

Carbon rich land use models in Bac Kan province



FIELD REPORT

November 2011

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Abbreviations

CFM	Community Forest Management
DARD	Department of Agriculture and Rural Development
DONRE	Department of Natural Resources and Environment
DFP	Department of Forest Protection
DoF	Department of Forestry
HH	Households
LUR	Land Use Right

Table of Contents

- I. About the team
- II. Abbreviations
- III. Table of contents
- IV. Study overview
 - a. Aims of the study
 - b. Research questions
- V. Methodology
 - a. Study Site
 - b. Data collection
- VI. Results
- VII. Conclusions and recommended actions
- VIII. Annexes

Study Overview

Aims of the study

Reducing Emissions from All Land Uses (REALU II) brought a new dimension into current discussion on REDD+ construction that currently ignores high potential emissions reduction and sequestration in landscapes. Furthermore, to address drivers deforestation and degradation outside of forest, REALU recognizes that carbon credit may also be used to promote non-forest tree-based land use, as a part of sustainable development pathways of the landscape. This was in line with an aim of Rewards for, Use of and Shared Investment in Pro-poor Environmental Services (RUPES-II) Project, that promoting sustainable land use practices as a reward for local people to maintain forest environmental services, including carbon sequestration.

In Vietnam, REALU II and RUPES II have been very closely linked in Bac Kan province, where both forest cover and poverty rates are significantly high compared to country's average. During November 2010, the ICRAF team members conducted two trips to Bac Kan province to find about successful models of carbon rich land use. The aim of the trip was to gather lessons learnt from past experience on sustainable forest management approaches, to later on promote them (Hoang Minh Ha et al 2008). As well as to evaluate the awareness of government units in terms of sustainable forest management and payment for environmental services.

Research questions

1. Where the most valuable and threatened are forest located in Bac Kan?
2. Which are the threats and measures adopted to protect them?
3. Which are the most successful of those measures and why?
4. What is community forestry according to policy makers perspective?
5. What is the level of awareness of Payment for environmental services of policy makers?

Methodology

The study site and data collection

The carbon rich models study continues a series of researches conducted in Bac Kan province in the past 10 years. There are 3 focus districts in the province, namely, Ba Be, Pac Nam, Na Ri, corresponding 3PAD/IFAD project sites. ICRAF's survey team select sites for carbon rich land uses investigation within these 03 districts. Criteria for selection of these sites are:

- Interviewing key informants at province and district level (cross-checking and digging for deeper information)
- Relevant to Nang river watershed
- Relevant to agroforestry and (carbon rich) land uses

- Accessibility

Once the main action sites had been selected, the team identified the study locations at a smaller scale (commune, village), by means of interviewing key informants at the different levels. Key informants are coming from organizations like DARD (and forest departments such as DoF, DFP, forest rangers), DONRE, People's committee, and head of mass organizations where gathered in group meetings were a checklist of questions focusing on forest conservation and agroforestry was used to collect qualitative data (see Annexes 1, 2 and 3)

Stakeholder meetings were held in the mornings; follow by team meetings in the evening, where the next steps were discussed.

As a result, the seven sites were identified in a first phase. From which five were surveyed more deeply.

District	Ba Be		Pac Nam		Na Ri		
Commune	Banh Trach	Dia Linh	Xuan La	Nghien Loan	Van Minh		Lang Sang
Village	Ban Hon	Ban Vang 1	Thom Meo	Khuay Toc	Na Muc	Khuay Lieng	To Dooc and Na Muc
Model	CFM	Agroforestry (Bamboo forest)	CFM	Slopping agriculture land technology (SALT)	CFM	CFM	CFM
Team	Bac	Bac	Alba, Hoan	Alba, Hoan	Alba, Hoan	Alba, Hoan	Alba, Hoan
Surveyed	x	x	x	x	x	-	-

Results

Bac Kan forest status and threats

Bac Kan province counts on 270,000 ha of forest and 100,000 ha of bare land. 260,000 ha of forest land have been allocated to households, individuals, organizations and communities. Around 24,000 ha are in hands of communities¹.

¹ Community Forests



A typical landscape in Pac Nam district



Meeting Pac Nam District Staff

Forest land is affected by agricultural activities with corn and soy bean cultivation being the most important. 12,000 out of 16,000 ha of corn are planted in forest land. Among the focus districts, Pac Nam was identified as the most affected one by shifting cultivation, and occurring mainly on allocated forest². Program 52 supports with food and nurseries to local farmers as a measure to stop shifting cultivation and promote tree growth on the land. The program is being applied in 18,526 ha in the whole province, being 10,000ha in the 3PAD focus districts. The program supports up to a maximum of seven years.

