

UN-REDD
PROGRAMME



Report

**Analysis of indicators and small scale data
collection for Participatory Governance
Assessment (PGA) for the REDD+ in
Vietnam**

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ABBREVIATIONS:

CORENARM: Consultative and Research Center on Natural Resource Management

FAO: Food and Agriculture Organization.

PGA: Participatory Governance Assessment

PRA: Participatory Rural Appraisal

SRD: Social Research and Development

REDD+: Reduction of Emission through Deforestation and forest Degradation.

UNEP: United Nation Environment Program

UNDP: United Nation Development Program

1. BACKGROUND

The collaborative program among FAO, UNDP and UNEP on reducing emission through deforestation and forest degradation (UN-REDD) is a global program aiming at developing approaches, data collection and data analysis tools, as well as instructions for implementing REDD+ programs in various nations. ‘Participatory Governance Assessment’ (PGA) is an initiative proposed by UN-REDD, which is being tested and developed in 4 countries namely Nigeria, Ecuador, Indonesia and Vietnam. PGA is an approach aiming to produce robust and credible governance data relevant to REDD+, through an inclusive process of consultation and with contributions from both government and civil society as joint developers and owners of the process.

In Viet Nam, PGA has been developed and introduced through a series of technical indicator development workshops and field testing started in March 2012 in Lam Dong province. The province was selected as the only testing site for PGA due to a very high level of commitment and interest from local stakeholders and a large forest area in which parts are exposed to high risk of being deforested and degraded.

In order to develop an understanding on key considerations in the development of an indicator set for further use of PGA in Vietnam, a training workshop in April 2013 brought into fore the main elements of and main steps for developing indicators and helped different stakeholders with different backgrounds to become aware of key considerations for data collection and what basis to rely on when selecting data collection methodologies relevant to PGA. This workshop was followed up with the second indicator workshop in June which aims at finalizing a indicator set and data collection tools for field testing in Lam Dong province. Before the field testing was conducted in Lam Dong province from 30th July to 02nd August, a preparation workshop took place on 23-24 July to revisit and refine indicators and tools for collecting data. After the first testing, the tools and approaches were adjusted and completed to further facilitate the data collection process. This modified tool set was used in the second field testing conducted during November 5 – November 6, 2013. Results collected from this testing were used to analyze and assess the tools in terms of capacity to collect data on indicators as well as to assess forest management activities in Lam Dong province now.

This report was prepared and finalized by members of the facilitator group including CORENARM and PGA coordinator with inputs contributed by members of core provincial

working groups in Lam Dong after field trips in Lac Duong district and Di Linh district during November 5 – November 6, 2013. The main content of the report is divided into 7 parts. Section 1 introduces the background, the process of testing the indicators, goals and expected outcomes. Section 2 provides in-depth descriptions of the site for collecting data including the selection of locations and research participants. Section 3 discusses the natural and socio-economic characteristics of the sites. Section 4 outlines the methodology. Section 5 states a few factors which might have affected the data collected and processed. Section 6 lists concrete results, including the current situation of local forest management as well as evaluations of the tools, specific indicators and PGA indicator framework. Section 7 analyzes and concludes on key findings and lessons learnt during the development of PGA indicators. Annexes for each section can be found at the end of the report.

This report is a continuation of the documentation process of PGA in Vietnam through testing, analysis and synthesis of data collected using the tools which have been developed and adjusted from previous activities. The data collection tools are presented in Annex 1.

2. SITES FOR COLLECTING DATA:

The selection of sites is based on the result of the first field testing that took place in July-August 2013. For this test, drawing from the pool of knowledge already presented on methodologies including quantitative and qualitative research, principles and methods to select samples, concise information about random sampling, systematic sampling and stratified sampling, participants discussed and selected testing sites and criteria for interviewees of the test. This means that activities from this data collection were conducted in the same districts/communes which were used in the previous test. The tools were adjusted after the first test.

Di Linh was selected to be the site for collecting data because this was the district where the UN REDD Programme phase 1 carried out their activities here, while Lac Duong was selected because it has now been selected to implement activities of the UN REDD Programme phase 2. The two selected areas have different physical characteristics, forest condition and forest protection and management activities, which will help the data collecting team to see most clearly the effectiveness of using the tools to assess forest governance status in different locales and adjust the tools accordingly.

Similar to the field testing, criteria for the number of households selected for interview and group discussion in each village was decided based on the ratio of household with allocated forest in each testing site as presented in table 1:

Table 1: Some information about the testing sites

	Commune	Village	Number of household interviewed	Note
1	Bảo Thuận commune	Hang Por	15	Poor village
		Kla Tô Kreng	15	Above average
		Kla TânGu		This village has allocated natural forest to the community. 4-5 people were invited to discussion to provide different perspectives on forest allocation and forest contract.
2	Đạ Chais	Village 2	15	Above average village
	commune*	Village 3	15	Poor village

*Group interviews in Da Chais commune were conducted with people in village 2 and village 3 and no other participants from other villages.

Criteria for selection of participants in the field testing are:

- **Individual Households:**
 - With forest contract
 - High level of dependency on forest resources
 - Households are categorized by level of income: poor, average, above average
 - Gender (to ensure that at least one-third of the participants is women)
- **Households for group discussion:** select among the individual households, members of the community and other individuals:
 - In-depth understanding of forest contract
 - Village chief, elderly, village patriarch with good knowledge and experience
 - Families with high level of dependency on forest resources who have forest contract.

- People who collect forest products, have forest contracts
- In Bao Thuan commune, some forest land is allocated to the community rather than individual households. Some representatives of the community were also invited to participate in group meeting/interview.
- **In-depth interviews (district/commune level):**
 - In-depth understanding of the issue
 - Be in charge of management and responsible for technical aspects at local level that are relevant to PGA
 - Be in contact with, work directly or indirectly with those who are related to forest protection activities.

3. PHYSICAL AND SOCIO-ECONOMIC CHARACTERISTICS OF THE DATA COLLECTION SITES

Di Linh District implemented different activities within the UN REDD Vietnam program phase 1 (2009-2011) so there have been many activities related to forest preservation and protection. Most forest areas in the district are planted forest (pine trees) which are managed and developed by forest owners such as Forestry Companies. Two major forest owners in the district are Bao Thuan Forestry Company (owning 18.913,44 ha) and Di Linh Forestry Company (owning 29.971 ha, of which 27.051 ha is natural forest). Both companies are contracting the local people to protect forest in order to increase effectiveness of forest management and protection as well as to enhance the local people's livelihoods. The main capital for forest management and protection contract is from the provincial budget and the payment for forest environmental services, with some financial assistance from different projects.

The Bao Thuan commune has a very large area for forest plantation and production, managed by the Bao Thuan One Member Forestry Company, Ltd. Even though the forest area is large, up to now the company has only been able to cover 4.000 ha for forest contract with 180 households to manage and protect.

88-89% area of forest in the Lac Duong district is watershed forest, playing an important role in preserving the water source for hydroelectric plants located in the area. While this district

did not participate in phase 1 of the UN REDD Vietnam program, activities of phase 2 of UN REDD Vietnam program will be implemented here from 2013 to 2015. Most forest area in the district is special-use natural forest and protective forest. Two major forest owners in the district are Bidoup-Nui Ba Natural Reserve and the Management Board of Da Nhim Production Forest. These two organizations have contracted local people for forest management and protection.

In addition, there were private forest owners who receive forest contract or lent out forest for production and tourism activities such as the Lac Duong District Police, the District Military Command, Provincial Military Command, Ward 12 Police, Da Nhim commune Police, etc.

The Da Chais commune has a very large natural forest area and most of this area is managed by Bidoup – Nui Ba Natural Park (special use forest) and Da Nhim Management Board of Forest Protection (special use forest). Production forest area in this region is very small (see Annex 2). These organizations have a relatively large area of forest to make forest contract with local people for management and protection. The total area of forest contract that those two organisations have in Da Chais is 17.514 ha.

The similar features of the two areas where data was collected are a high proportion of ethnic minority groups and quite large coverage of natural forest. However, the two areas also have very distinctive physical and socio-economic characteristics.

Lac Duong district is very close to Da Lat city, thus it enjoys a close connection and good trading practice which leads to a better economic status. Consequently, there are certain advantages with the location in relation to the management and protection of forest resources due to easier access and better coordination with relevant provincial institutions. However, there are also certain disadvantages. With diverse resources and convenient transportation and good road conditions, this region is under pressure of many illegal exploitation, hunting and transport of forest products. Di Linh district is quite far from Da Lat city, thus road condition makes it more difficult to transport illegal products.

Specific information about the two communes and districts is presented in annex 2.

