SON LA PROVINCIAL PEOPLE'S COMMITTEE
DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

SON LA 2018 PRAP M&E REPORT

Son La, January 2019

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1. Introduction

Implementing the Decision No. 419 of the Prime Minister, with support of the SNRM Project which funded by JICA, Son La province have developed its Provincial ERDD+ Action Plan 2017-2020 (toward 2030) (PRAP). The PRAP was approved by the PPC as stated in the Decision No. 2238/QĐ-UBND. As it was mentioned in chapter IV of the PRAP, the province needs to develop its annual PRAP implementation M&E and submit to the Steering Committee for Target Program on Sustainable Forest Development. This includes annual monitoring for year 2018 and 2019, and evaluation in 2020.

To monitor the implementation status of PRAP, under the direction of DARD and in cooperation with the related departments/agencies, the Solution Packages defined in the PRAP were monitored based on the two aspects as follows:

1. Level of achievements based on the Result framework (outcome level monitoring) (see *Section 3.1- Result framework for the details*),

2. Observed impacts based on the Social and environmental benefits and risks framework (see *Section 3.2 – Social and environmental benefits and risks framework for the details);*

Based on the achievements and shortcomings identified in the PRAP implementation process in year 2018, a set of recommendations are provided to improve the PRAP implementation in year 2019, and toward the achievement of its overall objectives by 2020.

2. Scope of M&E

The scope of Son La PRAP Monitoring 2018 is the 35 communes of Sốp Cộp, Sông Mã, Thuận Châu, Quỳnh Nhai, Mường La and Vân Hồ districts as targeted by the PRAP and (*details are as in the annex 02*) highlighted in green color in the map below :
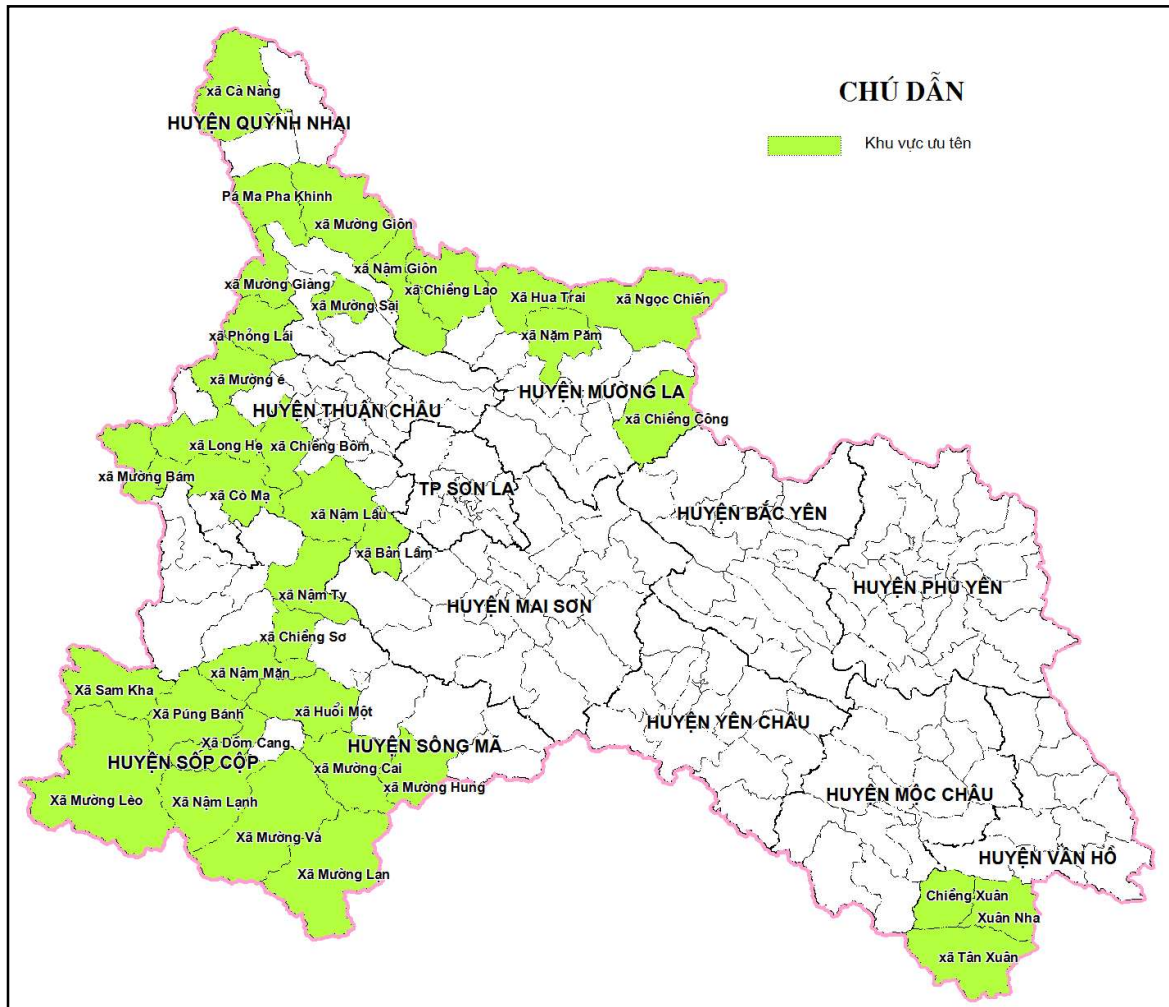
Figure 01. Son La PRAP M&E scope map

3. Methodology

Step 1: Preparation
Step 2: Review PRAP M&E framework
Step 3: Data collection
Step 4: Data processing and compilation
Step 5: Monitoring report drafting
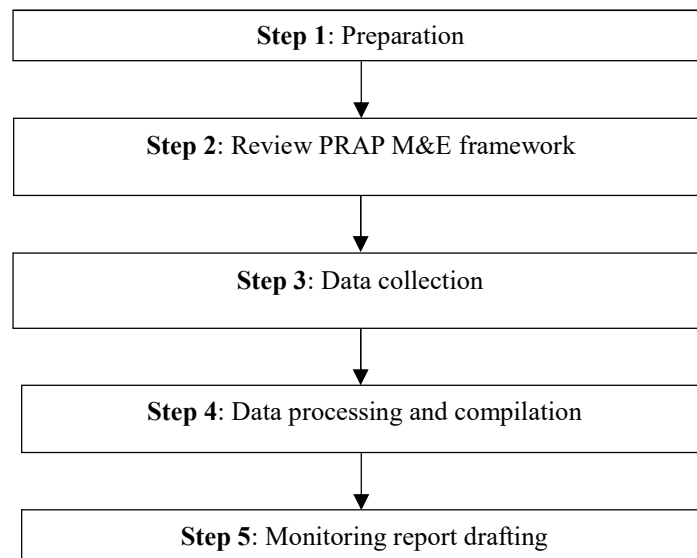
Figure 02. Steps of PRAP M&E

The PRAP M&E process consisted of 5 steps.

Step 1: Preparation

In this step, a Working Group for PRAP implementation M&E was established and outline of the report was developed and agreed. Majority of the members of the M&E Working Group were the members of the PRAP Technical Working Group who were involved in the development of PRAP The report outline was formulated and agreed by the Working Group before deploying further steps.