In addition to program 52, program 147 will target 2,000 ha under shifting cultivation to be substituted by forest plantations.

The most valuable forests are perceived to be those where “Nghien” species is growing. This kind of forest can be found mainly in 3 of the national parks and reserves located in the province, being these Ba Be National Park in Ba Be district, Xuan Lac Natural Reserve in Pac Nam district and Kim Hy Natural Reserve in Na Ri district. Among those Kim Hy was declared to have the highest number of “Nghien” trees.

These forests are mainly threatened by illegal logging, illegal forest exploitation, and land use conversion. Although deforestation happens throughout the province, Na Ri is the most threatened area of all³. According to district authorities, most of the illegal logging in Pac Nam district is destined to house construction by local farmers. Valuable forest containing Nghien timber (*B. hsienmu*) in Na Ri district have been subject to illegal logging by poachers coming mainly from the bordering Lang Son province.

During the interviews, no information was provided on the measures that the forest authorities are applying to address deforestation and forest degradation. However, the team is aware of that this kind of information can be found in the reports drafted by forest authorities⁴.

² Red Book

³ According to province authorities.

⁴ DFP, DoF

Agroforestry projects

Name	Owner /donor	Location	Types of project/ main activities	Total area	Year	Amount of fund
CARD project	AUSAID	4 villages of Van Minh and Lang San communes of Na Ri district (buffer zone of Kim Hy)	SALT model Organic composite model Forest nursery model Forest land allocation to the community (with red book) Credit support (community forest development fund)	About over 100 ha for each village	-	-
Community forest management	-	Banh Trach commune, Ba Be district	Community forest to check (protection forest) by village's regulation, done by local people, but constraint is no exploitation	About 200 ha	-	-
Community forest protection of upstream forest	-	Cho Don and Cho Moi	Local people protect upstream forest of watershed area by their own regulation	-	-	-
Forest plantation	D&G companies	Pac Nam: Bang Thanh, Xuan La, Cao Tan	Forest plantation, but not yet. Renting land for 50 years	Only about over 100ha forest	Just started	Note: seems to take land for mining, not forest plantation
Forest plantation	Hoang Long	-	Forest plantation, but not yet. Renting land for 50 years	-	Just started	Note: seems to take land for mining, not forest plantation
VOICE Project	DPI to implement	Na Phac, and Trung Hoa or Cho Moi district	Alternatives livelihood to reduce pressure on forest	-	2009	-
«Thao qua » plantation in the forest	-	Thuong Giao commune, Ba Be district, Don Den area	Agroforestry to improve livelihood	-	2008	-
Truc sao (bamboo) plantation	Ba Be National park National agriculture extension Center	Leo Keo, Quang Khe, Ba Be Tan Xuan commune, Cho Moi district	Truc sao is endemic species (only in Bac Kan and Cao Bang) Bac Kan has a “truc sao” processing factory Main markets: Hanoi, Hai Duong	-	-	-

-	3PAD	Bang Thanh commune, Pac Nam district	Pilot Forest land allocation	-	2010	-
-	FSIV	Nhan Mon (Slam Ve village on the top of the mountain) [Not accessible (1 day walking)], Pac Nam district	Cardamon (Thao qua) plantation in forest	7-8ha		Research project
-	FSIV	Nhan Mon (same situation), Pac Nam district	Bamboo (may, song), plantation in the forest	Small		Research project
(CIDSED)	CIDSED	2 communes, 4 villages: Co Linh commune and An Thang commune (don't see it in the map), Pac Nam district	Improve awareness on environment. Capacity building. Support forestry and improve livelihoods, irrigation.	-	2005-2008 & 2009-2010	-
EU project	-	Pac Nam district	Support forestry and improve livelihoods	-	2000-2004	-

The success of these projects is not evaluated by government staff during the course of the project. Generally, it's the project itself who evaluates at the end of the implementation period.

Alternative livelihoods projects

No.	Activity	Location	Year	Note
1	Model on sloping land cultivation (paddy or corn)	Nghien Loan and Xuan La communes (Pac Nam district)	-	Nghien Loan: 3PAD Xuan La: Province's science and technology fund
2	Sustainable shifting cultivation (named as 52 program, following Decision 52)	A total area of 18,526 ha of the whole province, if 3 districts under 3PAD are excluded, total area will be 10,000 ha At least will be implemented at two 30A districts. Idea: support food (rice) and nursery to local farmer (15 kg of rice/per/month) for them to stop shifting cultivation and grow trees on the land. Period of support will be no more than 7 years	Not yet started	Lack of funding: province is seeking support from WB, but seems no to be approved
3	Growing grass on slop land	Nghien Loan, Xuan La (old project, difficult to find because it has been destroyed) of Pac Nam, Co Linh of.....	-	Province's science and technology fund
4	Livestock: raising "semi wild pig" for improving income and local gene conservation	Xuan La commune, Pac Nam district. Will be expanded to Ba Be district	-	Province's science and technology fund

Performance of all two sets of projects has not yet been evaluated.