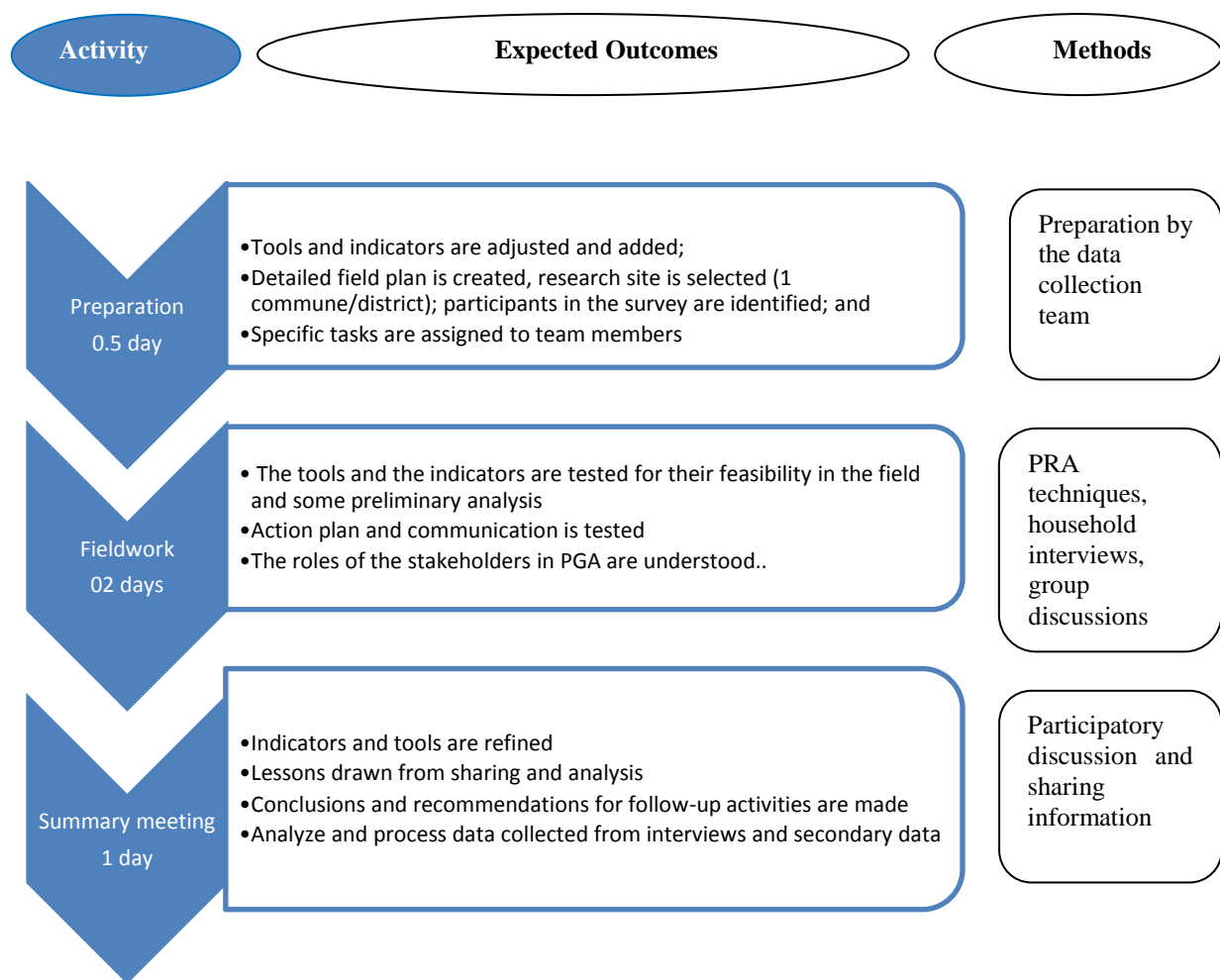
4. METHODOLOGIES

The PGA process provides stakeholders with opportunities to participate in the whole process from the beginning. More specifically, the stakeholders learn and gain an understanding on the concept of indicators, then they develop the indicators based on governance components, selected suitable tools for collecting data and in the end, used the tools for collecting data. In short, they own the process which means that they take charge of developing the tools, testing the indicators and the tools, editing and improving them, selecting a key person to archive data, entering and analyzing data and keeping it for long term use.

It can be said that the unique feature of the PGA process in Lam Dong is the success of creating a process in which stakeholders are owners. The whole process was implemented by representatives from the provincial level to the grassroots level of Lam Dong with support from the facilitators. However, it should be noted that this is a learning process so participants need time to understand, implement and completely own the whole process. The whole implementation was conducted by participants in Lam Dong with some support from the facilitators. During the testing in Lam Dong, PGA process was considered a tool under development and ready to adopt changes. On the one hand, the testing provided the participants with a hands-on experience of how the tools work. On the other hand, it suggested necessary changes for the tools based on the participants' reflection of their experiences.

Participatory forest governance means to be implemented by maximizing the participations of different stakeholders throughout the whole process, including technical workshops, discussions and testing (e.g. forest owners and local people). This principle was presented in the methodologies before and after the data collection as well as during the field testing process. It was also used as the most fundamental principle in the reflection of PGA methodology and efficiency of data collection.

Steps of PGA data collection are demonstrated in graph 1:



Graph 01: Steps of PGA data collection in Lam Dong, 2013

5. FACTORS AFFECTING DATA COLLECTION AND DATA ANALYSIS

The data collection and data entry process followed a system of tables already established, requiring participants to really understand the procedures of the test and data collection as well as implications of these activities. One advantage of PGA is the field team members who collected data had participated in a series of workshops and training sessions with PGA which makes it easy to discuss and reach an agreement on the steps and techniques to implement. However, the additional field team members in Bao Thuan and Da Chais who joined to provide assistance in interviews and group discussions were a bit confused and needed time to catch up with the rest of the team. Therefore their performances were rather limited.

- All field team members were reminded of some basic interview techniques, especially they were not to answer questions but only clarify the questions when the interviewees really did not understand.
- Examples were taken up and explained so the new additional team members could understand and replicate. The new members received instructions about the tasks, the plan and specific assignments. Afterwards they attended some interviews conducted by experienced interviewers with one or two household heads so they could understand clearly the process, how to ask questions, how to explain questions and how to record information into the tables. Then they conducted interviews with 2 or 3 households under the supervision and assistance of old members until the latter could ensure that they were capable of doing their jobs.
- Data entry is very important to the quality of data analysis. This task was discussed between the PGA coordinator and the Lam Dong Forest Protection Department (FPD) and agreed that FPD would take care of this task. This task was important as it established a precedent for the Lam Dong FPD in keeping data and collecting updated data regularly for PGA in the future. Although tables and forms were already created, mistakes were found in the process of entering data made by FPD staff. Further attention is necessary to ensure better quality in data collection, management and processing in the future. The mistakes are found as followed:
 - o Not being accurate in recording the number of question in the data collection form into the data entry form, creating difficulty for checking and analysis.
 - o Some information such as name of village/commune, name of interviewees, age, male/female, number of members in a household, number of labourers in a family is missing. This information is very crucial in drawing comparisons between two regions afterwards. It can also be used to re-check and re-evaluate participants in future assessments.
 - o Skipping some very important information such as specific amount of income (specific amount of money), this is a very important indicator to know the amount of money collected from different sources among the local people so just recording percentage is not enough. A column should be added to the data entry form to demonstrate clearly the amount of money coming from these 8 sources.

- For columns that record amount of money or percentage (%), the units are noted in the first rows (e.g. Vietnamese dong, percentage), so the actual numbers entered into the column do not need the additional information of the unit such as Vietnamese dong, percentage, which might create difficulties in data cleaning and processing in the future.
- Questions should be separated as requested. For example, a question consists of 2 parts, part 1 is a yes/no question and part 2 lists the reasons for that choice of yes or no. Consequently, the data entry form must have two parts, part 1 for a yes/no answer and part 2 for all the options.
- The forms are convenient for interviewing and extracting data but difficult for entering data. For example, a data entry form consists of 5 sub-questions (i.e. 5 related questions are listed in five rows) and 5 columns for options. Therefore, for each row there must be 5 columns in the data entry forms. There must be 25 columns to enter data for such a form as mentioned.
- Furthermore, computer skill is also needed in checking the accuracy of information entered into the input tables. A careful check of the input tables by max, min values as well as abnormal values will help cross-checking and data cleaning afterwards.

During the data entry process, the staffs of the Forest Protection Department received supports, supervision, checking and discussing with the facilitator to minimize mistakes. Through this process, the data entry staffs also developed their capacity and understood better the purposes, implications and the tasks.

6. RESULTS

6.1. The current status of local forest governance

The current status of local forest governance focuses on two main aspects of forest governance, namely (i) participation and coordination of the local authorities and relevant agencies in forest protection management and decision making and (ii) Forest allocation to improve the local people's livelihoods. Corresponding to these two governance issues are important components and specific indicators:

6.1.1. Participation and coordination of the local authorities and relevant agencies' in forest protection management and decision making process

All indicators for this component were extracted from secondary data provided by commune People's Committee, District Forest Protection Department and forest owners.

a. Capacity of the commune management and organizational system:

Capacity of the commune management and organizational system, specifically the members of Commune Forestry Board is demonstrated in Table 2:

Table 2: Descriptions of staffs of the Commune Forestry Board

Commune	Number of staffs	Level of Education			Major in Forestry	Number of years working in the Forestry Board
		Post Secondary	University	Post Graduate		
Đa Chais	19	3	5	0	5	3
Bảo Thuận	21	4	1	0	3	2.5

This statistic has included local forest rangers who participate actively in forestry management of the commune, village chiefs and group leaders of forest protection and management groups in the villages. Indicators in the table include managing staffs with post-secondary level and above, the number of staffs with specialized forestry training working in the commune forestry board, and the number of years working in forest protection and management of staffs of the commune forestry department. It is clear that in Da Chais, Lac Duong, the level of education of forestry staffs is higher than that of the staffs in Bao Thuan, Di Linh.