Step 2: Reviewing content of the M&E framework

In order to ensure feasibility of the M&E work, especially, to which is related to inputs and accurate data collection based on current local conditions, it is necessary to review content of the M&E framework and make suitable changes. This is an important step to ensure that the PRAP monitoring is truly operational, captures the right information for the subsequent analysis, and be able to draw implications for improved implementation of the PRAP. The changes/revisions made need to be tracked.

Regarding the Social and environmental benefits and risks framework, risks are critical issues which may create instant negative impacts to the environment and society where PRAP is being implemented. On the other hand, 'benefits' are the long-term impacts which the PRAP wants to enhance and not necessarily suitable to be monitored in the short-term (annually). Considering its nature and importance, social and environmental monitoring of 2018 decided only to focus on the monitoring of the risks. (*Details on the revised SE framework are as in the annex 04*).

Step 3: Data collection.
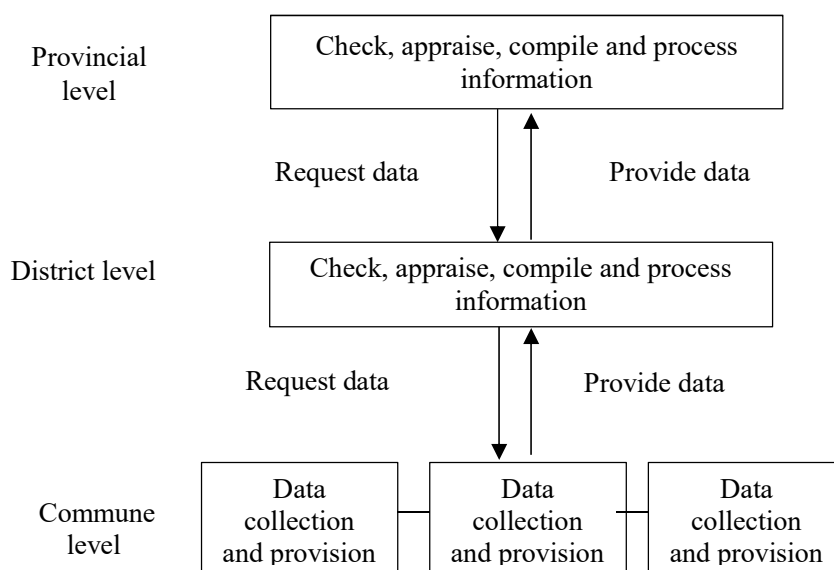
Figure 03. Data collection for M&E

Result framework: data were collected by Sub-FPD by using FRMS and from annual reports. The results indicators for the solution package 1 (*Enhance the effectiveness of af/reforestation*), solution package 3 (*Control forest fire*), solution package 4 (*Control forests encroachment for upland cultivation*) and solution package 5 (*Mitigate impacts of forest conversion into other land use (road construction and hydropower plant development))*, are for the results of the entire 2017-2020 period. In such case, alternative information were needed for the annual PRAP monitoring, in order to supplement the assessment of progress towards the end of 2020.

Social environment framework: data were collected by the district FPDs of the priority districts. In order to ensure the consistency and accuracy of the data, the monitoring team advised the provincial FPD to issue a guiding document with survey templates attached and sent to the related district FPDs. Forest rangers of the district FPDs collected the data through interviews to the staff of the CPCs of the target communes (e.g. deputy chairman in charge of agriculture and forestry, land management staff and commune police) using the templates.

The Working Group was responsible for compiling the data provided by district agencies/departments. In addition, in order to check the quality of the collected data and also to conduct in-depth analysis, the M&E Working Group selected one sample commune/district to perform a field survey. Two criteria were set for the selection of communes subject to the field survey: 1) the pilot commune implementing REDD+ with the support from SNRM project; and, 2) communes which are targeted under the PRAP to implement Solution Packages. The quality of data provided by the district agencies/departments were additionally considered for the selection. In addition, priority were given to the communes where the provided data were insufficient or unsatisfactory. As a result, Muong Gion commune in Quynh Nhai district, Ngọc Chien commune in Mương La district, Dom Cang commune in Sop Cộp district, Huoi Mot commune in Song Ma district, Nam Lau commune in Thuan Chau district, Tan Xuan commune in Van Ho district were selected.

Step 4: Data processing and compiling

The collected data were then processed and compiled.

For the Result framework, the data were cross-checked by the Sub-FPD using the Forest Resource Monitoring System (FRMS) before being compiled and assessed against the baseline of respective indicators.

For the Social and environmental benefits and risks framework*,* the risks were qualitatively and quantitatively assessed by looking at their potential of occurrence, locations and people to be impacted. Based on provincial characteristics, socio-economic conditions, and the contents of each solution package, the impact were assessed in 3 different levels: low, medium, and high (details are as in the annex 07).

Basically, the impact level thresholds are determined based on analysis of the field survey data of 2018 and the baseline data of 2016 and 2017 provided by sub-FPD. Accordingly, implementation of a solution package is considered as satisfactory in terms of its social and environmental impact if the negative impact was assessed as "low". Any solution packages which were ranked high and medium in its social and environmental impact is considered as unsatisfactory.

Step 5: M&E report drafting.

The results from Step 4 were used for drafting the Monitoring report. Positive information indicates that whether we are on the right track to achieve PRAP objectives, negative information is used for analysis for recommended interventions. The outline and contents of the report were decided by following the requirements of the province as well as by aligning with international and national REDD+ practices.

4. Results

4.1. Result framework

Monitoring of the solution packages (outcome level) based on the result framework has been carried out in order to assess and ensure that PRAP implementation is on the right track for achieving its objectives. Intervention will be identified (if needed) based on the monitoring results.

Monitoring of the activities (output level) listed under each solution package has been implemented at the commune level to keep the status of REDD+ implementation up to date. These are not the subject of this monitoring report. Muong Gion in Quynh Nhai district is the commune where REDD+ activities have been piloted with support from SNRM Project.

4.1.1. Monitoring results

a) Solution package 1: Enhance the effectiveness of af/reforestation

Baseline data: During the 2010-2015 period, the average forested rate was 75-80%, with the forest income value was VND 55 million/ha at the time of harvesting.
Result indicator: By the end of 2020, the forested rate will be 85%, and the forest income value will be VND 60 million/ha
Monitoring duration: 01/01/2018 – 31/12/2018.
Data sources: Annual report on af/reforestation by investors.

Table 01. Monitoring results of solution package 1 – Result framework

District	Af/reforested area 2018 (ha)	Survival rate (%)
Sốp Cộp	98.42	85.6
Sông Mã	44.98	85.6
Thuận Châu	350.0	85.6
Vân Hồ	112.0	Not yet checked and accepted
Total	**605.4**	**85.6**

Result indicator of the solution package 1 sets out the target for the entire PRAP period of 2017-2020 (*By the end of 2020, the forested rate will be 85%, and the forest income value will be VND 60 million/ha*). In order to assess the progress towards achievement of the results by 2020, a sub-indicator (i.e. survival rate of the planted seedlings) was suggested and monitored for 2018. According to Table 01, the total of newly af/reforested area in the target districts was 605.4 ha and their quality was accepted by the Sub-FPD (except for Van Ho district which the process has not completed yet) with the survival rate of 85% or higher *(acceptance process is conducted as in accordance with the Article 10, circular 23/201e6/TT-BNNPTNT dated 30 June 2016 of MARD).*

b) Solution package 2*: Promote forest protection and sustainable use of forest resources*

Baseline data: Total 'Poor Forest' area in 2016 was 5,822 ha, 'Medium Forest' was 5.933 ha, rich forest was 2.643 ha; at the end of 2016, total timber volume of the natural forests of the province was 3.990.293 m3, forest area was 63.892 ha
*Note: the baseline figures were re-calculated and corrected from the PRAP.