Community forestry

Local authorities define community forest as the forest that is managed by a community or a group of households, leaving the land managed by the People's Committee aside of the concept. This second case is understood to be a forest without and indicated owner, which, according to province authorities, leads to higher levels of deforestation. So far there is no policy on community forestry, neither on their rights and obligations, and groups or communities are not identified as legal bodies to receive forest land. Forests managed by communities are therefore based on village agreements.

There is however a pilot project⁵ taking place in 40 communes in the country, among which Bac Kan province is included, to test forest land allocation to groups.

The actual forest managed under this scheme responds to two kinds of "ownership":

- Land allocated to a village (with Red book) (3/4 of total in the province)
- Land allocated to groups of households (1/4)

⁵ MARD's decision (106/2008)

Many upstream protection forests correspond to the model of community management, self recognized by the people. But the best example can be found in Na Ri district, under the implementation of CARD project. Each village counts on over 100ha, mostly production forest, but not exclusively.

Best model of community forest				
District	Na Ri			
Commune	Van Minh		Lang San	
Village	Na Muc	Khuay Lieng	To Dooc	Ban San
Ethnicity	<i>Tay</i>	<i>Tay</i>	<i>Nung</i>	<i>Dao</i>

Community forest is deemed to be successful when it is backed by a Red Book, there are community regulations from bottom-up decided, and receive some initial support in terms of, e.g., credits or nurseries. However, most of the existing cases are not successful because they lack a clear benefit sharing mechanism, regulations on the right to take timber and other commercial products, and the legal backup, as there is no Red Book. Even when a Red Book is provided the land cannot be sub-leased or mortgaged⁶, which is considered also as an obstacle to succeed. In addition, most of the times, forest allocated to a community have no valuable timber species.



Nursery, Pac Nam District

In addition, government staff suggested the importance of supporting local farmers with techniques on forest plantation. They lack the skills, and therefore forest plantations are not efficient.

Payment for Environmental Services

Government officials' awareness on payment for environmental services seemed to be very confined to the pilot policy on Decision 380, and the concepts inside it. They indicated that the payment should relate to the basin area, and the forest area and condition. They highlighted the conflict in land allocation, which might affect the definition of the benefit sharing mechanism among local stakeholders.

⁶ According to Decision 106/2008/QĐ-BNNPTNT of MARD

The pointed out as main buyers and suppliers, respectively, the hydropower plants and clean water supply companies – quite scarce in Na Hang river basin-, and the National Parks and Natural reserves, the main forest owners, according to province authorities.

They indicated that the most suitable organism at province level for PES management were either the forest departments belonging to DARD, or the DONRE. For the monitoring and evaluation, forest rangers were mentioned as the most suitable authorities. However, both departments' staff and forest owner have low awareness. Awareness rising was recognized as a necessity.

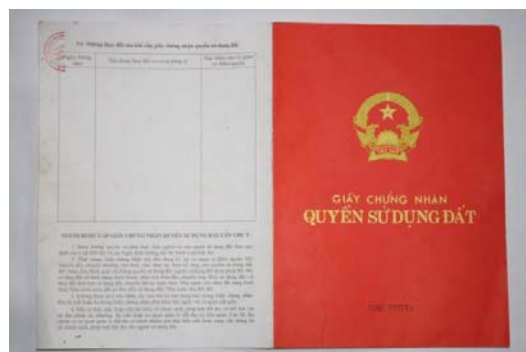
Selected models

1. Community forest management

Location	Area / Involved population	Main Activities	Remarks
Ban Hon Village, Banh Trach Commune, Ba Be district	56 ha/92 HHs	Forest protection	This CFM area plays an important role as protection forest for water resources and reduces soil erosion
Thom Meo village, Xuan La commune, Pac Nam district	556 ha/103 HHs	Forest protection (contracted by forest ranger)	Combination of "Forest protection" with "poverty reduction"
Na Muc village, Van Minh Commune, Na Ri district	118ha/23 HHs	Protection and plantation of forest (70%production forest, 30%protection forest)	Very efficient, as the village has been given an land use right certificate (red book). This is the first case in Vietnam where a village obtains a LUR certificate.