It should be noted that the number of years working for the Forest management board is very short, i.e. only 2.5 – 3 years. In fact, staffs of the Forest management board are rotated quite frequently. As the team investigated into this matter, the reason is the commune People's Committee does not prioritize forest governance activities and consider these only to be supportive work rather than serious commitment. This also relates to the benefit mechanism of the commune People's Committee in forest resources management and protection.

However, according to the field team, the question for this indicator is not clear enough and could cause confusion between the actual number of years spent working in the Forestry Department and when they started working for the Forestry Department. In addition, the key

members of the forest management board are often burdened by the fix-term in position. For example the position of the Head of Commune Forest management board is normally for a few years and the person in charge could be rotated to other position/commune.

In terms of working capacity, in the first 9 months of 2013, the two communes have received and processed complaints, as follows:

Table 3: Complaints received in the management of the commune

Stt	Commune District	Contents	Time (date/month)			Reasons for delayed/unresolved
			Received	Resolved	Number of attempts	
1	Đa Chais-Lạc Dương	None				
2	Bảo Thuận-Di Linh	Unlawful clearance of trees	22/5/2013	Yes	1	None
		Complaint about program 135 in Sector 612	23/9/2013	No	1	In investigation

The collected information shows that the number of complaints at the commune level is very low and there is no information on how much time the commune staffs need to resolve one complaint. This should be noted to adjust the indicators and data collection in following surveys. The two communes have also kept a record of violations of forest management and protection such as deforestation, illegal exploitation, illegal transportation of forest products, illegal trading and storing of forest products, or violation of administrative regulations of prevention of forest fire. All violations are handled with specific measures as demonstrated in table 4 below.

Table 4: Violations and measures in districts selected for data collection

District	Type of violation	Number of case	Pecuniary Penalty	Repair the damage	Criminal charge
Lạc Dương	Deforestation	23	269,400,000		9
	Illegal exploitation	14	82,350,000		
	Illegal transport of forest products	49	293,000,000		
	Illegal trading and storing of forest products	11	100,000,000		
	Violation of administrative regulations of prevention of forest fire	6	24,000,000		
	Land encroachment				
Total cases in Lạc Dương district		103	768.750.000		
Di Linh	Deforestation	121	1,749,200,000		6
	Illegal exploitation	17	121,000,000		
	Illegal transport of forest products	12	76,000,000		
	Illegal trading/hiding of forest products	13			
	Violation of administrative regulations of prevention of forest fire	5			
	Land encroachment	6	6,000,000		
Total cases in Di Linh district		174	1,952,200,000		

Table 4 shows 2 indicators: the number of complaints about forestry which have been resolved successfully and the number of violations of forest law which have been discovered and processed. These indicators demonstrate working capacity of the forest management boards of the two communes in terms of receiving and processing complaints, as well controlling and handling violations of the law on forest. In Di Linh, the number of violations and the degree of sanctions are higher than those in Lạc Dương. Differences between two communes are quite remarkable. Forest area in Lạc Dương mostly is protective forest with

better protection so deforestation takes place less frequently and mostly due to illegal logging. On the other hand, forest land in Di Linh is both protective and productive so more deforestation happens due to a switch of land use purpose rather than exploitation for forest products. However, there were 49 cases of illegal transportation of wood and wild animals illegally exploited in Lac Duong (green, normal forest). This number is much higher than that in Di Linh, where only 12 cases took place.

In addition, one very alarming fact is sanctions only stop at confiscation of exhibits, pecuniary penalty and criminal charge without any activities forcing offenders to repair the damage such as to regrow the forest, to recover the damaged areas, etc. This should be paid attention to in forest governance in the region.

a. Information sharing and receiving mechanism

In their work, the commune People’s Committees, specifically the commune Forest management boards have implemented information sharing and receiving activities such as community education and intergration into the year-end summation. The sharing activity is captured by the indicator: “The number of participants/conference/year organized to disseminate the Forest Management and Protection law”. The information reception activity is captured by the indicator: “The number of interdepartmental meetings with relevant departments on Forest Management and Protection.” These indicators are shown in table 5.

Table 5: number of participants/conference/year organized to disseminate the Forest Management and Protection law

Commune	Name of conference	Number of participants				Time
		Total	Of which			
			Commune staffs	The public	Households with forest contract	
Đạ Chais	Information dissemination	32	2		30	12/9
	Year-end summation	36	8	8	20	12/12
Bảo Thuận	6 months summation	60	40	10	10	15/7/20 12

	Year-end summation	260	50	10	200	10/1/20 13
		388	100	28	260	

The information sharing and receiving mechanism of the commune People's Committees is implemented via interdepartmental meetings with relevant departments in forest management and protection. There is a big difference between the numbers of participants in year-end summation in the two communes. In Bao Thuan, the number is very large, i.e. 260 people of which 200 were households with contracts while in Da Chais only 36 people attended of which 20 were households with contracts. This fact needs to be further examined and considered in forest governance in the testing sites.

Table 6: Number of interdepartmental meetings with relevant departments on Forest Management and Protection

Commune	Content	Organizer	Date	Participants	Number of participants
Đa Chais	Department monthly meeting	Department manager	17 th everymonth	Staffs of the Forest Management Board	15
	Groups of households with contract meeting	Department manager	10/9/2013	Groups of households with contract	12
	6 months meeting	Department manager	6/2013	All commune departments	15
	9 months meeting	Department manager	9/2013	All commune departments	15
Bào Thuận	Report of tasks in the last month and plan for next month	Commune People's Committee	15/3/2013	Staffs of the Forest Management Board	28
	Report of tasks in the last quarter and plan	Commune People's	17/6/2013	Staffs of the Forest	30

	for next month	Committee		Management Board	
	Report of tasks in the first 6 months and plan for next 6 months	Commune People's Committee	16/9/2013	Staffs of the Forest Management Board	30
					145

Interdepartmental activities with other stakeholders in forest management and protection are carried out quite well in both communes. This shows that different levels of management have received and shared information about forest protection and management quite well. The commune People's Committees and the commune Forest management boards play the main role in these activities.

b. Appropriate and timely benefit schemes and policies

Good policies and benefit schemes for local staffs of forest governance are very essential in motivating them to be active in the local forest governance. From the data collected, it is observed that allowances for the commune Forest management board come from different sources such as the state budget and the fund for forest environmental services. From conversations with forest owners, at the moment forest owners have not provided allowances for the members of the commune Forest management board, because they said a payment mechanism is missing. From the discussion, it is clear that the amount of allowances and benefit could be adjusted according to the efficiency of forest management and a higher pay will enhance devotion on the part of the members of the commune Forest management board.

Table 7: Allowances for staffs of the commune Forest management boards

	Commune	Name	Position	Amount of payment/year	
				Total	Funding sources

				(đồng)	Fund for forest environmental services	state budget
1	Đa Chais-Lạc Dương	Bon Tô Ha Diêng	Department Manager	7.800.000	6.000.000	1.800.000
2		Cil Ha Su	Department Deputy	11.400.000	6.000.000	5.400.000
3		Kon Sơ Ha Sang	Village chief	6.000.000	6.000.000	
4		Kon Să Ha Thương	Village chief	6.000.000	6.000.000	
5		Cil K'Đóp	Village chief	6.000.000	6.000.000	
6		Bon Tô Sa Nga	Village chief	6.000.000	6.000.000	
Total				43.200.000	36.000.000	7.200.000
7	Bảo Thuận- Di Linh	K'Brél	Department Manager	4.680.000	2.340.000	2.340.000
8		K'Bôi	Department Deputy	23.940.000	5.940.000	18,000,000
Total				28.620.000	8.280.000	20.340.000
Total of 2 communes				71.820.000	44.280.000	27.540.000

A difference is observed in the allowances for staffs of the commune Forest management board in the two testing sites. In Da Chais commune, the village chiefs take charge of forest protection and management, i.e. contracts for natural forest. They are paid from the fund for forest environmental services, while those in Bao Thuan do not receive such amount. The Manager and Deputy Manager of the Commune Forest management board receive allowances both from the fund for forest environmental services and the state budget. However, there is also a gap between the amounts of allowances in the two communes. This comes from the difference in the type of forest, special use forest and productive forest as

well as the amount of payment in each area. In addition, the area of contracted forest for management and protection per household in Lac Duong district is 28-48ha, much larger than that in Di Linh district, where each household receives 21 – 25ha. This is the reason for a higher allowance for the staffs of Commune Forest management board and for each household annually in the protection and management contract.

Table 8: Number of staffs received awards for forest protection

	Commune	Name	Awards given for	Awards given by	Note
1	Đạ Chais	Cil K'Đóp	forest protection and management	District People's Committee	
2	Bảo Thuận	K'Brêl	forest protection and prevention of fire	District People's Committee	
		K' Bôi	Communication and information dissemination about forest protection and fire prevention	District People's Committee	

Bao Thuan, Di Linh have more staffs who have received awards than Da Chais, Lac Duong. This shows the efficiency of forest management and protection in Di Linh. However, the field team acknowledges that information about commendation is very general, without specific information about reasons for commendation or achievements of the recipients.