Result indicator: By the end of 2020, 30% of poor forest become medium forest; maintain the existing forest area (no decrease compared to the baseline value).

Monitoring duration: 01/01/2018 – 31/12/2018.

Data sources: FRMS and forest change monitoring report of Sub-FPD

Table 02. Monitoring results of solution package 2 - Result framework

District	Natural forest area 2018 (ha)	Natural forest stock 2018 (ha)
Thuận Châu	40,315	3,059,322
Quỳnh Nhai	23,934	779,441
Total	**64,249**	**3,838,763**

Due to the limitation of available technologies (e.g. remote sensing technology to identify forest regrowth in short period) and limited funding for implementing forest change monitoring (in particular, monitoring of the regeneration of poor forests), the indicator "30% of poor forest area become medium forests by the end of 2020" will be measured only at the end of 2020.

For the indicator " Maintain the existing forest area (no decrease compared to the baseline value)," according to Table 02, natural forest area increased by 357 ha (178.8 ha/year) while forest stock decreased by 151,530 m3 (75,765 m3/year) compared to the baseline of year 2016. This is explained with the fact that the area of high stock forest area (rich and medium forests) decreased while poor and regenerating forest area increased. Forest degradation is a problem which most of the Northwest provinces in general and Son La in particular are facing for years but have yet to find solutions to completely overcome. In fact, complete elimination of forest degradation is a challenge. Maintaining the forest stock, or keeping its loss to acceptable rate while achieving the steady increase of forest cover are considered as the expected results.

In general, it can be concluded that the implementation of the solution package 2 has achieved quite good results in 2018 and contributing towards achieving its objectives by 2020.

c) Solution package 3*: Control forest fire*

Baseline data: During the period of 2010-2016, average number of forest fire recorded was 52 cases/year); during the period of 2010-2016, the average area damaged by forest fire was 201 ha/year.

Result indicator: The average number of forest fires and the damaged areas reduce 10% or more during the period 2017-2020

Monitoring duration: 01/01/2018 – 31/12/2018.

Data source: FRMS and forest fire records of Sub-FPD.

Table 03. Monitoring results of solution package 3 - Result framework

District	Forest fire (cases)				Forest area damaged by fire			
	Number of cases	Increase (+)/reduce (-)_compared to baseline data	Compared to result indicator		Forest area under fire (ha)	Increase (+)/reduce (-)_compared to baseline data	Compared to result indicator	
			Satisfactory	Unsatisfactory			Satisfactory	Unsatisfactory
Sốp Cộp	0				0			
Sông Mã	0				0			
Thuận Châu	0				0			
Quỳnh Nhai	0				0			
Mường La	1				2.48			
Total	1	-98%	x		2.48	- 99%	x	

According to Table 03, forest fires did not occur in Sop Cop, Song Ma, Thuan Chau and Quynh Nhai district. One forest fire occurred in Muong La district and damaged 2.48 ha of forest area (land with regenerating trees on a rocky mountain). The fire was caused by local villager who used fire and smoke to collect honey.

In the target areas, forest fire cases reduced by 98% and forest area being damaged reduced by 99% compared to the result indicators (10%). Therefore, the solution package 3 achieved the results indicators for 2018.

d) Solution package 4: Control forests encroachment for upland cultivation

Baseline data: During the period of 2010-2016, the average area of forest encroached for upland field was 281 ha/year

Result indicator: During the period 2017-2020, the forest area encroached for cultivation reduces by 70%.

Monitoring duration: 01/01/2018 – 31/12/2018.

Data source: FRMS and annual forest protection and development report of sub-FPD

Table 04. Monitoring results of solution package 4 - Result framework

District	Encroached forest area (ha)	Increase (+)/reduce (-)_compared to baseline data	Compared to result indicator	
			Satisfactory	Unsatisfactory
Sốp Cộp	0			
Sông Mã	1			
Thuận Châu	1.54			
Quỳnh Nhai	0			
Mường La	0.75			
Vân Hồ	1			
Total	4.29	- 98%	x	

According to Table 04, in 2018, there was no forest encroachment for upland field cultivation in 2 out of 6 target districts namely Sop Cop and Quynh Nhai districts. Encroachments were reported in Song Ma, Thuan Chau, Muong La and Van Ho districts but the encroached areas were small (4.29 ha of forest). In total, encroachment reduced by 98% for the entire target districts. Thus, the solution package 4 was successfully

implemented in 2018 in Son La province. The incentive policies effectively encouraged the local people to practice sedentary agricultural production on their lands through promotion of intensive cropping method and introduction of crop varieties with higher productivity and economic value; demand for agricultural lands also reduced as the younger generation moved out from agriculture sector to industrial sector for their job; and since upland cultivation lands were often degraded in their soil condition after intensive use over years, some farmers abandoned the lands.

e) Solution package 5: Mitigate impacts of forest conversion into other land use (road construction and hydropower plant development)

Baseline data: During the period of 2010-2016, offset planting reached 783 ha (equivalent to 34.2% of the planned area)
Result indicator: Offset planting target for the period of 2010-2016 (720 ha out of 1,503ha) is completed; 100% of the newly converted areas are also off-set planted during the 2016-2020 period.
Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Report on af/reforestation and acceptance of Sub-FPD

Table 05. Monitoring results of solution package 5 - Result framework

District	Period of 2010-2016		Compared to result indicator		Period of 2017-2018		Compared to result indicator	
	Planned area (ha)	Actual area planted (ha)	Satisfactory	Unsatisfactory	Planned area (ha)	Actual area planted (ha)	Satisfactory	Unsatisfactory
Sốp Cộp		357.97			NA			
Thuận Châu		436.65			286.71	286.71		
Quỳnh Nhai	720	0			NA			
Mường La		0			132.54	132.54		
Total		**794.62**	**x**		**419.25**	**419.25**	**x**	

According to Sub-FPD, the remaining areas which need to be replanted through the off-set planting scheme for the period of 2010 - 2016 was 720 hectares. Table 05 shows that in 2017 and 2018, 749.62 ha were off-set planted in the target areas: this exceeds the result indicator (720 ha) by 74.62 ha. According to the provincial plan, offset planting planned for the period of 2017-2018 was of 419.25 ha and it has been completed.

This means the solution package 5 was successfully implemented.

f) Province-wide cross cutting solution package (1): Improve Forest Resource Monitoring System (FRMS)

Base line data: 12 District FPDs and 5 forest management boards are implementing the improved FRMS
Result indicator: By the end of 2020, FRMS is operational in all target districts
Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Annual forest protection and development report of Sub-FPD.

Table 06. Monitoring results of province-wide cross cutting solution package (1) - Result framework

District	New FRMS is operational/not operational	Increase (+)/reduce (-)_compared to baseline data	Compared to result indicator	
			Satisfactory	Unsatisfactory
Sốp Cộp	operational	+ 100%	x	
Sông Mã	operational	+ 100%	x	
Thuận Châu	operational	+ 100%	x	
Quỳnh Nhai	operational	+ 100%	x	
Mường La	operational	+ 100%	x	
Vân Hồ	operational	+ 100%	x	
Total	**operational**	**+ 100%**	**x**	

Son La province is one of the four provinces which received support on introducing FRMS mobile application installed in the tablet PCs by the SNRM project. In 2017-2018, Son La PPMU collaborated with Sub-FPD to receive 223 tablet PCs and handed them over to the local forest rangers after the trainings.