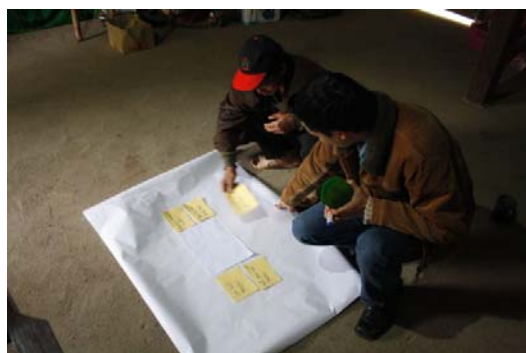
Village Red Book, page 2&3, Na Muc



Village Red Book, page 1 & 4, Na Muc



Group meeting with village, Na Muc



Na Muc Village leader



Na Muc village



Na Muc community forest

2. Bamboo (truc sao) plantation

Location	Area / Involved population	Main Activities	Remarks
Pac Vang 1 village, Dia Linh Commune, Ba Be district	8ha/1 HH	Bamboo plantation in the forest, and selling bamboo products	High economic value of Truc Sao can contribute significantly to HH's income, and improve C stock

3. Slopping agriculture land technology

Location	Area / Involved population	Main Activities	Remarks
Khuoi Tuon Village, Nghiem Loan Commune, Pac Nam district	1ha/3HHs	Stylo grass growing together with maize on sloping land to reduce soil erosion and provide fodder for cattle	A pilot activity of 3PAD project, only at the first year and not yet able to be evaluated



Stylo grass, Khuoi Tuon Village



Stylo grass, Khuoi Tuon Village



Stylo grass, Khuoi Tuon Village

Conclusions and recommended actions

Province authorities had the picture of forest and forest practices situations, but lack deep specific information. Key informant interviews gives qualitative information about the general picture, but for deeper quantitative information it is recommended to carry out PRA activities (PAPOLD, PALA) with farmers, as well as carrying out a HH survey gathering key information.

Community based forest conservation and carbon rich models have been either piloted or practices in Bac Kan province for more than 10 years. Province's authorities encouraged forest protection and plantation through supporting households, communities and enterprises in obtaining forest land allocation, seedlings and preferential loan. Some large areas of land have been allocated to companies (2,000 ha to D&G company in Pac Nam district and 1,700 ha to Hoang Long company in Cho Moi district) for forest plantation. However, forest plantation progress after land allocation has been very slow, and generally considered inefficient. Among current forest conservation and management measures, local authorities recognize community forest management in Van Minh and Lang San communes of Na Ri district as an effective model by allocating forest land to local communities with land use right certification (Red Book) and with a clear benefit distribution mechanism (village's regulation). This can be a good and effective model of forest conservation and management for both carbon market and other PES payment mechanism.

Since 1999, the province's agriculture and forestry sector has piloted over 75 models of planting high economic value trees in the forest, such as *Dendrocalamus membranaceus*, *Dendrocalamus ohhlami*, *Amomum aromaticum*, etc with a total area of 686 ha. This does not include practices initiated by districts, communes or local people, that can more numerous. A comprehensive assessment of these models is currently lacking, however, through interviewing key informants at province and district levels, it is found that most of the models are either newly established or not economically productive as expected. Further investigation is needed to find out the best models among those and to improve current agroforestry practices.

For deforested slope land in the province, that is occupied mainly by shifting cultivation with rice and maize, growing stylo grass together with maize should be a good option that: (i) ensure food security for local people; (ii) prevent soil erosion and thus maintain soil carbon (according to a recent research by ICRAF Vietnam, soil carbon of shifting cultivation land in Bac Kan province may count for 30% of total carbon stock of the land use); and (iii) support cattle grazing for poverty reduction. It is suggested to expand the model onto heavily deforested area of the province, such as Pac Nam district, in parallel with forest plantation that usually cost much more time and labour.

For more information on the level of awareness of local authorities on PES it is suggested to continue with stakeholders dialogues. If after the dialogues it is deemed necessary, a stakeholder workshop is suggested to capacitate government staff and collect information authorities perspective.