6.1.2. Forest allocation to improve local people's livelihoods

Contracted forest to improve local people's livelihoods

All indicators for this section are derived from secondary data of the commune People's Committees, District Forest management board and forest owners in combination with primary data collected from in-depth interviews with relevant stakeholders, households and group discussions. Key components for forest governance in "Forest allocation to improve local people's livelihoods" are demonstrated as follows:

a. Forest condition before contract

Table 9: Forest condition before contract

	Forest owners	Group/hou	Location(se	Area (ha)			Volume (m3)	Function	Planning
				Total	Fores	Bare			

		sehol d	ction)		t	land			
Di Linh (Bảo Thuận comm une)	Bao Thuan one member forestry company, Ltd	17 group s/ 180 house holds	9	3.849	3.779	70	83.426	Productiv e and protective	Forest ry
	Community forest of Kalatongu village	4 group s /196 house holds	2	500	500	0	55.368	Productiv e	Forest ry
Lạc Dương (Đa Chais comm une)	Đa Nhim Protective Forest Management Board	6/112 house holds	6	3.240	3.240	0	709.44 7	Productiv e and protective	Forest ry
	National Park Bidoup-Núi Bà	30 group s/ 308 house holds	14	14.274	12.84 7	0	3.357.7 41	Special use	Forest ry
Total		57 group s /786 house holds		26.363	24.86 7	70	4,205,9 82		

Table 9 shows two indicators of forest condition before allocation in terms of land area categorized by functions, types and status. Table 9 above states the number of groups and households that receive/contract forest for protection and management in two areas with the total area of land, forest and bare land.

The majority of productive and protective forest in Bao Thuan commune, Di Linh has low timber volume, ranging from 21 – 110 m³/ha, while the natural forest area in Da Chais, Lac Duong has very high timber volume, ranging from 218 – 235 m³/ha. This forest is owned by the Da Nhim Protective Forest Management Board and Nui Ba National Park. Consequently, the average area allocated to each household in Da Chais is quite large, about 28-48 ha/household. Meanwhile, the average area allocated to each household in Bao Thuan, Di Linh only ranges from 2.5 – 21ha. This difference creates a gap in the income from forest protection and management activities of the local people in the two areas.

b. Rights and responsibilities in allocation/contract forest for protection and management

Income structure from livelihood activities could show the contribution of livelihood activities in the total income of the local people:

Table 10: Income from forest allocation and contribution to total income

Sources of income	Average income in Bảo Thuận and Dạ Chais		Bảo thuận		Đạ Chais	
	Income	Ratio %	Income	Ratio %	Income	Ratio%
Forest allocation	8.664.440	15.6	6.769.379	11.1	10.559.500	21.0
Animal farming	2.000.000	3.6	-	-	4.000.000	7.9
Coffee	23.762.011	42.7	33.689.655	55.3	13.834.366	27.5
Rice/vegetables	4.581.810	8.2	4.163.619	6.8	5.000.000	9.9
Business	1.910.204	3.4	-	-	3.820.408	7.6
Sarlary	5.051.667	9.1	5.800.000	9.5	4.303.333	8.5
Work as hired labour	9.663.753	17.4	10.486.364	17.2	8.841.143	17.6
Total income	55.633.884	100.0	60.909.017	100.0	50.358.750	100.0

(Source: interviews with households with forest contract)

In both Bao Thuan and Da Chais, the biggest source of income comes from growing and harvesting coffee, which makes up for 55% of the total income of people in Bao Thuan and

almost 28% of those in Da Chais. Income from forest management and protection in Bao Thuan only makes up 11% of the total income, and 21% of that in Da Chai. This is a significant source of income here. Working as hired labour makes up for about 17.5% of the income in both areas. As a whole, people in Bao Thuan earn higher incomes than those in Da Chais.

Whether payment for forest management and protection is made on time is an important indicator to demonstrate local people's rights in forest allocation.

Table 11: Time of payment for forest management and protection

Commune	On time payment		Late payment	
	Number of people	Ratio %	Number of people	Ratio %
Bảo Thuận - Di Linh district	23	79	6	21
Đạ Chais - Lạc Dương district	14	43,7%	18	56,3%

In Da Chais, during the group discussions, the local people raised a lot of concerns about late payment for the forest management and protection. This reflection is expressed clearly in the table 11 above, as 56.3% people indicated that payment is made later than it should be. Local forest governance should pay attention to this.

Table 12: Rights and responsibilities of groups/households with forest contract

	Forest owners	Groups	Households	Change in area (ha)		Decrease	Number of patrolling (Quý)	Number of households participating in patrolling	Number of households violate contract	
				Q1	Q3					
1	Di Linh	Bao Thuan one member forestry company, Ltd (2012)	17	170	3849	3780	69.7	3	170	0
		Community forest (2012)	4	196	500	500	0	3	196	0
Plus Di Linh			366	4349	4280	69.7	6	366	0	
2	Đa Nhim Protective Forest Management Board		1	25	733	732	0.3	12	5 to 10	1
			1	12	366	366	0.11	12	5 to 10	0
			1	21	531	531	0	12	5 to 10	0
			1	22	658	658	0	12	5 to 10	0
			1	19	475	475	0	12	5 to 10	0
	Lạc Dương	National Park BiDoup-Núi Bà	30	308	0	0	0	7	5	0
Plus Lạc Dương			420	3251	3250	0.41	72			

During our data collection this time, there was no adjustment in payment for households or groups of households because there was no change in area or other reasons such as forest fire. However, this indicator could be tracked through time if done regularly (i.e. once per year) and this job requires coordination among forest owners who conduct periodic inspection,

households who receive contracted forest and the fund for forest environmental services. In fact, adjustment in payment for households/groups of households can be easily gathered from forest owners.

In reality, some households have violated forest management and protection activities and their payment in the contract was deducted. However, if only this sanction was applied, effectiveness and level of deterrence is not high and forest resources face a high risk of exploitation since profit that could be made from forest exploitation is much higher than payment for the management contract. Some households are willing to have their payment deducted in order to earn a higher income from illegal activities which violates the forest management regulations.

c. Effectiveness of forest management and protection after contract

Table 13: Violations and damage done to forest resources in the region

Offence	Number of cases		Damaged area (ha)		Damage forest products (m3)		Extent of damage (thousand dong)	
	2012	2013 (6 months)	2012	2013 (6 months)	2012	2013 (6 months)	2012	2013 (6 months)
Deforestation	158.0	72.0	26.9	14.4	374.1	152.0	1,749,200	318,000
Illegal exploitation of forest products	25.0	8.0			124.4	23.6	121,000	410,000
Violations of forest fire prevention, causing fire	5.0	4.0	3.0	8.4				
Illegal transport of forest products	12.0	4.0			9.3	17.2	76,000	96,000

Illegal trading, storing, processing forest products	13.0	2.0			83.3	2.0	15,000	
Encroachment of forestry land	6.0	3.0	1.4	3.0			6,000	11,000
Plus Di Linh	219.0	93.0	31.3	25.8	591.1	194.8	1.967.200	835.000
Deforestation	27.0	6.0	8.9	0.5			1.175.081	85.903
Illegal exploitation of forest products	132.0	37.0	236.7	118.6				
Violations of forest fire prevention	1.0							
Violation of timber processing regulation	1.0							
Illegal trading and storing forest products	116.0	59.0	58.5	38.0				
Encroachment of forestry land	4.0	1.0						
Plus Lạc Dương	281	103	304.1	157.2	-	-	1.175.081	85.903
Total	500	196	31.3	25.797	591.086	194.778	3.142.281	920.903

There are big differences in forms of violations and severity of forest damage in the two areas. In Di Linh, illegal deforestation happens rather often (128 cases) compared to Lac Duong (28 cases). In Di Linh, deforestation mainly happens because of a switch in purpose of land usage (i.e. from forest land to agricultural land and land for growing long-term industrial

trees while in Lac Duong, most deforestation happens because of logging and animal hunting. Therefore, sanctions and fines in Lac Duong are much more severe than those in Di Linh. Similarly, the number of illegal trading and transport of forest products in Lac Duong is very high (116 cases) compared to Di Linh (25 cases). Convenient road conditions as well as close distance to big centers for consumption (e.g. Da Lat city) are the main reason for this problem.

Fire does happen but not frequently, only one fire took place in the Bao Thuan one member Forestry Company Ltd and damaged 15ha but it was an area covered with grass, not forest. The fire was caused by people cooking in the forest.

Table 14: Number of fire discovered and prevented in 2012

	District	Section	Time	Area (ha)	Status	Reason
1	Di Linh	739 and 730	3/1/2012	15	IIB	People cooked in forest
2	Lạc Duong	0	0	0	0	
				15		

Due to different physical conditions in the two regions, forest fire prevention is quite different. In Lac Duong, most forest is green, natural forest so there is a low risk of fire. On the contrary, most of forest in Di Linh consists of human grown pine trees so the severity and extent of risk of fire is much higher than other areas.