Monitoring results show that the use of tablet PCs and the application has been very effective. In 2017, according to the Report No. 142 / BC-SNN dated March 22, 2018 of DARD on the results of monitoring of forest and forest area changes in Son La province, field data recorded by using the tablet PCs and mobile application reached a total of 2,138 records, accounting for 65.02% of the total data updated in the FRMS database.

Currently, every district FPDs, management boards of SUFs and Protection Forests have been using the tablet PCs with FRMS mobile application installed to monitor forest and forest area changes. Thus, in 2018, the province-wide cross cutting solution package (1) has achieved the defined indicator.

g) Province-wide cross cutting solution package (2): REDD+ awareness raising and capacity building

Baseline data: 7 concerned staff have participated in 3 provincial workshops on PRAP development held in 2016 and 2017.

Result indicator: By 2020, 1,400 participants from provincial agencies and target districts will have been provided with trainings on climate change and REDD+; 35 communes people got raised their awareness during the period of 2017-2020

Monitoring duration: 01/01/2018 – 31/12/2018.

Data source: Annual FPD of Sub-FPD and SNRM Project report.

Table 07. Monitoring results of province-wide cross cutting solution package (2) - Result framework

District	REDD+ and CC awareness raising				Number of communes			
	No. participants	Increase (+)/reduce (-)	Compared to result indicator		Number of communes	Compared to result indicator		
			Satisfactory	Unsatisfactory			Satisfactory	Unsatisfactory
Sốp Cộp	8.547				7			
Sông Mã	1,922				6			
Thuận Châu	6,981				8			
Quỳnh Nhai	9,322				5			
Mường La	2,944				6			
Vân Hồ	2,380				3			
Total	**32,096**	**+ 4,584%**	**x**		**35**	**x**		

According to Table 07, total number of participants who participated in REDD+ and CC workshop were 32,096 people, which exceeds the result indicator set for 2018 and even for the entire period of 2017 – 2020. These results owe to the effort of Sub-FPD who carried out communication activities on forest protection and management, fire prevention and fighting, and forest development in districts and cities. Such work were carried out monthly and included topics on REDD+ and CC being mainstreamed into the communication with the staff and local people of the 35 communes.

However, quality of communication and awareness raising needs to be improved which takes time. Local forest rangers have not been trained sufficiently yet about REDD+ and CC so their limited understanding also influenced the quality of communication. If only looking at the quantity, the solution package 2 was carried out successfully in 2018.

It should be noted that there was a discrepancy in the target of monitoring between the baseline data, result indicator and actual result. This issue made awkward differences in the numbers (e.g. baseline data (7 officers) against actual results (32,096 people)). This needs to be addressed in the next monitoring cycle.

4.1.2. Shortcomings and causes

a) Shortcomings

- Province-wide cross cutting solution package (2): Although the number of people got communicated exceeds the indicator, the contents often focused more on general forestry issues and some commune staff still lack good understanding on REDD+ and climate change.

b) Causes

Implementation of the province-wide cross cutting solution package (2) had some issues as already analyzed in Section 4.1.1 above. In short, budget for training and awareness raising activities focusing on REDD+ and climate change was limited.

Besides, there are reasons that affect the implementation of all solution packages:

- The results of the solution package level largely depended on the degree of implementation of associated activities. In fact, implementation and monitoring of PRAP activities (described as "Component 2: Additional activities" in the PRAP) were carried out in all targeted communes, but the results of other communes were not as good as that of the Muong Gion commune supported by SNRM project due to the different intensity of implementation..

- Lack of funding is another cause of unsatisfactory implementation. The total budget planned for PRAP implementation (component II) is VND 42,880.8 million in which local budget shares the largest proportion with VND 17,305.2 million (40%) (including PFES), however, allocation from this source remain insufficient so far. In addition, ODA support through JICA 3 Project with planned budget of VND 12,563.1 million (29%) has not materialized yet. Son La is a poor Northwest province which relies largely on state budget, therefore, funding for REDD+ implementation is still limited.

- Although the PRAP was approved by Decision 2338/QD-UBND dated August 29, 2017 by the PPC, its implementation still faces a number of difficulties. For example, some localities do not know their role in implementing the PRAP; and many of them still lack good understanding on REDD+ which lead to inefficient coordination among the communes, districts and provincial agencies.

4.2. Social and Environmental Benefit-Risk Assessment Framework

Monitoring against the social and environmental benefit-risk assessment framework was carried in order to ensure the REDD+ safeguards following the principles of the seven Cancun Safeguards are met. The monitoring particulaly focused on the risks that have occured or may occur during the PRAP implementation in order to avoid and mitigate negative impacts to the society and environment. Categorization of the social and environmental risks and the seven Cancun Safeguards are shown in Annex 09 and 10. Criteria for the assesment results (i.e. 'low' 'medium' 'high' impacts) were defined by the PRAP monitoring team of the province as shown in Annex 07.

4.2.1. Monitoring results

a1) Solution package 1: Improve economic value of plantations

Social risk: Land and resource use conflicts; and marginalization of particular groups

Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Field data collected at target areas by the district FPDs.

Table 08. Monitoring results of solution package 1- social and environmental benefit-risk assessment framework

District	Risk	Number of affected people/cases	Impact level
Sốp Cộp	Land and resource use conflicts	none	
	Marginalization of particular groups	none	
Sông Mã	Land and resource use conflicts	23 cases	
	Marginalization of particular groups	260 people	
Thuận Châu	Land and resource use conflicts	12 cases	
	Marginalization of particular groups	380 people	
Vân Hồ	Land and resource use conflicts	none	
	Marginalization of particular groups	none	
Total	**Land and resource use conflicts**	**35 cases**	**High**
	Marginalization of particular groups	**460 people**	**Medium**

According to Table 08, there were no cases of marginalization of particular groups observed in Sop Cop and Van Ho districts, while there were some cases in Thuan Chau and Song Ma districts. Also in these two target districts, there were 35 cases of land and resource use conflicts and the impact was assessed as high. Marginalization of particular groups occurred and affected 460 people who had been practicing free grazing of their cattle and the impact was assessed as medium. Therefore, in 2018, implementation of the solution package 1 has created some social concerns.

There were some lands in the target areas often used for cattle grazing by villagers. When those lands were turned into afforestation lands, the original grazing lands reduced and created land use conflicts since many people were affected in their livelihoods: especially those who lived in Chieng Bom and Ban Lam communes of Thuan Chau district; Huoi Mot, Nam Ty, Muong Cai, Nam Man in Song Ma district. Since then, the local authorities have been trying to consult and encourage people to shift from free grazing to caged farming with support for building cages and cultivating fodder grass. Accordingly, both risks and impact are expected to be mitigated in the near future.

a2) Solution package 1*: Enhance the effectiveness of af/reforestation.*

Environmental risk: Risk of replacement of natural forest by plantation.
Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Field data collected at target areas by the district FPDs.

Table 09. Monitoring results of solution package 1- social and environmental benefit-risk assessment framework

District	Risk	Threatened natural forest area (ha)	Impact level
Sốp Cộp	Risk of replacement of natural forest by plantation	0	
Sông Mã	Risk of replacement of natural forest by plantation	0	
Thuận Châu	Risk of replacement of natural forest	0	

District	Risk	Threatened natural forest area (ha)	Impact level
	by plantation		
Vân Hồ	Risk of replacement of natural forest by plantation	0	
Total	Risk of replacement of natural forest by plantation	**0**	**Low**

According to Table 09, the "risks of replacement of natural forest by plantation" did not occur in the target districts. Therefore, the solution package 1 was implemented well without creating serious environmental concerns in 2018.