Annexes

Annex 1: Checklist of questions at Province Level

- General information about forest, forestry and agriculture of the province?
- Where are the most important/valuable forests in Bac Kan (District? Type of forest? Total area? Managed by whom?)
- What are main threats to forest of the province, and where?
- What are main threats to the most important/valuable forest, and where?
- What have been measures to address deforestation/degradation there? By whom?
- What are most important forestry/forest conservation, management and reforestation projects in the province? What are the most successful one among those? Why do you consider them successful?
- Information about 327/661 programs in the province: How many districts? Total area? Any renovations? Successful and not successful aspects?
- Are there any initiatives on improving livelihood of forester for better forest protection/management? (e.g. introducing/training of agriculture practice, agroforestry, develop market for NTFPs?)
- If yes, where can we find the best model for further investigation? Or who to talk to about these models
- If yes, how do you evaluate the performance of such practices?
- What is community forest to your understanding? Any governmental/local policy on community forest that you know?
- How many types of community forest are there? Definition of each
- Where are community forest in the province and in Ba Be, Pac Nam and Na Ri?
- What are pros and cons of community forest management/conservation?
- Who is the best people/organization/enterprise to ask for community forest management/conservation/reforestation practice?
- Who are doing shifting cultivation, and where shifting cultivation are out of control?
- What are alternatives to shifting cultivation that have been proposed/initiated? If yes, where?
- Any data/reports/notes on forest conservation/management/reforestation or specifically community forest management available? (Where to find, who to contact with)
- Other suggestions/recommendations of interviewee
- What are PES?
- Any specific PES:

Annex 2: Checklist of questions at District level

FOREST SITUATION

- What is the forest state in this district? (generally) High or low amount of forest?
- Where are the most important/valuable forest in this district? Type of forest? Total area? Managed by whom?
- What are main threats to forest of the district level?
- What are main threats to the most important/valuable forest? What are the practices to improve them?

FORESTRY PROJECTS

- What are the most important forestry/forest conservation, management and reforestation/afforestation projects in the district? What are the most successful one among those? Why do you consider them successful?
- Information about 327/661 programs in the district: How many communes? Total area? Any renovations? Successful and not successful aspects?
- What are most significant forest protection/management/conservation and reforestation practices initiated by local farmers/enterprises/forest protection department in Pac Nam? (or try to know on the previous list: which of these forest practices were initiated by local farmers?)

LIVELIHOODS IMPROVEMENT

- Are there any initiatives on improving livelihood of forester for better forest protection/management? (e.g. introducing/training of agriculture practice, agroforestry, develop market for NTFPs?)
- If yes, where can we find the best model for further investigation? Or who to talk to about these models
- If yes, how do you evaluate the performance of such practices?
- Are there any (especially successful) projects/activities related to livelihood diversification specially designed to reduce pressure from forest resources or to address a more sustainable use of forests (ex: cattle practices (restricting the cattle to a specific area, or preventing the cattle from grazing in a specific area, cultivating fodder for cattle, etc)

COMMUNITY FORESTRY

- What is community forest to your understanding? Any governmental/local policy on community forest that you know?
- How many types of community forest are there? Definition of each
- Where are the community forests in the Pac Nam?
- What are pros and cons of community forest management/conservation?

Annex 3: Checklist of questions for commune and village

COMMUNE

1. General information
 - a. List of HH
2. Information about the model
 - a. How can we get more information about this model?
 - b. Who is participating?
 - c. For how long has it has being going on?
 - d. Is the PC giving any support?
3. Socio-economic development report
4. Ask someone to come along

VILLAGE

- A. General questions
 1. Where is the model located (villages)?
 2. How many households in this model?
 3. How long has the model being going on?

4. How large?
5. (1) Why do they do this model? (2) Why collective and not individual? (3) Is it starting from someone inside the village or someone outside the village?
6. (1) Labor force put into the model? (2) Do they have enough labor force in the families?
7. Food? (1) Area, (2) Production, (3) from their perspective enough?

B. Hot issues:

1. Production – benefits

- What kind of forest: Protection forest
- (1) What products (2) how much of the products?
- (3) Price? (4) How do the products contribute to the total income?
- (5) What environmental benefits? (6) Are you facing water scarcity, flooding or soil erosion?
- (7) Does this model help?

2. Contract – property

- (1) Who is the owner of the land?
- (2) Who is the leader of the group? (3) Why?

(4) Internal regulation?

- (4a) Are they allowed to collect the products any time they want?
- (4b) Is it allowed to sell the products?
- (4c) Do they need to ask for permission to someone?
- (4d) What are they not allowed to do?
- (4e) How do they share what they get?
- (4f) If your neighbor breaks any of the regulations (ask for specific regulation for easier understanding) what would happen to him?

3. (4g) Who decides the regulation? (4h) Where are they coming from? Legal-institutional

- (1) Do you get any support from the local government?
- (2) What kind of support?