Information for the indicator of increased timber volume was not gathered because there is no assessment of timber volume before and after contract because this job would require very high cost of human and material resources. In addition, that the boundaries among groups/households are not clear also causes difficulties for the assessment of this indicator. This shortcoming needs to be considered and overcome. In order to assess the effectiveness of forest governance, especially productive forest, timber volume is a key indicator to indicate the effectiveness of forest resources management and growth. In particular in the coming time, when activities of the REDD+ program are implemented in the two areas, timber volume assessment as well as annual growth of forest contracted for protection and management in the two areas must be integrated and implemented so that the effectiveness of

forest governance is identified as well as a more accurate payment for the people participating in forest protection can be made.

6.1.3. Forest governance status from the local people's perspectives

The interviews with households and the group discussions were conducted with the purpose of enhance local people's participation in forest governance, so in addition to collecting some information for the indicators and cross-checking information collected elsewhere, they also provided an overview of factors that influence the local people's participation in forest governance.

There are some differences in forest governance in the two areas. These differences are due to variations in how forest owners proceed and approach the local people, as well as natural and socio-economic differences in each area. However, fundamentally both the testing sites share some common features.

1. The liasion between forest owners and the local people mostly is through key contacts such as village chiefs, head of contract group, commune People's Commune. The local people often receive information about forest contract for protection and management through these contacts.
2. From the discussion, the criteria for a household to receive a contract are as follows:
 - Availability of labourers
 - No record on damages to the forest resources
 - Priority is given to poor households or ethnic minority households
 - Strong desire to participate

In Bao Thuan, the local people requested to add 3 more criteria

- Maintain fairness by contract rotation so all households can participate
- The community should be consulted in households evaluation for the forest contract, priority should be given to households with high commitment to the forest.
- Community evaluation for households with forest contract should be carried out annually.

This shows that at the moment the local people have not found the contracting process fair and they wanted to participate in the whole forest governance process in their areas including selecting which households to receive the contract rather than being passive as they are

currently. This aspiration is strongly felt when the local people expressed that each contract should last for 2 years instead of 5 years so other households can also participate in the contract.

In Lac Duong all households received forest contracts so they did not show much interest in the duration, while in Di Linh only some households received contracts and other households must wait for an uncertain length of time. However, in Lac Duong the number of households receiving contracts is increasing so the amount of money each household receives from forest protection is decreasing. The local people expressed some concerns over this matter.

One obvious problem here is the forest contract does not encourage participation from households with above average income, since they are not interested in forest protection and management or the payment from the contract is not significant to them. This is a weakness of the contract, which excludes households with above average incomes from forest governance.

3. The local people's goal and strongest interest in forest contract is to increase income. More than half (58%) of people interviewed said the current payment rate for forest management and protection is too low, 37% thought it is reasonable and 5% considered it too high. On average, income from forest protection and management contributes 15.6% to the total income of households with forest contracts (21% in Lac Duong and 11% in Di Linh). Therefore, this is a significant source of income for the local people, especially poor households.
4. The local people have not been able to really participate in the contract as they play a relatively passive role. They have not discussed to identify their roles, responsibilities and rights but mostly followed other people's instructions. The majority of the local people (73%) believed that the procedures for them to receive a forest contract were simple and convenient. They just needed to submit a copy of their IDs, signed the contract and received quarterly payment. Most people who have signed the contract do not know the terms written in the contract, and even do not keep a copy of the contract. This should also be noted in the contracting process because it shows that the local people have not truly participated in the forest governance process.
5. Most of the households do not know clearly where their contracted forest is, but only know where it is located approximately within a group of other contracted forest. This shows the important role of groups and grouping households who have forest

contracts. However, this also signifies the lack of active participation, clear understanding of their rights and responsibilities, which leads to difficulties in personal accountability when violations of forest management and protection happen.

6. The local people are not very interested in participating in the forest protection process. They do what they are assigned, mostly jobs distributed by forest owners. They consider themselves hired workers and receive payment rather than taking control of forest protection and management. Some households in Bao Thuan rarely participate in forest protection activities even though they have contracts.
7. Agencies and individuals whose roles are important in the local people's contract are forest owners, village chiefs, heads of contract groups and commune People's Committee. The most supportive agencies before and after the contracting process are forest owners, village chiefs, local forest rangers, and commune People's Committee. If the local people need to send feedback about forest protection and management activities, they would meet the head of their groups, the village chief and afterwards the village chief will address the problem to the commune People's Committee and the forest owner.
8. During discussion, the local people seem to understand their rights, benefits and responsibilities of households with contracts. However, they mostly follow instructions and requests of forest owners, the village chiefs and the head of their groups in forest protection activities.
9. In forest protection and management activities, the local people have access to information about fire prevention and fire fighting, prevention of slash and burn farming, exploitation of forest products, hunting and transport of wild animals. Most local people have access to information spread by the commune People's committee, forest rangers and forest owners.
10. The main forest protection and management activity most households are currently doing is patrolling. They divide the tasks among groups, teams and patrol periodically. Forest development activities have not really been paid attention to.
11. Contract duration: different households have different contract duration. In Da Chais, contracts last for 1 year, while in Bao Thuan, contracts used to last for 2 years and now they last for 5 years.

The local people indicated that duration of 2 years is reasonable (Bao Thuan), because contracts should be rotated so other households could receive forest to protect and manage. In Da Chais, the local people take the activity for granted and they do not pay attention to the duration. On the contrary, in Bao Thuan, there are 200 households but only 20 households receive the contracts, so the local people really care about the duration of contracts. With the current mode of rotation, as the contracts last for 5 years, some households must wait for a few tens of years before they receive the contract.

12. For households with allocated community forest in Bao Thuan, the local people have started to understand the benefits of forest allocation. In particular currently forest is allocated for their community for 50 years, and they could benefit from payment from the fund for forest environmental services. However, they have not realized the impact of growing and developing forest and have been focusing on protecting and managing the area of forest already available.
13. Having understood the differences between contract and allocation, the local people were asked which mode of engagement they preferred. There is a remarkable difference between the choices of people in Di Linh and those in Bao Thuan. About 65% of people in Bao Thuan wished to be allocated forest while only 19% of people in Da Chais did. This is understandable given the fact that most forest area in Da Chais is special use and protective forest while forest in Di Linh is productive. In addition, contracts for a large area of forest could generate a significant amount of income for people in Da Chais and that motivates them to receive contracted forest.
14. When answering the question above, some people expressed concerns over their ability to protect allocated forest. Some households preferred contracts because allocated forest is often poor while they did not have capital to invest as well as ability to protect the forest. When asked whether they would be interested if allocated forest comes with seeds and technical assistance, they were enthusiastic and stated that they would develop human growth forest to bring benefit for their families and the society.
15. Comments on radio programs related to forest protection and management:
 - Programs have been broadcast but the speakers often break down and have low quality so it is difficult to listen to.
 - Insufficient and inappropriate length of programs

- The contents should be more diverse and easier to understand
- Should broadcast from 5.30am – 6.30am and 4.30pm-5.30pm, when the local people are home.

16. Some comments on ways to improve forest protection and management activities

- Professional, technical trainings in forest protection and care
- Provide safety equipments and fire prevention equipments
- Technical training in seedings, forest recovery, regeneration and development.
- Provide herbal plants, forest products besides timber, rare timber species for the people to grow in order to improve forest quality and their income
- Support in making a detailed map of the allocated and contracted forest so the people understand well their areas and their tasks.

6.2. Evaluation of the tools

- The input tables design has utilized the local authorities' current system of data tables or relevant management systems. PGS's tables have few differences from current systems of data tables and avoid unnecessary difficulties for the data collection teams especially agencies such as forest owners and offices of commune People's Committees.
- The systems of tables/format have taken into account the edits and comments from previous field activities. Relevant concepts in the tables should be explained and noted clearly under each table for the data collectors, such as forest contract, forest allocation, benefits and responsibilities of forest contract, forest allocation.
- The questions were simplified and clarified, cleared of technical terms so the local people could understand easily. The current arrangement of questions is appropriate and systematic enough to lead interviewees to think about relevant issues. Questionnaires for ethnic minority groups were not simplified enough, so the local staffs still needed to make adjustment to ensure that the interviewees understood the questions correctly.
- The group meeting content table repeats a lot of information in the household questionnaire. For the group discussions, issues should be categorized into areas rather than discussed as questions. Note-taking in group discussion should be improved to avoid losing important information when the local people discussed.

- Some input tables collect information irrelevant to the indicators. For example, Table 7.3.4: General information about radio programs related to forest protection and management in 2012
- Necessary adjustments are clarifications for the interviewees so they could provide information and filled out the questionnaires correctly.

6.3. Evaluation of the indicators

This part answers the following questions:

6.3.1. Do the indicators capture the two main issues of governance?

+ First issue: “Local authorities and departments’ participation in forest governance and decision making process”

- Even though this issue refers to how the local government (i.e. the commune People’s Committee) and other government agencies participate in the forest governance process and decision making for forest protection, but most indicators related to capacity, information sharing and receiving mechanism, timely and appropriate benefit schemes focus on the commune People’s Committee and do not mention other relevant departments and agencies such as forest rangers, forest owners and others.
- Whether forestry capacity of the commune People’s Committee is key to local forest governance, especially in contracted forest is worth discussing. From information collected, all activities and techniques relate to silviculture and forest development are researched, proposed and implemented by forest owners. The staffs of commune People’s Committee and Forest management board only play a supportive role in coordination.