Effective implementation of the Directive 13-CT / TW by the Secretariat of the Central Committee of the Communist Party on strengthening the party's leadership in forest management, protection and development has led to the success. In particular, conversion of natural forests in any form has been strictly prohibited, except for important projects related to national security and defense. In addition, program for land-marking the boundaries of protection, special-use and production forests showed positive impact on limiting illegal forest and forestry land conversion.

b1) Solution package 2: Promote forest protection and sustainable use of forest resources

Social risk: Loss of traditional knowledge, culture and livelihoods; and land and resource use conflicts
Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Field data collected at target areas by the district FPDs.

Table 10. Monitoring results of solution package 2- social and environmental benefit-risk assessment framework

District	Risk	Number of affected people/cases	Impact level
Thuận Châu	Loss of traditional knowledge, culture and livelihoods	none	
	Land and resource use conflicts	10 cases	
Quỳnh Nhai	Loss of traditional knowledge, culture and livelihoods	none	
	Land and resource use conflicts	none	
Total	Loss of traditional knowledge, culture and livelihoods	**none**	**Low**
	Land and resource use conflicts	**10 cases**	**Low**

According to Table 10, the risk of "loss of traditional knowledge, culture and livelihoods" did not occur in the target districts.

The risk of "land and resource use conflicts" occurred with 10 cases recorded in Thuan Chau district. The nature of this problem is the conflicts between local authorities (forest rangers, commune authorities) and local people, especially forest-dependent households committing illegal harvesting of timbers and NTFPs for their domestic use, such as for building houses, animal cages, food and even for commercial purposes. These are persistent problems that have been posing challenges to the local authorities, particularly to the forest rangers who are aiming to improve the quality of forest

management and protection. However at the same time, it is necessary for the forestry sector to accomplish the goal of meeting the essential economic needs of forest-dependent communities. Although some social impact were observed as above in the target districts, the level of impact seems to be still low. Therefore, the solution package 2 has not yet generated any serious social concerns.

b2) Solution package 2*: Promote forest protection and sustainable use of forest resources*

Environmental risk: Displacement of deforestation.
Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Field data collected at target districts by the district FPDs.

Table 11. Monitoring results of solution package 2 - social and environmental benefit-risk assessment framework

District	Risk	Deforested area (ha)	Impact level
Thuận Châu	Displacement of deforestation	None	
Quỳnh Nhai	Displacement of deforestation	None	
Total	**Displacement of deforestation**	**None**	**Low**

According to the field survey in the target areas, under the pressure on the need of wood for building houses and for selling, etc., there were some cases where encroachment of forest were displaced. However, there were few obvious deforestation but rather seen in the form of forest degradation (e.g. selective logging). In general, the solution package 2 has not created a serious environmental concerns in 2018, however it requires further attention.

c1) Solution package 3*: Reduce forest fire*

Social risk: Marginalization of particular groups; and land and resource use conflicts.
Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Field data collected at target areas by the district FPDs.

Table 12. Monitoring results of solution package 3 - social and environmental benefit-risk assessment framework

District	Risk	Number of affected people/cases	Impact level
Sốp cộp	Land and resource use conflicts	None	
	Marginalization of particular groups	None	
Sông Mã	Land and resource use conflicts	None	
	Marginalization of particular groups	None	
Thuận Châu	Land and resource use conflicts	5 cases	
	Marginalization of particular groups	None	
Quỳnh Nhai	Land and resource use conflicts	None	
	Marginalization of particular groups	None	
Mường La	Land and resource use conflicts	None	

District	Risk	Number of affected people/cases	Impact level
	Marginalization of particular groups	None	
Total	**Land and resource use conflicts**	**5 cases**	**Low**
	Marginalization of particular groups	**None**	**Low**

According to Table 12, the risk of "marginalization of particular groups" was not observed, while there were 5 cases of land and resource use conflicts in the target areas. The main cause of the conflict was dissatisfaction against the restriction on their use of fire for field burning to avoid forest fire. In fact, the local authorities have tried to solve the conflicts peacefully by requesting and encouraging the people to practice proper use of fire in their farming. Basically, this approach received positive responses from the majority of the population, except for the people who were living in some areas in Chieng Bom commune, Ban Lam commune and Thuan Chau district.

In general, the solution package 3 did not create serious environmental concerns in 2018

c2) Solution package 3: *Reduce forest fire*

Environmental risk: Creating flammable material that is potential of forest fires
Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Field data collected at target areas by the district FPDs.

Table 13. Monitoring results of solution package 3- environmental risk - social and environmental benefit-risk assessment framework

District	Risk	High fire risk forest area (ha)	Impact level
Sốp Khộp	Creating flammable material that is potential of forest fires	19.93	
Sông Mã	Creating flammable material that is potential of forest fires	320.0	
Thuận Châu	Creating flammable material that is potential of forest fires	361.5	
Quỳnh Nhai	Creating flammable material that is potential of forest fires	0	
Mường La	Creating flammable material that is potential of forest fires	100.5	
Total	**Creating flammable material that is potential of forest fires**	**801.93**	High

According to Table 13, the risk of "creating flammable material that is potential of forest fires" increased in most target areas (except Quynh Nhai district) with high impact level. Therefore, the solution package 3 has created serious environmental concerns in 2018.

Most of the high fire risk forest areas are in special-use forests, including Copia Special-Use Forest in Thuan Chau district; Muong La nature reserve in Muong La district; Sop Cop Special-Use Forest in Sop Cop district and Song Ma district. According to the regulations, silvicultural measures are not allowed to be applied to special-use forests, therefore, accumulates the understories and other combustible materials on the forest floor over years. Especially these areas were affected by snow and ice phenomena in 2015 and 2016 which damaged the forest. There is large amount of combustible materials such as dry branches and leaves left after this event that creates high risk of forest fire.

d) Solution package 4: Reduce forest encroachment for upland fields

Social risk: Loss of traditional knowledge, culture and livelihoods; land and resource use conflicts; and equity between the supported and not supported communities
Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Field data collected at target areas by the district FPDs.

Table 14. Monitoring results of solution package - social and environmental benefit-risk assessment framework

District	Risk	Number of affected people	Impact level
Sốp Cộp	Loss of traditional knowledge, culture and livelihoods	100 people	
	Land and resource use conflicts	none	
	Equity between the supported and not supported communities	none	
Sông Mã	Loss of traditional knowledge, culture and livelihoods	2,600 people	
	Land and resource use conflicts	23 cases	
	Equity between the supported and not supported communities	none	
Thuận Châu	Loss of traditional knowledge, culture and livelihoods	7,862 people	
	Land and resource use conflicts	17 cases	
	Equity between the supported and not supported communities	none	
Quỳnh Nhai	Loss of traditional knowledge, culture and livelihoods	none	
	Land and resource use conflicts	none	
	Equity between the supported and not supported communities	none	
Mường La	Loss of traditional knowledge, culture and livelihoods	none	
	Land and resource use conflicts	none	
	Equity between the supported and not supported communities	none	
Vân Hồ	Loss of traditional knowledge, culture and livelihoods	none	
	Land and resource use conflicts	none	
	Equity between the supported and not supported communities	none	
Total	**Loss of traditional knowledge, culture and livelihoods**	**10, 562 people**	**High**
	Land and resource use conflicts	**40 cases**	**High**
	Equity between the supported and not supported communities	**none**	**Low**

According to Table 14, the total number of people who may have affected to their indigenous knowledge, culture and traditional livelihoods was approximately 10,562 people, mainly those in Thuan Chau and Song Ma districts, especially in Co Ma and Ban Lam commune of Thuan Chau district; Nam Ma, Chieng So and Nam Ty commune of Song Ma district. Son La is a mountainous province in the Northwest and large part of the population depend their livelihood on forest products and shifting cultivation agriculture. The monitoring showed that the people in Song Ma, Sop Cop and Thuan Chau districts, were affected by the reduction of shifting cultivation lands, especially, H'Mong people who had been practicing shifting cultivation for ages.