Annex 4: Comprehensive table with all models

Ba Be district

District	Ba Be	
Commune	Banh Trach	Dia Linh
Village	Ban Hon	Ban Vang 1
River basin	Nang	Nang
Relative position of the stream	Upstream	Upstream
Conservation area	None	None
Type of practice	CFM	Agroforestry (Bamboo forest)
Main activities	Forest protection	Bamboo plantation in the forest, and selling bamboo products
Support project	None	3PAD
Starting	2000	1974
Area (ha)	56	8
Commune population (HH)	664households, 3172people	731households, 3219 people
Commune poverty	49.69% under a new HH's economic classification (less than 400 000vnd/person/month, considering as a poor household	41,6% under a new hh's economic classification (less than 400 000vnd/person/month, considering as a poor household
number of villages	13 villages	9 villages
Village population	92HHs	111HHs
Average income of village	Never calculated	Never calculated
HH participated	92/92HHs (42 poor HHs)	1
Ethnicity	Tay, Nung, Kinh, Dao (dominant: Tay)	Tay
Village poverty	45.60%	43.20%
Food production	Main productions: Maize, rice, cassava, pig. Food is fair enough, However, poor households are still not enough food in 1month/year because of lack of areas for cultivation, lazy to work.	Main productions: Maize, rice, cassava. Food is fair enough, However, poor households are still not enough food in 1-2months/year because of lack of areas for cultivation.
Production-Benefit		
Key products	Low economic value tree species: De, Xoan, xa cai, Xa Moc, Sau	Bamboo (Truc Sao and Truc Gay)
Price	When outsiders cut down/exploit trees, Village management board cannot compensate outsiders. But logged woods from outsiders were sold at market price and this money was contributed to village's fund.	Depend on the size of diameter. If the Truc Sao tree (D: 1.8-2cm; Length: 2,6) equals to 800vnd/tree

<i>Contribution to HH income or village income</i>	After 8 years, income: 1200-1500trees/ha, equals to 2.400.000-3000000vnd	10 million per year
<i>Other non-commercial benefit</i>	there are many poor households lack of forest and agricultural lands for cultivation; lazy to work; just want to work as a hired labor person such as rice cultivation, plough and house's construction. It is said that un-control fire and illegal forest exploitation are not the deforestation causes in the area.	Lack of labor, fertilizer, technology on bamboo plantation. Lack of grazing area for cattle
<i>Env. Issues</i>	More drought at recent years	More drought at recent years
<i>Env. Benefit</i>	This CFM area plays an important role as protection of forest for water resource and reduceof soil erosion and contribution to agricultural cultivation.	Most of bamboo forests here are production forest, functioning as water resource protection of Na Re stream and reducing of soil erosion and contributing to agricultural cultivation. During the raining season, it still happens the floodings with rice field area along the stream. People said that there was more water than before because of better forest protection
Contract-property		
<i>Land ownership</i>	No land use certificate for this CF	The land areas were measured and surveyed last two years. However, the local people have not received land use certificate yet.
<i>Leader of the group</i>	The Village leader takes the highest responsibility of the group because he/she is the one all of people in the village always believe in and be a representative before the commune.	Individual household
<i>Internal regulation, including benefit sharing mechanism</i>	The trees in CFM under control by a representative group of village called community development board with participants of young union, women union, veteran, party leader, and village's policeman. Regulation was decided by whole people in The village. Sometimes, when there are families want to construct a new house. When outsiders come to cut down The trees illegally, The representative village group will discuss and organize a meeting with all households of The village for deciding. The tree was exploited from outsiders will be sold and money will be contributed to village's fund.	None
<i>Contract with external organizations</i>	Contract with district's forest enterprise on forest protection under circular 156.	No contract on bamboo forest production. Most of households sell bamboo every week.

<i>External support</i>	<p>Under the program 661. The village received 50 000vnd/ha. In 2010. The village received 100 000vnd/ha. This amount of money contributed to village's fund. However, village did not invest this money to enrichment of forest thru forest plantation.</p> <p>Under decision 147/CP on forest plantation support, households are registering on area for forest plantation.</p>	<p>Under the 661 program, total area of forest were planted 140.94has/154.17has</p> <p>Under the 147/CP, households are registering on area of forest plantation.</p>
Legal status-Institutional aspects		
<i>Background legal documents/policy</i>	<p>Under circular number 56 and now it is circular No. 52 of MARD on forest protection regulation. Based on that circular the agreement on forest protection between village and district forest enterprise was signed.</p> <p>Program 661, Production forest plantation support program(decision 147/CP)</p>	Program 661, 147/CP
<i>Support from local government</i>	District people's committee is not allowed to exploit trees from the CF model	<p>With the support from the 135 program, the family has planted 0,8ha of bamboo. The program supported NPK (2quintals/ha), seedlings, money for taking care of trees, and seedlings.</p> <p>Bac Kan provincial extension center: After implementation of bamboo plantation, the assessment report indicated that with the total of 40ha in Dia Linh commune. There were 40 contracts on bamboo forest plantation. After 8 years, 1ha of Truc Sao can sell at price of 1200-1500VND/tree. Income: 2.400.000-3.000.000vnd. If tree has a diameter of 3-4cm can sell at price of 2000vnd per tree. It is concluded that 1ha of Truc Sao can generate income threefold compared to 1ha of rice on mosaic land. It is important that Bamboo (truc sao) is less investment than rice cultivation in uplands and it contributes to anti-soil erosion. Truc sao is very suitable tree species at the local condition on climatic and soil conditions.</p>
<i>Monitoring</i>	Fire control cutting, guarding, fire shelter wood/extinguishes	By family