For example, in Bao Thuan commune, Di Linh district, among the staffs of the commune there are 2 people graduating with degrees in Forestry but they do not work in the Forest management board but instead work in the Youth Union. This shows that human resources in Forestry have not been used appropriately. The question is whether the commune Forest management board really needs staffs with specialized degree in Forestry while their main role is in coordination, while activities in forest resources management and protection are not many and do not require any special technical understanding.

Therefore, the use of an indicator for capacity of staffs of the Forestry Department needs to be further discussed because the roles and functions of the commune People’s

Committee do not relate to technical activities in forest resources management and protection.

- Indicators to measure capacity of forest owners and forest management boards are missing. These indicators need to be added in future assessment because these groups are the main force in forest resources management and protection. Although information and indicators were collected from sources of forest rangers and forest owners, they were not the focus of those indicators.
- With the current mechanism, funding for activities of the Forest management boards is from the state budget and forest environmental services. They have to work without benefiting from the result of their work. Forest resources growth will benefit forest owners. This arrangement can not ensure that they will be active and dedicated in their jobs.
- In addition, the current indicators still lack an indicator to measure the participation of Forest management board staffs in forest management and protection. The current indicators do not show their specific responsibilities and their commitment for their jobs.

Therefore, it could be concluded that the first issue of forest governance was not captured well in this indicator set. Most indicators focus on the capacity and coordination of the commune People's Committee, in particular the Commune Forest management board. They did not measure the roles, functions and capacity of other stakeholders such as forest rangers and forest owners in the process of forest management and protection. This gap should be addressed.

The focus of the current indicators is Commune People's Committee and Commune Forest management board rather than the participation of other departments and stakeholders in forest management and protection. Therefore, some adjustments are needed to balance between the commune People's Committee and relevant agencies.

+ The second issue: "Forest contract to improve the local people's livelihoods":

- Forest area categorized by functions, type and status. So far, forest contracted to the local people only stops at protection, namely the main task is to patrol and protect the area of forest from deforestation or violation, thus the local people have not focused on forest development activities. In addition, the application of factor $K=1$ in payment for forest environment services makes the contracts similar for everyone and the contractors are not interested in the quality of contracted forest but only the quantity.

- In fact, the local people do not even know clearly the boundaries and the areas they receive and only know vaguely that their forest is located in this or that region, particularly those who receive forests in groups or teams. Therefore the indicator of “Area of forest” categorized by functions, type and status has not been paid attention to. This will be fixed as in the long run the payment for services will take into accounts elements that affect factor K in service payment.
- Timber volume is an indicator that shows the growth of forest resources, explained clearly in details in the contract/allocation terms. However, this number was not derived from measurement but rather an estimated average by years (for human grown forest) and condition (for natural forest)
- As mentioned above, the amount of payment households receive from forest protection and management activities is almost fixed with the contracts which last for 1, 2 or 5 years. A change might come from recalculation and adding potential environmental services to increase payment, such as REDD+, tourism, bio-diversity values, etc. Therefore, during the contract, there is no change in the value of this indicator. The same will happen to the indicator *“income from forest protection and management contract/total income of households with contract”*.
- The number of households participates in patrolling per month illustrate that all patrolling activities are done in group and are organized and arranged by forest owners. Households and groups with contracted forest participate in patrolling under the supervision and support of forest owners. In fact, households and groups have not participated actively, in some cases a household only patrol once per month or once per quarter.
- The number of households violating the contract shows that very few households violate the contracts in both testing sites. However, the number of cases in table 13 only show cases of direct violation such as encroachment of forest land, violation of fire prevention regulation, etc but does not include lack of participation or little participation in forest protection activities that were stated in the signed contracts.
- The number of cases and amount of forest damaged in months, quarters and years could not be collected in the households/group level but there was a statistics of violations in the whole district provided by the District Forest management board. Therefore, this number does not really reflect the result of forest protection of households and groups with contracts.

Forest owners need to closely keep track of violations of households with contracts in the area managed by the households/groups.

- The number of times and area of forest where a fire is discovered or prevented per year, similarly to the indicator of the number of cases and area of forest damaged in months, quarters and years, this indicator was collected from secondary data of forest owners and generalizes for the whole areas that belong to forest owners, so it was impossible to charge any households or groups with responsibility.
- Change in area of forest before and after contract of each household is very difficult to identify because boundaries and areas of each households were not clear from the beginning. Up to now, forest owners can only identify changes in area of forest land managed by groups (table 13). Therefore, households' accountability when forest is violated is not clear.
- Increase/decrease in timber volume by periods: Due to a lack of specific statistics of each household/group (contract is made according to the forest condition) so it is difficult to identify increase/decrease in timber volume periodically in the future even though now forest owners have provided statistics related to volume of contracted forests, i.e. the total volume of the whole contracted areas, not concrete number of each household/group. This specific data should be measured and kept track of regularly, and the information could be used for PGA activities in phase 2.
- Income from forest protection and management/total income of households: information for this indicator was possible to collect and this indicator could demonstrate the contribution of forest protection contract towards the local people's income.

In conclusion, the indicators and factors that have been used do not really measure the second key issue in forest governance, namely "*forest contract to improve the local people's livelihoods.*" Some factors such as forest area (categorized by functions, types and conditions), timber volume (before and after contract), number of cases and amount of area of forest land damaged in months, quarters and years. Increase/decrease in timber volume tracked in periods is not really suitable with the specific conditions of the local area, i.e. currently contract forest have not truly cared about functions, types, conditions and timber volume, etc; even though these indicators are mentioned in the contract for the local people.

6.3.2. Do these indicators show the challenges in governance?

Two general issues in local forest governance that were identified area (1) decision making and the mechanism to make decisions in forest management and protection and (2) whether the current forest governance really bring benefits to the local people. The current tools and indicators are able to partly capture these issues. However, there are still gaps and shortcomings that need to be addressed to ensure effectiveness and sustainability of the current forest governance process and were not captured by the tools and the indicators.

+ **Benefit sharing mechanism:** currently, value of contracts is withdrawn from the forest environmental fee and allocated in the following way, 10% for the staffs of the Fund for forest environmental services, 9% for forest owners and 81% for people with contracts. Added values from timber go to forest owners exclusively.

- Local people with contracts receive 81% of the fee for forest environmental services but they are not responsible when deforestation happens due to fire, illegal exploitation or switch of useage, unless they themselves cause the damage by doing those activities. They do not benefit from the added vaule of protecting and managing the contracted forest. The current rate of payment (8.6 million/household/year) is not high enough to incentivize people to participate
- Forest owners receive 9% of the environmental services fee and the added value (timber) of forest resources.
- Other agencies such as forest rangers, commune People's Committee do not benefit from the governance activities.

The question here is whether this benefit sharing mechanism affects participation in forest resources management and protection.

+ **Actual participation of various stakeholders in forest governance**

- The commune People's Committee (or the commune Forest management board) only participate as a local administrative agency and fulfill their management responsibility without any motivation to participate actively in forest protection and management. There have been no indicators to measure their responsibilities.
- District Forest management board is the government agency to take charge of forest protection and ensure that the law is followed when it comes to forest protection, management and forest products management. They also coordinate with and support forest owners and commune People's Committees.

- Local people who participate in forest contract in reality are hired labourers who receive low payment, even though technically they receive 81% of the total fee paid to environmental services. In addition, the contract is mostly a formality and no clear legal regulations identify their specific roles and responsibilities in management. They do not benefit from added values from the forest (timber).

The fact that the local people are lacking productive land, together with high value of industrial trees creates pressure on switching purpose of land or encroaching forest land to produce. Due to those reasons, the effectiveness of forest management in the area is quite low, and deforestation and degradation of forest products continue to take place.

- The local people have not truly participated in local forest governance. They play a passive role in the whole contracting process for forest protection. They are mostly not informed and able to contribute any thoughts to the process of distributing and receiving contract and implementation of forest protection activities. This one way information sharing and decision making leads to a risk of safety for them in the upcoming REDD+ activities.
- Information collected shows that the local people have not participated in the development of a forest protection and management plan for contracting, rather than submitting a copy of their IDs and signing the contracts. They considered the procedures very simple, however, this simplicity might present potential risks for the local people because they did not keep a copy of the contract and did not understand what their rights and responsibilities are besides patrolling as forest owners requested. This demonstrates that forest owners have implemented the contracting process as a one-way procedure and have not discussed or shared information with the local people to achieve effectiveness in the forest contract activities.

In fact, this second issue is the consequence of the first issue, namely the benefit sharing mechanism. As the mechanism is not clearly defined and stakeholders do not see their interests, their participation will be formality and will not be effective in the forest resources management and protection.