In total, 40 cases of "land and resource-used conflicts" were observed in Thuan Chau and Sop Cop districts. As some upland corn fields of H'Mong ethnic group were under fallow and already regenerated into forests, the local authority re-categorized the lands as forestry land through its program on three forest categories planning (Decision No. 3248/QD-UBND dated December 27, 2018 of Son La PPC approving of the results of the program on three new forest categories planning for 2017-2025 period towards 2030). Conflicts between the local authorities and some groups of H'Mong ethnic group occurred when the latter intended to return to the lands which they used to farm but then had been categorized as forestry land. Although the conflicts were small in their scale, it created certain disturbances to the society and posed a challenge to the forest management and protection in the locality.

In the target areas, except for the risk of "equity between the supported and not supported communities", the other two risks occurred as above with high level of impact mainly to the people in Thuan Chau and Sop Cop districts. Therefore, the assessment concludes that in 2018, the solution package 4 has created serious social concerns.

e) Solution package 5: Mitigate impacts of forest conversion into other land use (road construction and hydropower plant development, etc.)

Social risk: Land and resource use conflicts.
Monitoring duration: 01/01/2018 – 31/12/2018.
Data source: Field data collected at target areas by the district FPDs.

Table 15. Monitoring results of solution package 5 - social and environmental benefit-risk assessment framework

District	Risk	Number of cases	Impact level
Sốp Cộp	Land and resource use conflicts	None	
Thuận Châu	Land and resource use conflicts	None	
Quỳnh Nhai	Land and resource use conflicts	None	
Mường La	Land and resource use conflicts	None	
Total	Land and resource use conflicts	**None**	**Low**

According to Table 15, the risk of land and resource use conflicts has not occurred. Therefore, the solution package 5 has not created any serious social concerns in 2018.

This is understandable since there were no new forestry land conversion in 2018 for infrastructure development and mining projects in the target districts while the social impact of the projects of the previous years had been low. Following the Directive No. 13-CT/TW of Provincial Party Secretariat Committee dated 12 January 2017, Son La province has reviewed all the projects in pipeline to mitigate their impact to the forest resource.

Offset planting were carried out in the priority communes in Thuan Chau, Sop Khop and Muong La in order to offset the forest conversion implemented in non-priority communes, however they did not create any social concerns related to land and resource use conflicts.

Social risk: People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community.
Monitoring duration: 01/01/2018 – 31/12/2018
Data source: Field data collected at target areas by the district FPDs.

Table 16. Monitoring results of province-wide cross cutting solution package - social and environmental benefit-risk assessment framework

District	Risk	Number of affected people	Impact level
Sốp Cộp	People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community.	28 people	
Sông Mã	People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community.	24 people	
Thuận Châu	People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community.	32 people	
Quỳnh Nhai	People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community.	20 people	
Mường La	People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community.	24 people	
Vân Hồ	People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community.	None	
Total	**People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community.**	**128 people**	**Low**

According to Table 16, the process of REDD+ implementation in the target areas in 2018, the risk of "People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community" occurred but with low level of impact. The field survey revealed that, REDD+ is still a new concept to the majority of the local people, even including the commune staff implementing PRAP, thus their expectations were limited. Therefore, impact assessment in 2018 should be regarded as a reference only, and there would be more adequate analysis in the following years (2019, 2020) when people have enhanced the understanding about REDD+ activities. While REDD+ should be careful on creating unsuitable expectation among the local communities, the result also implies the shortage of communication/awareness raising activities.

4.2.2. Shortcomings and causes

a) Shortcomings

- Solution package 1 (*Improve economic value of plantations*): The solution package 1 did not create serious environmental concerns. Meanwhile, it created some social concerns: marginalization of particular groups occurred and affected 460 people; and 35 cases of land and resource use conflicts were observed.

- Solution package 3 (*Reduce forest fire*): There were no serious social concerns observed thorough the implementation of the solution package 3. Meanwhile, there is an environmental concerns as it may have been increasing the risk of forest fire in 801.93 ha of forest areas, mainly in Special-Use Forests in Song Ma and Thuan Chau districts.

- Solution package 4 *(Reduce forest encroachment for upland fields)*: Implementation of the solution package 4 has generated high level of social impact, especially in terms of "loss of traditional knowledge, culture and livelihoods" which influenced 10,562 people and "land and resource use conflicts" of 40 cases.

b) Causes

The causes leading to the shortcomings of solution packages are already analyzed in part 4.2.1 and as summarized below:

- Solution package 1 (*Enhance the effectiveness of af/reforestation*): Grazing area reduced due to the use of land for production forest tree planting without sufficient consultation and provision of alternative livestock management practices (including caged farming).

- Solution package 3 (*Reduce forest fire*): The amount of flammable material has been accumulating over years due to the restriction in silviculture activities in Special-Use Forests, for example, dry branches and leaves left over after snow and ice phenomenon in 2015 and 2016.

- Solution package 4 *(Reduce forest encroachment for upland fields)*:

+ The traditional livelihoods of the local people, especially H'Mong ethnic group in some areas, were affected due to the local government's efforts in reducing forest encroachment for cultivation.

+ The conflicts between functional forces and a group of H'Mong ethnic group occurred when the latter intended to return to the lands which they used to farm but then had been categorized as forestry land.

Besides, there are general issues behind the unsatisfactory implementation of the solution packages as summarized below:

- In order to mitigate the negative impact, implementation of mitigation measures in a timely manner is critical. However, mitigation measures were often not implemented except for the cases where such measures are already incorporated in the PRAP activities. As a result, impact tend to increase. Although the SNRM project provided financial support for monitoring PRAP implementation, fund sources for

implementation of mitigation measures are not clearly identified.

- Despite the active involvement of the authorities in the target districts, data collection for social & environmental impact assessment was relatively new task for them, thus requires more time to learn and comprehend. This may have partly affected the quality of the collected information, thereby affecting the accuracy of impact assessment.

5. Conclusion and recommendations

5.1. Conclusion

Implementation of solution packages are assessed d as successful when the targets are met, through achievement of the indicators of the result framework, and by ensuring that the social and environmental impact related to the seven Cancun safeguards are sufficiently managed as 'none' or 'low'.