Constraints-Challenges	<p>The survey revealed that when local people has rights to decide on their forest resources, they can organize to manage and protect forests by themselves, creat benefit sharing, and help the poor households. In contrast, when they have no rights on process of some inflexible policy implementation on village forest protection regulation. It may not be successful.</p> <p>Some of initial success was recognized by allocating the forests to communality under CFM. In order to success in CFM model. It needs to continue to support on policy issue to community. Such as:</p> <p>Legal entity: CFM area must have land use certificate as a good example of CFM case in Van Minh and Lang Sang commune, Na Ri district.</p> <p>Long and stable community forest management: what kinds of forests should be allocated to community as CF?.</p> <p>Sustainable forest management and benefit sharing mechanism from CFM:</p>	<p>Due to poor infrastructure and different terrains which affected to the fertilizer transportation and monitoring of tree planting.</p> <p>Un-control grazing it affected to seedling protection on Truc sao.</p> <p>Truc Sao is long-term tree species. So, it is difficult to assess efficiency and effectiveness of economic aspect. There are many households are still poor, then I have lack of co-investment kinh phi doi ung. This will affect to disseminate the models at a large scale.</p> <p>There is only one trader in the whole village to collect the bamboo products.</p>
Extension potential of the model in the area	None	Available areas

Pac Nam district

District	Pac Nam	
Commune	Xuan La	Nghien Loan
Village	Thom Meo	Khuoi Tuon
River basin	Nang	Nang
Conservation area	None	None
Type of practice	CFM	Slopping agriculture land technology (SALT)
Main activities	Forest protection	Stylo grass growing together with maize on slope land to reduce soil erosion, and make food for cattle
Support project	None	3PAD
Starting	2005	2010
Area (ha)	556 ha (Nam Cat area) of upstream protection forest	1ha
Commune population (HH)	About 2,700 people	981 HHs
Commune poverty	37.50%	59%
Village population	103 HHs	36HHs, 181 people
Average income of village	500,000 VND/person/month	500,000 VND/person/month
HH participated	103 HHs	3HHs (piloted phase)
Ethnicity	Hmong	Dao
Village poverty	37%	14%

Food production	Rice: 0.15 ha/HH; Maize: 0.2ha/HH Food is fairly enough , food security is better than other villages	Rice: 0.2 ha/HH; Maize: 0.5ha/HH From 2002 to now, food is always enough for villagers
Production-Benefit		
<i>Key products</i>	Timber for construction, NTFPs (herbs)	Corn and seed of stylo grass (for the next year the HH will harvest grass)
<i>Price</i>	NA: timber used in community only, NTFPs are sold to market	NA: the project will buy seed from the 3 HHs (after the first year) and redistribute to other HHs
<i>Other non-commercial benefit</i>	Preventing soil erosion and keep water (need to check with other villagers)	Grass for cattle grazing and prevent soil erosion Demand for cattle grazing: about 500m2 for each buffalo (assumed to be same to Co Voi grass)
<i>Env. Issues</i>	Not lacking water	Water scarcity (most serious this year) Soil erosion: reduced recently due to increasing forest coverage
<i>Env. Benefit</i>	Preventing soil erosion and keep water (need to check with other villagers)	Reduce erosion (assessed by observing sedimentation in the stream)
Contract-property		
<i>Land ownership</i>	Land belongs to the village (local perspective), but no Red Book	HH/individual land (no Red Book)
<i>Leader of the group</i>	Village's leader	Village's leader is the key contact of the group
<i>Internal regulation, including benefit sharing mechanism</i>	~ The regulation has come to effect 5 years ago, since the model start ~Village's leader is in charge in making plan for forest patrol and distribute payment accordingly ~Exploitation of timber forest requires an application and must be agreed in a village meeting ~ Timber products are used for HH construction in the village only (about 4 house construction/year), not for selling	
<i>Contract with external organizations</i>	Contract with district's forest ranger on forest protection Before 2010: the contract was signed between FR and many groups of HH (3 years contract). Village leader is in charge for distributing the fund From 2010: the contract is signed between FR and poor HHs. Village leaders is in charge for distributing the fund	
<i>External support</i>	No support in forestry, only some small project supporting rural agriculture and hygiene, e.g. 135, 30A	Support from 3PAD project: seed, fertilizer for maize)