6.3.3. Whether these factors have identified main issues in governance

From the analysis above, the most important issue in forest governance is to identify who makes the key decisions, how the decisions are made and how they are implemented. From analysis of two main issues in local forest governance, it is observed that:

- The provincial People's Committee decides the forest contracting process. Recently, the provincial People's Committee issued a document No. 6808/UBND-LN on December 4, 2012 to recover all contracted and rented land currently managed by different organizations to give to the local people so they could participate in forest contract for protection and management and benefit from that. Therefore, forest owners only performed the tasks assigned by the provincial People's Committee' when they made contracts with the local people.
- Factors and indicators focusing on capacity, information sharing mechanism, timely and appropriate policies and benefit schemes have only focused on the commune People's Committee and the Commune Forest management board, which are administrative institutions coordinating and supporting forest owners to fulfill their tasks of managing and protecting forest resources. In fact, the commune People's Committee does not have the power to control local forest governance activities. Meanwhile, forest owners were not assessed and considered in the indicators of this tool set. Although some information from secondary data taken from forest owners have been added to the indicators but it was not enough for the analysis.
- In the two testing sites, forest owners play the decisive role in forest contracting process. They can make decisions about who can participate in the local forest governance with specific criteria for households to receive contracts and priorities, how they participate (e.g.individual households, team, group), level of participation (e.g. drafting the contracts and signing contracts that last for 1 year, 2 years, 5 years). They also support and supervise activities of groups (e.g. schedule patrolling, conduct assessment with inputs from households and groups) mobilize support from the local government and specialized agencies for relevant work, such as the commune People's Committee and the District Forest management board, pay the fee for forest protection and management for households that participate in this activity, with rate and time of payment, and do other specific silvicultural and forest management activities. This shows that although the tool set have adjusted and changed after the test in August but still has not met requirements.
- The local people, in particular, households who receive forest protection contracts have close connection to the local forest governance activities as they participate and benefit from it. However, they have not demonstrated their roles and participation in all aspects of the forest governance activity such as forest resource planning and development, discussion and negotiation of households' specific rights and responsibilities, how they

should participate, transparency and forms of organizing and implementing forest protection and management activities in the areas of contracted forests. Many households and group do not know exactly their areas and boundaries, are very passive in the activities and do not really contribute to the local forest management and protection.

- Currently, households without contracts are being excluded from the local forest governance. Some households have not received forest, some others have no demand. PGA should take into account this issue.
- The average income from forest contract is 8.6 million/household/year according to the households' survey, making up about 15.6% of the total household income. This amount is significant for low-income families. However, their participation is not active so forest governance activities are not effective, benefit from contracting forest with the local people is not high. Furthermore, when forest fire does happen, forest owners bear responsibility. This is the reason forest owners are not keen on allocating forest to the households to protect and manage.

6.3.4. *Are these indicators really sustainable?*

To assess whether the indicators are sustainable depends on many factors, however table 14 presents some assessment of the current indicators based on some criteria such as possibility of data collection, stability of the indicators and some factors that could affect the indicators' sustainability. This assessment is still a rough guide and requires further discussion and adjustments.

Table 15: Sustainability of the current indicators

Code	Name of indicator	Sustainability (Y/N)	Explanation and suggested changes
A.1.1	Manager staffs with post-secondary education and above.	Y	Could be tracked through time and still meaningful because increased capacity means better contribution to the work
A.1.2	Number of staffs with a forestry degree in the commune Forest Management Board	N	The main goal and task of the commune is not to protect and management forest, so this is not their priority (as the example of Bao Thuan shown above)
A.1.3	Number of years	N	The staffs only coordinate and support so this

	working in forest management and protection of the staffs of the commune Forestry Management Department		indicator does not measure the capacity of decision makers in forest management, protection and development.
A.1.4	Number of complaints about forestry resolved	N	The commune is only responsible for reconciling, giving sanctions or transferring files. This indicator does not show whether this work actually impact the effectiveness of forest management in reality
A.1.7	Number of violations of forest law discovered and handled	Y	Should be collected together with the area of allocated/contracted forest, should not be calculate for the whole district as in the current data
A.2.2	Number of people/conference/year organized to disseminate information about forest protection and management law	C/ N	Does this indicator demonstrate understanding of the people who showed up for the meetings? If integrated meetings are also counted, does this number mean anything, because people who do not work in forest management are also present?
A.2.4	Interdepartmental meetings with relevant departments about forest management and protection	Y	Show information receiving and sharing among stakeholders in communication about forest management and protection
A.3.1	Allowance for staffs of the Forest Management Board per month	Y	Should add an indicator of staff engagement because allowance does not express how the staffs involve in forest management and protection
A.3.2	Number of commune staffs given awards for	Y / N	Should reconsider this indicator or add explanation for the awards, specific jobs that

	forest management and protection		earn awards.
B.1.1	Area of forest (categorized by functions, types and conditions)	Y	Supplemental indicators should be added, whether the people who receive contract know about these targets.
B.1.2	Timber volumn	N	Difficult and not feasible at the household level because it requires too much efforts to do survey and supervise and have not been able to use in reality.
B.2.1	Amount of money received from forest management and protection activity per household	Y	Demonstrate the benefit local people could get from forest management and protection per unit area.
B.2.2	Number of households participate in patrolling per month	Y	Should add the number of days per month or per year to identify accurately income or value of each working day in this forest management and protection activity
B.2.3	Number of households violating contract	Y	Should get specific statistic from the forest owners, currently this data is calculated for the whole district
B.2.4	Number of cases and amount of forest damaged (in month, quarter, year)	Y	Should add that this indicator only applies to groups/households who receive forest, and their forest area
B.2.5	Number of cases/amount of forest area where fire is discovered and prevented per year.	Y	Should add this indicator only applies to groups/households who receive forest and their forest area
B.3.1.	Area of forest before and after contract	Y	What if the area stays the same but the quality reduces?

B.3.2	Periodical increase/decrease in timber volumn	N	If information about the volumn before contract cannot be obtained then the quality of forest after contract cannot be assessed.
B.3.3	Income from forest management and protection out of total income	Y	Clearly demonstrates the ratio of income from forest management and protection out of total income

6.4. PGA framework indicators

To gain an oriental basis for upcoming work of the PGA process, PGA framework indicators were developed. However, this task can only tackled meaningfully when the indicators are really valid and governance aspects can truly express the current status of local forest governance. From the results of the data collection and data analysis, we would like to recommend building a grading scale for the indicators and from there developing the PGA indicators framework.

This system works on the basis of grades collected from values of the indicators (e.g. from 1-10) for all indicators that satisfy requirements and gain attention. After this grading scale has been established, the indicators are evaluated using the grading scale in order to generate an overall score of the tool set for each area and each group. The overall score will express the current status of local forest governance. A separate score for each stakeholder will supplement other perspectives in forest governance activity and can be use for recommendation of support and coordination activities among relevant partners. However, these points can only be achieved when the main governance issues are captured and the indicators as well as the tools for data collection are sustainable and fulfill technical requirements.

From the results collected from testing the indicators, we propose the process to develop a PGA indicator framework including the following steps:

1. Screening and adding indicators on the basis of:
 - a) Accurate assessment of the local main forestry governance aspects
 - b) Accurate assessment of the role of stakeholders
 - c) Appropriateness (important, little important, not important)
 - d) Can collect information in the field
 - e) Can be quantified and used to track changes inn forest governance through time

- f) Sustainability of the indicators
- 2. Build a grading scale for each indicator
- 3. Develop an instruction to convert the indicators into appropriate scores.
- 4. Develop a suitable grading scale for each issue, important factors of forest governance and stakeholders
- 5. Evaluate the current status of forest governance and propose solutions to influence and support based on the scores of each component.
- 6. Regularly check, add and update the tool set.

All steps must be performed with the participatory approach with feedback and contributions from the members of PGA experts. This process could be implemented step by step, with documentation of notes and lessons learnt to serve future adjustments.

7. CONCLUSION AND RECOMMENDATIONS

7.1. Conclusions

7.1.1. The status of local forest governance:

The two selected district and commune areas have different conditions, but overall forest owners have participated actively in forest contracting process to enhance the participation of the local community in forest protection and management as well as to improve the local people's livelihoods.

The current status of local forest management is shown quite clearly though:

+ Roles, functions and responsibilities of stakeholders:

- The commune People's Committee is a government administrative institution, which supports forest owners in managing, protecting and developing the forest resources. The commune Forest management board directly involves in activities jointly conducted by forest owners and local people, with specialized staffs who receive allowances from the state budget and the fund for forest environment services. This institution plays an intermediary role, receiving and sharing information related to forest resource protection and management, organizing communication activities to raise the local people's awareness of forest protection and management, prevention of forest fire, patrolling, supervising and developing forest resources. This group is the focus of the indicators, however this focus should be reconsidered.

- Forest owners receive forest resources assigned by the state, playing an important role and bearing responsibility for the protection, development and management of forest resources. They give contracted forest to households/groups of households for protection and management to reduce pressure on forest resources and enhance the local people's participation in protection and management and improve their livelihoods. However, forest owners' functions and responsibilities are not shown clearly in the indicators.
- District Forest management board carries out the state regulations on forest protection, ensuring the law on forest protection and development and forest products management are followed, supports forest owners to fulfill their tasks. However, their functions and responsibilities are not clearly shown in the indicators.
- The local people who receive forest contracts for protection participate and benefit from patrolling and supervising the forest resources, however, they have not really participated in the local forest governance process. They are quite passive in the whole contracting process. They almost never speak out during the contracting process, distributing and receiving forest land

During forest protection activities, this one way information sharing and decision making is an obstacle to REDD+ implementation in the future.

