	66	1
		Afternoon	Xom 3	Village head house	60	2
6	24/9/2018	Morning	Ten	Village head house	39	1
		Afternoon	Cong	Village head house	30	2
7	25/9/2018	Morning	Keo	Village head house	51	1
		Afternoon	Co Muong	Village head house	27	2
8	26/9/2018	Morning	Nghiu 1	Village head house	59	1
		Afternoon	Nghiu 2	Village head house	46	2
9	27/9/2018	Morning	Ha 1	Village head house	23	1
		Afternoon	Ha 2	Village head house	34	2
10	28/9/2018	Morning	Bo	Village head house	35	1
		Afternoon	Co Cuom	Village head house	57	2
11	29/9/2018	Morning	Sang	Village head house	28	1 & 2

2) The second round monitoring schedule

No	Date	Village	Place	Participant	Group
1	18/4/2019	Vang 1	Village head house	42	1
2	18/4/2019	Vang 2	Mr. La's house	50	2
3	18/4/2019	Pu Sung	Mr. Rau's house	73	3
4	19/4/2019	Pa Tra	Village head house	18	1
5	19/4/2019	Dong Met 1	Village head house	80	2
6	19/4/2019	Dong Met 2	Village head house	73	3
7	20/4/2019	Co Thon	Village head house	41	1
8	20/4/2019	Xom 1	Village head house	54	2
9	20/4/2019	Xom 2	Village head house	66	3
10	21/4/2019	Xom 3	Village head house	60	1
11	21/4/2019	Ten	Village head house	39	2
12	21/4/2019	Cong	Village head house	30	3
13	22/4/2019	Keo	Village head house	51	1

14	22/4/2019	Co Muong	Village head house	27	2
15	22/4/2019	Nghiu 1	Village head house	59	3
16	23/4/2019	Nghiu 2	Village head house	46	1
17	23/4/2019	Ha 1	Village head house	23	2
18	23/4/2019	Ha 2	Village head house	34	3
19	24/4/2019	Bo	Village head house	35	1
20	24/4/2019	Co Cuom	Village head house	57	2
21	24/4/2019	Sang	Village head house	28	3

3) The third round monitoring schedule

No	Date	Village	Place	Participant	Group
1	26/9/2019	Vang 1	Village head house	42	1
2	26/9/2019	Vang 2	Mr. La's house	50	2
3	26/9/2019	Pu Sung	Mr. Rau's house	73	3
4	27/9/2019	Pa Tra	Village head house	18	1
5	27/9/2019	Dong Met 1	Village head house	80	2
6	27/9/2019	Dong Met 2	Village head house	73	3
7	28/9/2019	Co Thon	Village head house	41	1
8	28/9/2019	Xom 1	Village head house	54	2
9	28/9/2019	Xom 2	Village head house	66	3
10	29/9/2019	Xom 3	Village head house	60	1
11	29/9/2019	Ten	Village head house	39	2
12	29/9/2019	Cong	Village head house	30	3
13	30/9/2019	Keo	Village head house	51	1
14	30/9/2019	Co Muong	Village head house	27	2
15	30/9/2019	Nghiu 1	Village head house	59	3
16	1/10/2019	Nghiu 2	Village head house	46	1
17	1/10/2019	Ha 1	Village head house	23	2
18	1/10/2019	Ha 2	Village head house	34	3
19	2/10/2019	Bo	Village head house	35	1
20	2/10/2019	Co Cuom	Village head house	57	2

21	2/10/2019	Sang	Village head house	28	3
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4) The fourth round monitoring schedule

No	Date	Village	Place	Participant	Group
1	16/5/2020	Vang 1	Village head house	42	1
2	16/5/2020	Vang 2	Village head house	50	2
3	16/5/2020	Pu Sung	Mr. Rau's house	73	3
4	17/5/2020	Pa Tra	Village head house	18	1
5	17/5/2020	Dong Met 1	Village head house	80	2
6	17/5/2020	Dong Met 2	Village head house	73	3
7	18/5/2020	Xom 1	Village head house	54	2
8	18/5/2020	Xom 2	Village head house	66	3
9	18/5/2020	Xom 3	Village head house	60	1
10	19/5/2020	Ten	Village head house	39	2
11	19/5/2020	Cong	Village head house	30	3
12	19/5/2020	Keo	Village head house	51	1
13	20/5/2020	Co Muong	Village head house	27	2
14	20/5/2020	Nghiu 1	Village head house	59	3
15	20/5/2020	Nghiu 2	Village head house	46	1
16	21/5/2020	Ha 1	Village head house	23	2
17	21/5/2020	Ha 2	Village head house	34	3
18	21/5/2020	Bo	Village head house	35	1
19	22/5/2020	Co Thon	Village head house	41	1
20	22/5/2020	Co Cuom	Village head house	57	2
21	22/5/2020	Sang	Village head house	28	3