Legal status-Institutional aspects		
<i>Support from local government</i>	661, 135 and 30A program, no support from 52 Program yet	The village has totally 30ha of forest (plantation) which is supported by 661 program
<i>Monitoring</i>	HHs are divided into groups to patrol the forest in rotation (usually twice per month) Money for forest patrol is taken from 661 and 30A programs (from 2010: 200,000 VND/ha/year, before that: 80,000 VND/ha/year). This payment for a poor HH in 2010 is about over 1,000,000 VND	~ Currently 3PAD is in charge ~ No bad impacts on maize production has been found
Constraints-Challenges	The forest is far from the commune and difficult to protect, but in general the model works well	
Extension potential of the model in the area	Need more information about un-allocated forest in the district, but through interviewing District's staff, it seems like not much of forest land left for CFM	All maize area in the village (about 0.5 ha/HH) and even other villages

Na Ri district

District	Na Ri		
Commune	Van Minh		Lang Sang
Village	Na Muc	Khuay Lieng	
River basin	Nang	Nang	Nang
Relative position of the stream	Upstream (name of the stream?)		??
Conservation area	Buffer zone		Buffer zone
Type of practice	CFM	CFM	CFM
Main activities	Forest protection, plantation and exploitation		Forest protection, plantation and exploitation
Support project	CARD		CARD
Starting	2007 (start2007-end2010)		2007
Area (ha)	121ha		>100ha
Commune population (HH)	278hh = 1180 people		
Commune poverty	50%		
Village population	23 households		
HH participated	100%		
Ethnicity	Dao, Tay		
Food production	Currently, there is enough food.		
Production-Benefit			
<i>Key products</i>	Cash crops (soy bean, maize, cassava) NTFPs, timber (in the future, not yet)		
<i>Other non-commercial benefit</i>	* Timber for house construction?		

	* Capacity building		
<i>Env. Issues</i>	Illegal logging, illegal hunting		
<i>Env. Benefit</i>	Watershed protection, Nghien conservation		
Contract-property			
<i>Land ownership</i>	Red Book for Village		
<i>Leader of the group</i>	Village leader		
<i>Internal regulation, including benefit sharing mechanism</i>	Developed by Thay Nguyen University, agreed by the Village Forest Management Board and signed by Head of District's PC, Commune's PC and Representative of the VFMB (village leader) - Regulations on Forest Management and Benefit Sharing (including forest fund) - Regulations on Community Fund Development		
<i>External support</i>	Village nursery, improved hybrid cuttings, loan (1000AUD/village-13.000.000VND/3years)-CFD fund, equipment for forestry (in 1st year), seeds (Acacia, cay mo), capacity building activities at community (agroforestry and forest development) and government levels, and technical and institutional support, in participatory forest land use planning, land allocation and extension services as part of community based forest management.	Village nursery, improved hybrid cuttings, loan (1000AUD/village), capacity building activities at community (agroforestry and forest development) and government levels, and technical and institutional support, in participatory forest land use planning, land allocation and extension services as part of community based forest management.	Village nursery, improved hybrid cuttings, loan (1000AUD/village), capacity building activities at community (agroforestry and forest development) and government levels, and technical and institutional support, in participatory forest land use planning, land allocation and extension services as part of community based forest management.
Legal status-Institutional aspects			
<i>Background legal documents/policy</i>	was based on MARD's decision (106/2008) on piloting forest land allocation (with Red book) to 40 communes in the country	was based on MARD's decision (106/2008) on piloting forest land allocation (with Red book) to 40 communes in the country	was based on MARD's decision (106/2008) on piloting forest land allocation (with Red book) to 40 communes in the country
<i>Support from local government</i>	* money from 661 for forest protection in 2003 * commune supports on records of financial documents		
<i>Monitoring</i>	village members organize themselves in groups for forest surveying (2 or 3 times per month during dry season, 1 time in rainy season) for forest fire and outsiders		

Strengths	<ul style="list-style-type: none"> * Regulations are easy to understand * Strong Regulations against shifting cultivation * Supported by local (mass) organizations * Future sustainable-regular source for timber, and income generation * Participatory (farmers are involved, there is a VFMB) 		
Constraints-Challenges	<ul style="list-style-type: none"> * Lack of funding (loan is not enough) * Location (forest is far from the village) - border next to other villages * Illegal hunting at night 	<ul style="list-style-type: none"> * people were suspicious on how much time others would invest in their inputs 	<ul style="list-style-type: none"> * people were suspicious on how much time others would invest in their inputs * land was too steep (design was changed to move to a different plot) * animals damaged seedlings