Table 17. Monitoring results of Son La PRAP solution package implementation in 2018

S: Satisfactory   US: Unsatisfactory

No.	Solution package	Result		Social & environmental impact		Overall assessment	
		S	US	S	US	S	US
1	Enhance the effectiveness of af/reforestation	x			x		x
2	Promote forest protection and sustainable use of forest resources	x		x		x	
3	Reduce forest fire	x			x		x
4	Reduce forest encroachment for upland fields	x			x		x
5	Mitigate impacts of forest conversion into other land use (road construction and hydropower plant development, etc.)	x		x		x	
6	**Province-wide cross-cutting solution package**						
6.1	Improve Forest Resource Monitoring System (FRMS)	x				x	
6.2	REDD+ awareness raising and capacity building	x		x		x	

According to Table 17, results of PRAP implementing in Son La province in 2018 can be concluded as follows:

- Solution package 2, 5 and the province-wide cross-cutting solution package (2) met the result indicators set for 2018 without creating any serious environmental and social concerns. However, the results of the province-wide cross-cutting solution package (2) significantly out-performed the target (32.096 participants only in 2018 against the target of 1.400 participants over the entire period). It is actually not clearly defined who are to be counted as the participants: this created irrational discrepancy between the result and the target. This implies the need of clarifying of improving the

monitoring design in the next monitoring cycle.

- Solution package 1, 3 and 4: Although implementation of these solution packages have achieved the result indicators set for 2018, they have also created some social concern of loss of traditional knowledge, culture and livelihoods, land and resource used conflicts, and marginalization of particular groups, especially to those who practice shifting cultivation and free grazing livelihoods.

5.2. Recommendations

As a result of the monitoring of PRAP implementation in 2018, a list of recommendations are derived in order promote achievement of the outcomes and address the shortcomings during the implementation of the PRAP in the following years:

- Cross cutting solution package (2): the results of this solution package are far exceeding the set indicators: it is necessary to review the appropriateness of the indicators. In addition, in order to improve the quality of data collection process, those who are responsible for collecting data (in this case, for cross cutting solution package (2)) shall be trained in data collection.

- For the solution package 1: In order to mitigate impact of land and resource use conflicts and marginalization of particular groups (cattle grazing groups), first, it is important to identify the right stakeholders and ensure their participation. Then, understand the current land-use and agree on optimal land-use plan for the future. The stakeholders need to respect the agreement and have fair channel to complain in case there are any problems to be solved.

- For the solution package 3: In order to mitigate forest fire risks, the local authorities should patrol the forest areas with high forest fire risks and clean the flammable material, especially the accumulated deadwood and forest debris in the natural forests after the extreme cold weather in 2015 and 2016.

- For the solution package 4: In order to achieve the result indicators while ensuring mitigation of social and environmental risks and impact, it is important to replicate good practices of Muong Gion commune, Quynh Nhai district (pilot REDD+ commune under the SNRM project) and other communes. The examples could be, for instance, support to the dissemination of improve stoves to save firewood, construction of biogas plants and livelihood activities such as bee keeping, etc.

Apart from the recommendations to specific solution packages, general recommendations are derived as follows:

- In order to achieve the targets in the following years, it is critical to seek for more resources to implement the planned activities (Component II - PRAP). It is necessary to allocate sufficient provincial fund including PFES to implement enhanced collaboration in forest fire prevention and fighting, especially in the border areas; improve output markets for forest products; and control the use of fire in upland agriculture (see annex 01, Son La PRAP). In addition, the province should continue to follow up   the

possibility of JICA 3 project and also actively call for investment from domestic and international organizations.

- In order to mitigate negative social & environmental impacts, it is necessary to adopt impact mitigation measures when implementing REDD + activities (*refer to Annex 03 of the PRAP for more details*).

- Along with further refinement and operationalization of social and environmental impact monitoring, Feedback Grievance Redress Mechanism (FGRM: a mechanism to accept, assess, and resolve stakeholder feedback or complaints related to the implementation of REDD+) needs to be put into practice, building on existing institutions, regulatory frameworks, mechanisms and capacity. This shall promote the role of local communities, transparency and safeguarding the people's rights when implementing REDD+. However, further elaboration of the principles at the national level is required for the provincial level to operationalize FGRM in their own province...

- For PRAP monitoring in 2019 and the following years, it is important to organize trainings for staff in district-level agencies and FPD in order to improve efficiency and effectiveness of the information to be collected - especially the information related to social impact monitoring.

- Finally, the financial and technical support of the SNRM project for implementing PRAP monitoring is critical and should be considered for the following years.

ANNEX

Annex 01. PRAP solution packages by target district

No.	Solution package	Sốp cộp	Sông Mã	Thuận Châu	Quỳnh Nhai	Mường La	Vân Hồ
1	Enhance the effectiveness of af/reforestation	x	x	x			x
2	Promote forest protection and sustainable use of forest resources			x	x		
3	Reduce forest fire	x	x	x	x	x	
4	Reduce forest encroachment for upland fields	x	x	x	x	x	x
5	Mitigate impacts of forest conversion into other land use (road construction and hydropower plant development)	x		x	x	x	
6	Province-wide cross cutting solution package	x	x	x	x	x	x

Annex 02. List of target communes for PRAP implementation in Son La province

No.	District	Commune	Reduce deforestation	Reduce forest degradation	Enhance forest carbon stock
1	Sốp Cộp (7 communes)	Mường Và	x		x
2		Nậm Lạnh	x		x
3		Púng Bánh	x		x
4		Mường Lèo	x		x
5		Mường Lạn	x		x
6		Sam Kha	x		x
7		Dồm cang			x
8	Sông Mã (6 communes)	Huồi Một	x		x
9		Nậm Ty	x		x
10		Chiềng Sơ			x
11		Mường Cai	x		
12		Mường Hung	x		
13		Nậm Mằn	x		x
14	Thuận Châu (8 communes)	Chiềng Bôm	x	x	
15		Bản Lầm	x		x
16		Mường Bám			x
17		Nậm Lầu	x	x	
18		Mường É	x		x
19		Phỏng Lái	x		x
20		Co Mạ		x	
21		Long Hẹ		x	x
22	Quỳnh Nhai (5 communes)	Mường Giôn	x	x	x
23		Cà nàng	x	x	x
24		Mường Giàng	x	x	x
25		Pác Ma Pa Khinh	x	x	x
26		Mường Sại	x	x	x

No.	District	Commune	Selection criteria		
			Reduce deforestation	Reduce forest degradation	Enhance forest carbon stock
27	Mường La (6 communes)	Chiềng Công	x		x
28		Chiềng Lao	x		x
29		Nậm Păm	x		x
30		Ngọc Chiến	x		x
31		Nậm Giôn	x		x
32		Hua Trai	x		x
33	Vân Hồ (3 communes)	Tân Xuân			x
34		Chiềng Xuân			x
35		Xuân Nha			x
Total	35 communes		27 communes	9 communes	30 communes

Annex 03. Sơn La 2018 PRAP Monitoring and Evaluation Framework
(Result framework)

No.	Solution package/activity	Baseline data	Result indicator	Input	Source	Duration
1	**Enhance the effectiveness of af/reforestation**	During the 2010-2015 period, rate of survival (by the time of harvest) is 75-80%, value of plantation at the time of harvest is VND 55 million	By the end of 2020, the rate of forested plantations is 85%, income from forest plantation is VND 60 million/ha	Survival rate (%)	Annual report on acceptance of tree planting results by the target district FPDs	1/1/2018 – 31/12/2018
2	**Promote forest protection and sustainable use of forest resources**	1. Total 'Poor Forest' area in 2016 was 5,822 ha, 'Medium Forest' was 5.933 ha, rich forest was 2.643 ha 2. At the end of 2016, total timber volume of the natural forests of the province was 3.990.293 m3, forest area was 63.892 ha	1. 30% of poor-quality forest area become medium forests by the end of 2020 2. Maintain the existing forest area	1. Natural forest area 2018 (ha) 2. Natural forest stock 2018 (ha)	FRMS and forest change monitoring report of Sub-FPD	1/1/2018 – 31/12/2018