Appendix 5. Honey marketing

1) Honey testing result:

Mekong LABORATORY | **RAC-USA** | **019/2017/BNN-KNTP** | **012/QĐ-ATTP** | **11/2018/BCT-KNTP**
 CHỈ ĐỊNH BỘ NÔNG NGHIỆP & PHÁT TRIỂN THỊ TRƯỜNG | CHỈ ĐỊNH BỘ Y TẾ | CHỈ ĐỊNH BỘ CÔNG THƯƠNG
VIMCERTS 239 | **116/TN** | **TNDM-BCT.10.16**
 CHỈ ĐỊNH BỘ TÀI NGUYÊN MÔI TRƯỜNG | ĐĂNG KÝ BỘ KHÊ DƯƠNG | CHỈ ĐỊNH BỘ CÔNG THƯƠNG

TESTING REPORT/ BÁO CÁO KẾT QUẢ PHÂN TÍCH

JOB No / Số phiếu yêu cầu phân tích: **3126.26** | Report date/ Ngày: **12-03-2020**
 Doc. code/ Mã số tài liệu: **MKL-TT04-SM01** | Page/ Trang: **1/ 2**

Applicant/ Khách hàng/ số yêu cầu: **HỢP TÁC XÃ NÔNG LÂM THỦY SẢN PÀ KHOANG**
 Address/ Địa chỉ: **Bản Đông Mít, xã Pà Khoang, huyện Điện Biên, tỉnh Điện Biên**
 Information provided by applicant: **Mật ong Pà Khoang (MOPK-01)**
 (Thông tin được khách hàng cung cấp)
 Sample description/ Mô tả mẫu: **Mẫu được chứa trong túi đaim báo**
 Seal No/ Số niêm: **Có niêm**
 Source of sample/ Nguồn mẫu: **Khách hàng gửi mẫu**
 Sample received on/ Ngày nhận mẫu: **04-03-2020**
 Sample tested on/ Ngày phân tích: **04-03-2020**

Code/ Mã mẫu	Name/ Tên mẫu	Test Parameter/ Chỉ tiêu phân tích	Test Method/ Phương pháp	Unit/ Đơn vị	LOD	Result/ Kết quả
3126.201	Mật ong Pà Khoang (MOPK-01)	Hàm lượng nước	TCVN 5263-1990	%	-	18.90
		Hàm lượng Đường Sacarosa	TCVN 5269-1990	%	-	0.00
		Đường khử	TCVN 5266-1990	%	-	67.30
		Protein	TCVN 5265-1990	%	-	0.17
		Năng lượng	M K Lab 27	Kcal/100g	-	324.00
		Vitamin B2	MKL-HH-320	mg/kg	5.00	ND
		Vitamin B6	SK 0083	mg/kg	0.10	ND
		Canxi	TCVN 1526-1-2007	mg/100g	-	1.56
		Sắt (Fe) (□)	AOAC 999.11	mg/kg	1.00	Vượt 2,20 <LOQ>=3.00
		Kẽm (Zn) (□)	AOAC 999.11	mg/kg	0.20	0.97
		Natri (Na)	TCVN 10916-2015	mg/100g	2.00	14.04
		Kali (K)	TCVN 10916-2015	mg/100g	5.00	74.65
		Magne (Mg)	TCVN 10916-2015	mg/100g	1.00	6.11
		Phospho	TCVN 9616-2012	mg/kg	10.00	172.00
		Xo thô	TCVN 4329-2007	%	-	0.00
		Atatơxin B1 (□)	TCVN 7996-2007	µg/kg	1.00	ND
E coli (□)	ISO 10648-2-2001	CFU/g	-	<10		
Salmonella spp. (□)	ISO 6579-1-2017	Định tính/25g	-	ND		
Chi (Pst) (□)	AOAC 999.11	mg/kg	0.016	ND		

TESTING REPORT/ BÁO CÁO KẾT QUẢ PHÂN TÍCH

JOB No / Số phiếu yêu cầu phân tích: **3126.26** | Report date/ Ngày: **12-03-2020**
 Doc. code/ Mã số tài liệu: **MKL-TT04-SM01** | Page/ Trang: **2/ 2**