+ The benefit sharing mechanism and participation of stakeholders:

- In the current forest contracting mechanism, the local people who enter a contract benefit the most from the payment for forest environmental services as they receive 81% of the total amount. However, this source of income only contributes 15.6% to the household total income. This shows that forest protection has not yet been an attractive option for the local people.
- There needs to be a support mechanism so the local people could benefit more from their participation in forest protection. Benefit mechanism from forest protection (i.e. added value, in particular timber) will be an incentive for people to participate actively and sustainably in forest protection.
- In addition, other stakeholders such as the District Forest management board, the commune People's Committee should also participate in this benefit mechanism to ensure the sustainability of forest resources management and protection.

- Currently, households with above average income are not motivated to participate in the forest protection contract because either they are not interested or the payment is not significant for them. This is a shortcoming of the forest protection and management contract, because it unintentionally excluded households with above average income from forest governance.
- The local people have changed in a few positive ways as they participated in forest protection and management activity. They have proposed some feedback to the selection of households for the contract, identified an appropriate duration of the contract and wished to receive forest to use for the long term.

7.1.2. The tool set

Generally speaking, the tools are useful in collecting information, especially the system of indicators. However, as already analyzed, the current tools (see annex 1) need a lot of adjustments.

There are 19 indicators, of which information for 16 indicators can be collected from secondary data and information for 3 indicators can be collected from primary data. The tools consist of:

- 4 input table for secondary data from forest owners
- 2 input table for secondary data from the forest rangers
- 6 input table for secondary data from the commune People's Committee
- In-depth interview questionnaires for forest owners, the forest rangers and the commune Forest management board
- Questionnaires for households with contracts
- A list of topics and themes for group discussions.

Secondary data can cover most issues in the two aspects of local forest governance. Primary data adds some information from households with contracts such as payment from the forest protection and management activity, the ratio of this income compared to other income and total income, the number of households participate in periodical patrolling.

Therefore, the usage of such comprehensive tool set to collect information for 19 indicators cause waste in human resources and time spent to collect data. The tools should be adjusted

so questions and tables are shortened and focus on concerned issues. Redundant steps in data collection should be removed.

7.1.3. The indicator set

a. Whether the indicators have captured forest governance issues

The component “*Local government and agencies’ participation and coordination in forest protection management and decision making*” of forest governance has not been well captured in this indicator set. Most indicators have only been also to show the capacity and coordination of the local government (i.e. commune People’s Committee) and have not captured the roles, functions and capacity of other agencies and stakeholders such as the forest rangers and forest owners. This shortcoming should be addressed.

Other indicators and components have not been able to capture the second key issue of forest governance, which is “*forest allocation to improve the local people’s livelihoods*”. Some factors such as forest areas (categorized by functions, type and condition), timber volumn (before and after contract), number of cases and amount of area damaged (in months, quarters, years), periodical increase/decrease in timber volumn are not really suitable to the specific condition of the testing sites.

The current forest contract does not include information about forest functions, types, conditions and timber volumn. Other indicators such as the number of cases and amount of forest area damaged are not specific to each contracted forest areas but rather the general statistics for the whole district. The level of increase/decrease in timber volumn is not kept track of.

b. Main challenges in forest governance:

The current indicators do not show the main challenges in forest governance, which are:

- Identify the roles, functions and responsibilities of various stakeholders. Now the roles of forest owners and District Forest management board are missing.
- Appopriarte benefit sharing mechanism. The current benefit mechanism is not a good incentive for diffent stakeholders to participate actively in forest governance.
- Actual participation of various stakeholders in forest governance. This is an inevitable consequence of an unclear and unfair benefit mechanism

c. Whether the components have captured the main aspects of two selected governance issues:

The key components have focused on the 2 selected main issues in local forest governance. However, these components did not demonstrate the current status and condition of local forest governance. Therefore, they need to be adjusted to reflect accurately the current status of local forest governance and express more clearly the challenges in governance issues as stated above.

d. Indicators' validity

Most of the indicators are quite valid. However, some are not really valid and whether they are feasible depends on adjustments in local forest governance activities made by forest owners. Some indicators rely on techniques which are still missing or weak in forest owners' activities, such as areas of forest (categorized by functions, types and conditions), periodical increase/decrease in timber volume, etc

Furthermore, forest governance is a wide and complicated concept; some aspects such as law enforcement, accountability, rights and sanctions seem to be missing from this indicator set. This should be addressed in a timely manner to ensure PGA's long term values.

7.1.4. The PGA process

- From the forest governance perspective, the development of the tools completely based on participation is good. However, the results show that the tools did not really capture the most important challenges in forest governance based on 5 governance principals, which are transparency, accountability, effectiveness, fairness and participation. This shortcoming of the tools should be addressed.
- We would like to make the following suggestions for adjustments:
 - o The local government, specifically the commune People's Committee, do not play a vital role in the forest governance process as shown in PGA indicators. The stakeholder that plays a very important role here is forest owners; therefore, the key component of the first issue (i.e. Local government and relevant agencies' participation and coordination in forest protection management and decision making) does not really address the group that needs attention. The main issues and the indicators could stay the same, but forest owners must be added as the focus of interest, not the commune

People's Committees. This could be a consequence of the fact that forest owners did not participate in the PGA process and most of the team who built the tools and the indicators were the People's Committee staffs.

- The development of the tools needs a better methodology. The expert method approach should be added in the selection of key governance issues and the establishment of components and indicators for these components. However, this process should also be discussed with the local team to ensure practicality and appropriateness to the local conditions.

7.2.Recommendations

7.2.1. *Forest governance status*

The local forest governance activity should implement the following changes

- Enhance the role of the stakeholders in forest governance process
- Develop an information sharing mechanism about forest governance process
- Develop a clear benefit sharing mechanism so as all stakeholders who participate in the local forest governance activity can benefit from it.
- Promote the local people's participation through awareness raising, capacity building activities and other economic incentives.

7.2.2. *The tool set*

- The tool set is relatively complete, however there are too many tables and too much work to be done in order to collect information for the 19 indicators. The amount of work should be reduced.
- The tables for secondary data are too long and disperse; they should be shortened and focused on the concerned indicators.
- The in-depth interviews for 3 groups and households are very time consuming but only provide data for 3 indicators.

7.2.3. *The indicator set*

- Other stakeholders in the local forest governance process such as District Forest management board, forest owners need to be added to the indicators that capture "*Local government and relevant agencies' participation and coordination in forest protection management and decision making*"

- Some indicators are not valid and need supplementary indicators to clarify such as forest area (categorized by functions, types and conditions), timber volume (before and after contract), the number of cases and amount of forest damaged (in month, quarter and year), periodical increase/decrease of timber volume
- The tools need to include some other very important issues in forest governance such as an appropriate benefit sharing mechanism, actual participation of the stakeholders in forest governance. In addition, the indicators need to be adjusted to reflect the actual situation of the local forest governance.

7.2.4. The PGA process

- The development of the tools need better participation from relevant stakeholders because those already participated in the PGA process such as the Department of Environment and Natural Resources, the Department of Forestry, representatives of forest owners, representatives of the local people with contract and without contract to diversify viewpoints of other groups of forest governance as well as to assess the actual need of the local people.
- The indicator set:
 - o Conduct workshops to gather feedback from various stakeholders about the tools and use the information to improve them
 - o Continue to refine the indicators with appropriate criteria.

Before the development of the indicators start, an expert method approach should be added. Various experts list all aspects of the forest governance activity, identify all concerned issues in forest governance process, and from there identify the key components of proposed issues. The PGA process continues with the participation of all stakeholders based on the foundation provided by the groups of experts. They select the issues that are most appropriate to their local conditions and develop indicators to assess and monitor. With this method, the discussion will be more focused and the participants can have a better understanding of the big picture and the general context of forest governance. Analysis and implementation of forest governance should be better developed so that it includes all of the following aspects: different forms of ownership, right to access, right to use, right to control, right to transfer, secure land tenure, benefit sharing, solutions in terms of prices and benefit to attract investment in forestry, law enforcement and supervision, accountability system and sanctions. However, it should

be noted that the whole process must be consulted thoroughly with the representatives of key stakeholders in local forest governance with necessary adjustments.

- Two groups which need support in order to facilitate the forest protection and management better and more effectively are the local forest rangers and the village chiefs (or the head of groups of households with forest contract). The PGA process needs active participation from these two groups at the grassroot level, partly because all activities related to the local people's forest protection are supervised, monitored and supported by these two groups; partly because they work as a liaison between the government and forest resources protection agencies and the local people. They often understand the thinking and needs of the local people
- To avoid absence of different stakeholders in a participatory process, one list of prioritized representatives must be made from the beginning.

Besides providing monitoring for the forest governance activity, the data collection activity for PGA is also a communication activity which raises the local people's awareness on the role of forest resources to livelihoods, environment, especially through the interviews with households and group discussions

The field data collection should be joined by both local staffs and an independent team so the data collection process can be both smooth and objective.