No.	Solution package/activity	Baseline data	Result indicator	Input	Source	Duration
3	**Control forest fire**	1. Total of 52 cases of forest fires recorded during the 2010-2016 period. 2. The average burned forest area of was 201 ha per year during the period 2010-2016	The number of forest fires/ burnt forest areas reduce 10% or more during the period 2017-2020.	1. Forest fire cases 2. Damaged forest area (ha)	FRMS and forest fire records of Sub-FPD	1/1/2018 – 31/12/2018
4	**Control forests encroachment for upland cultivation**	In the period of 2010-2016, the area of forest converted into upland field was 281 ha/year	During the period 2016-2020, the area of encroached land for cultivation is reduced by 70%.	Encroached forest area for upland fields	FRMS and annual report on FPD of Sub-FPD	1/1/2018 – 31/12/2018
5	**Mitigate impacts of forest conversion into other land use (road construction and hydropower plant development, etc.)**	During the period of 2010-2016, offset planting reached 783 ha (equivalent to 34.2% of the planned area)	Meet offset planting target for the period of 2010-2015 (1,503 ha) and newly converted areas during the 2016-2020 period.	-Planned area (ha) and Actual area planted (ha) of 2010-2016 - Planned area (ha) and Actual area planted (ha) of 2017-2018	Offset planting acceptance reports of Sub-FPD	1/1/2018 – 31/12/2018
6	**Province-wide cross-cutting solution package**	**Not applicable**	**Not applicable**	**Not applicable**	**Not applicable**	**Not applicable**
6.1	Improve Forest Resource Monitoring System (FRMS)	12 District FPDs and 5 forest management boards are implementing the improved FRMS	By the end of 2020, FRMS is operational in all target districts	Number of districts use the new FRMS (operational/not operational)	Annual reports on forest protection and development	1/1/2018 – 31/12/2018

No.	Solution package/activity	Baseline data	Result indicator	Input	Source	Duration
6.2	REDD+ awareness raising and capacity building	7 concerned staff have participated in 3 provincial workshops on PRAP development held in 2016 and 2017	1. By 2020, 1,400 participants from provincial agencies and target districts will have been provided with training and awareness raising in climate change and REDD+ 2. 35 communes are exposed to awareness raising activities in the period of 2017-2020	1. Number of REDD + and CC workshop participants 2. Number of communes got disseminated on REDD+ and CC	Annual reports on forest protection and development of Sub-FPD, and SNRM Project annual report	1/1/2018 – 31/12/2018

Annex 04. Son La 2018 PRAP Monitoring and Evaluation
(Social and Environmental Risk and Benefit Assessment Framework)

No.	Solution package	Risk	Input data	Data source	Duration
1	**Enhance the effectiveness of af/reforestation**	(1). Land and resource use conflicts (2). Marginalization of particular groups (3). Affect to biodiversity due to monopoly plantation; Risk of replacement of natural forest by plantation	(1). Number of cases (2). Number of affected people (3). Risk of replacement of natural forest by plantation	Field survey results collected by target district FPDs	1/1/2018 – 31/12/2018
2	**Promote forest protection and sustainable use of forest resources**	(1). Loss of traditional knowledge, culture and livelihoods (2). Land and resource use conflicts (3). Displacement of deforestation	(1). Number of affected people (2). Number of cases (3). Damage forest area due to shifting cultivation	Field survey results collected by target district FPDs	1/1/2018 – 31/12/2018
3	**Control forest fire**	(1). Marginalization of particular groups (2). Land and resource use conflicts (3). Creating flammable material that is potential of forest fires	(1). Number of affected people (2). Number of cases (3). Fire risk forest area	Field survey results collected by target district FPDs	1/1/2018 – 31/12/2018
4	**Control forests encroachment for upland cultivation**	(1). Loss of traditional knowledge, culture and livelihoods (2). Land and resource use conflicts (3). equity between the supported and not supported communities	(1,3). Number of affected people (2). Number of cases	Field survey results collected by target district FPDs	1/1/2018 – 31/12/2018

No.	Solution package	Risk	Input data	Data source	Duration
5	**Mitigate impacts of forest conversion into other land use (road construction and hydropower plant development, etc.)**	(1). Land and resource use conflicts	(1). Number of cases	Field survey results collected by target district FPDs	1/1/2018 – 31/12/2018
6	**Province-wide cross-cutting solution package**	**NA**	**NA**	**NA**	**NA**
6.1	Improve Forest Resource Monitoring System (FRMS)	NA	NA	NA	NA
6.2	REDD+ awareness raising and capacity building	(1). People may misunderstand about REDD+ and expect too much on benefits from REDD+, thus, it may lead disturbances in the community.	(1). Number of affected people	Field survey results collected by target district FPDs	1/1/2018 – 31/12/2018

Annex 05. Environmental risk classification by Cancun safeguard

No.	Environmental risk	Cancun safeguard
1	Displacement of forest encroachment	Cancun safeguard g) – displacement of emissions
2	Replacement of natural forest by plantations	Cancun safeguard (e) – conservation of natural forests and biological diversity

Annex 06. Social risk classification by Cancun safeguard

No.	Social risk	Cancun safeguard
1	Land and resource-use conflicts	Safeguard (b) – transparent and effective national forest governance Safeguard (d) – full and effective participation of relevant stakeholders
2	Marginalization of particular groups	Safeguard (c) – indigenous peoples' and local communities' rights Safeguard (d) – full and effective participation of relevant stakeholders
3	Equity between the supported and not supported communities	Safeguard (b) – transparent and effective national forest governance Safeguard (d) – full and effective participation of relevant stakeholders
4	Loss of traditional knowledge, culture and livelihood	Safeguard (c) – indigenous peoples' and local communities' rights

Annex 07. Criteria for risk classification

No.	Classification	Criteria	Remarks
1	Low	Natural forest area (ha) at risk of replacement by plantations (0 - <5,0)	Applicable for the risk of replacement of natural forest by plantations (solution package 1).
		Forest area at deforested risk due to shifting cultivation (0 - <5,0)	Applicable to the risk of displacement of deforestation (solution package 2).
		Forest plantation area (ha) at high fire risk due to flammable material (0 - <20,0)	Applicable to the risk of forest fire due to carelessness in use of fire. (Solution package 3).
		Number of cases (0 - 10)	Applicable to the risk of land and resource-use conflicts (solution package 1, 2, 3, 4, 5).
		Number of affected people (0 - 200)	Applicable to other risks: Equity between the supported and not supported communities; Marginalization of particular groups (solution package 1, 2, 3, 4 and province-wide cross cutting solution package)
2	Medium	Natural forest area (ha) at risk of replacement by plantations (5,0 - <10,0)	ditto
		Forest area at deforested risk due to shifting cultivation (5,0 - <10,0).	ditto
		Forest plantation area (ha) at high fire risk due to flammable material (20 - <100,0)	ditto
		Number of cases (11 - 20)	ditto
		Number of affected people (200 - 500)	ditto
3	High	Natural forest area (ha) at risk of replacement by plantations (>10,0)	ditto
		Forest area at deforested risk due to shifting cultivation (>10,0).	ditto

No.	Classification	Criteria	Remarks
		Forest plantation area (ha) at high fire risk due to flammable material (>100,0)	ditto
		Number of cases (>20)	ditto
		Number of affected people (>500)	ditto