Code/ Mã mẫu	Name/ Tên mẫu	Test Parameter/ Chỉ tiêu phân tích	Test Method/ Phương pháp	Unit/ Đơn vị	LOD	Result/ Kết quả
3126.201	Mật ong Pà Khoang (MOPK-01)	Chloramphenicol (□)	M K Lab07 (2019)/ FDA/ORA/DFS No. 6290	µg/kg	0.02	ND
		Streptomycin	MKL-HH633	µg/kg	2.00	ND
		Norfloxacin	M K Lab06 (2019)/ Ref. Journal of Food and Drug Analysis, Vol. 18, No. 2, 2010, Pages 67-67	µg/kg	0.20	ND
		Axit formic	TCVN 4073-2009	%	-	0.25
3182.201	Mật ong Pà Khoang (MOPK-01)	Chlorpyrifos (□)	AOAC 2007.01	µg/kg	10.00	ND
		Cypermethrin (□)	AOAC 2007.01	µg/kg	10.00	ND
		Trạng thái	TCVN 5262-1990	-	-	Đang lỏng sánh
		Màu sắc	TCVN 5262-1990	-	-	Màu vàng
		Mùi	TCVN 5262-1990	-	-	Thơm đặc trưng của sản phẩm
		Vị	TCVN 5262-1990	-	-	Vị ngọt đặc trưng cho sản phẩm, không có vị lạ
		Đường tổng	TCVN 5269-1990	%	-	62.10
		Chất rắn không tan trong nước	TCVN 5264-1990	%	-	0.07
		Tổng số vi khuẩn lactic (□)	ISO 4833-1:2013	CFU/g	-	1.8x10 ⁶
		Clostridia pasteuriana (□)	ISO 7937:2004	CFU/g	-	<10
		Tổng số bào tử nấm men, nấm mốc (□)	ISO 21527-2:2008	CFU/g	-	<10
		Asen (As) (□)	AOAC 966.15	mg/kg	0.01	ND
Cadmium (Cd) (□)	AOAC 966.11	mg/kg	0.002	ND		
Thủy ngân (Hg) (□)	AOAC 671.21	mg/kg	0.01	ND		

Note (Ghi chú):
 1. (□) Testing parameter is sent to subcontractor accredited by MekongLAB | Chỉ tiêu ghi nhớ: thông phụ vụ được giám sát bởi MekongLAB
 2. (□) Parameter is accredited ISO17025 or recognized by Vietnamese government | Chỉ tiêu được công nhận ISO17025 hoặc được chỉ định các bộ chuyên ngành
 3. ND: Not detected/ Không phát hiện | □ Detected/ Phát hiện | LOD: Limit of detection/ Giới hạn phát hiện | LOQ: Limit of Quantification/ Giới hạn định lượng
 4. This testing result is only valid on tested sample. It is relevant under our NHO-QSCert Terms and Conditions/ Kết quả phân tích chỉ có giá trị trên mẫu thử. Báo cáo này được ban hành theo những điều khoản và điều kiện của NHO-QSCert
 5. The above result shall not be reproduced, partly or fully, without written approval of NHO-QSCert is granted/ Không được sao chép lại kết quả này, một phần hay toàn bộ, nếu không được sự đồng ý bằng văn bản của đơn vị NHO-QSCert

Authorized Technical Representative
 Phụ trách kỹ thuật

 Phạm Thị Hồng Thủy

On behalf of NHO-QSCert
 Công ty chứng chỉ NHO-QSCert
 Tầng 7
 CÔNG NGHỆ
 NHONHO
 Hoàng Bá Nghị

2) Certification of compliance with food safety regulation

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
 Độc lập - Tự do - Hạnh phúc

GIẤY CHỨNG NHẬN
CƠ SỞ ĐỦ ĐIỀU KIỆN AN TOÀN THỰC PHẨM
 Certificate
 of compliance with food safety regulations


CHI CỤC QUẢN LÝ CHẤT LƯỢNG NÔNG LÂM VÀ THỦY SẢN
 quality management department of agriculture forestry
 and fishery products

CHỨNG NHẬN
 Certifies

Cơ sở/ Establishment: **HTX nông, lâm, thủy sản Pà Khoang**
 Mã số/ Approval number:
 Địa chỉ/ Address: **Bản Đông Mít, Xã Pà Khoang, TP. Điện Biên Phủ, Tỉnh Điện Biên**
 Điện thoại/ Tel: Fax:

Đủ điều kiện an toàn thực phẩm theo quy định
 Complies to food safety regulations
 Sản xuất, thu gom, sơ chế, chế biến, kinh doanh sản phẩm mật ong/
 Producing, collecting, preliminary processing, processing and trading in honey products

Số cấp/ Number: **13/2020/CMQLCL-EB**
 Có hiệu lực đến ngày **17 tháng 6 năm 2023**
 Valid until (date/month/year): **17/6/2023**

Điện Biên, ngày **17 tháng 6 năm 2020**
 Điện Biên, June 17th year 2020
CHIEU TRƯỞNG

 Phạm Đình Loan