



Sustainable Natural Resource Management Project

ACTIVE ASSESSMENT REPORT
SUSTAINABLE NATURAL RESOURCE MANAGEMENT PROJECT
SUB- COMPONENT OF PILOT REDD + ACTIVITIES IN HOA BINH PROVINCE



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ABBREVIATION

SNRM: Sustainable Natural Resource Management

PPC: Provincial People's Committee

DARD: Department of Agriculture and Rural Development

CPC: Communal People's Committee

CPMU: Central Project Management Unit

PPMU: Provincial Project Management Unit

VMBFMLD: Village Management Board for Forest Management and Livelihood Development

VMB: Village Management Board

MPFP: Management Board of Forestry Projects

FPD: Forest Protection Department

FPT: Forest Patrol Teams

PFES: Payment for Forest Environmental Services

HH: Household



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I. Partnership relationships in project management and implementation in Hoa Binh Province

Like other programs and projects in Vietnam, partnerships are an integral part of the process from the beginning to the end of the Sustainable Natural Resource Management Project (hereafter called SNRM Project). The established partnership is to ensure smooth coordination, timely and effective support among stakeholders in management, implementation, monitoring and evaluation of the SNRM Project. The SNRM Project is managed from central to local level in a systematic and rigorous manner to ensure it is managed, implemented and monitored in the most effective way. There are different partner agencies/stakeholders for every administrative management level of the Project such as PPC, DARD, CPMU, PPMU, VMBFMLD. Working and coordinating with partners is a mandatory for the implementation project activities at localities. The Project may not be able to carry out its activities at local areas without coordination with its partners. Therefore, the Project has acknowledged the importance of the partnership development with different stakeholders, which contributes to the success of the project. Since the project was launched in Hoa Binh Province, relationships with counterparts have always been built, maintained, and developed based on principles of listening and respect. The smooth coordination and support of the counterparts in the management and implementation of the Project has been contributing to the overall success of the Project in Hoa Binh Province.

1. Partnership relationship with CPMU of the Project

Prior to the establishment of the CPMU, the Project has developed and maintained a close relationship with the Provincial Management Board of Forestry Project (MPFP) which was assigned as the Project Leading Agency. The Provincial MPFP has provided practical assistance to the Project during its kickoff and first implementation phases. Every obstacle and difficulty encountered during these phases was solved thanks to receiving of timely advices and support of the Provincial MBFP, which have helped ensuring the project's start and setting up as planned. The CPMU was established on March 27, 1917 according to the Decision No. 1002 / QĐ-BNN-TCCB of the Minister of Agriculture and Rural Development. The CPMU is representative of the Central MBFP which is responsible for the Project's management and operation at the national level and for ensuring the Project's progress, quality and objective achievements. The Project has always been focusing on development and strengthen a close relationship with CPMU since its establishment. Thanks to the good relationship with the Central MBFP and CPMU, the SNRM Project activity implementation in Hoa Binh Province has been paid attention and provided effective support by these two units during the past



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time. Particularly, from August 2016 until now, the Central MBFP and the Central CPMU have paid a number of visits to Hoa Binh Province to work, direct, and participate as well as to monitor, and evaluate performance of the Project in the province, for example, PRAP development, and pilot REDD+ activities. Moreover, the CPMU held meetings which aimed to evaluate the results of the Project with participation of representatives of the Project consultant office and the PPMU in Hoa Binh. The participants in these meetings. In addition, in order to support the related stakeholders in management of the project in a consistent and effective way, under advices of the CPMU, in December 2017, MARD issued Regulation on Organization and Operation of the Project. This is an important basis for the PPMUs to develop its regulations on management and coordination with other related stakeholders in the respective province.

2. Partnership relationship with the Provincial MBFP and the PPMU

The Provincial MBFP which works under Hoa Binh Provincial DARD is assigned to be the focal point of contact for project management in Hoa Binh until PPMU is established. Therefore, during the inception phase, the Hoa Binh Consultant Office of the Project has worked closely with the Provincial MBFP to carry out kickoff activities as well as to establish institutions of project management and implementation in the area, for example, establishment of Provincial Task Force for PRAP development and formulation a team of collaborators. The Hoa Binh PMU was established in March 2017 with a total of 12 members. Its main task is to be responsible for the management and implementation of the Project in Hoa Binh province in order to ensure that the Project is managed and implemented as set schedule and objectives. Since its establishment, the Hoa Binh Project Consultant Office has worked closely with the PPMU to manage and carry out the project activities. Quarterly meetings were held with participation of the Provincial Project Consultant Office and the PPMU. Briefing sessions between the two parties were not regularly held in 2017 due to late promulgation of the Regulations on Organization and Operation of the Project (December 2017), but the two parties have set up a regular consultation channel to coordinate with each other on the management and implementation of the Project activities. Thanks to the strong relationship with the PPMU, the project has received timely and effective support of the counterpart in implementing the project activities such as the pilot REDD + activities, forest change monitoring, and PRAP development. In addition, the PPMU has worked closely with the Hoa Binh Provincial Consultant Office to receive experts and delegations who have paid visits and worked with the Project in the Province. The PPMU has also coordinated with the Hoa Binh Provincial Consultant Office to register, manage and use the project facilities (motorbikes and cars). It is possible to say that the good relationship with Hoa



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Binh PPMU plays a significant and key role in contributing to smooth and effective implementation of the project activities in Hoa Binh Province.

3. Partnership relationship with Tan Lac District People's Committee and other related district agencies

Although Tan Lac DPC and related district agencies are not directly involved in project management, they are very active in supporting the implementation of the Project activities in the district during the past time. While carrying out the Project activities in Tan Lac District, the Project Consultant Office in Hoa Binh province has regularly consulted with the DPC and related agencies such as Tan Lac District FPD, Tan Lac District DARD, Tan Lac District Extension Center, Tan Lac District Department of Natural Resources and Environment. Consultation with project partners in Tan Lac district is very important for the project to plan and implement interventions that meet the needs of Project's beneficiaries and help achieving the Project's objectives which is in line with the local socio-economic development plan. Moreover, Tan Lac District People's Committee and other related agencies have actively participated in the project activities during the past period such as Consultation Workshop for PRAP development, forest change monitoring, particularly, the DPC has assigned staff to participate in implementation of pilot REDD + activities in Thanh Hoi Commune. In addition, the good relationship between the Project Consultant Office and Tan Lac DPC and other agencies has been reflected by warmly welcome and working facilitation to Japanese experts during their business trips in the district.

4. Partnership relationship with Thanh Hoi Communal People's Committee

Thanh Hoi is the only commune that has been selected as a pilot area to implement REDD+ activities. This is the grassroots level that directly implements and enjoys benefits from the pilot activities of the Project, thus, the relationship between the Project Consultant Office and Thanh Hoi CPC brings great impacts to the implementation of pilot activities in the Project site. Understanding the importance of building relationship with local partners, the Project Consultant Office has always been being active in building and strengthening partnership with Thanh Hoi CPC. The Project consultant Office in Hoa Binh province has regularly consulted and discussed with commune leaders about every activity of the Project in the commune, thereby strengthening the partnership between the two parties and ensuring the broad participation of the commune to the implementation of the Project activities in the commune. Thanh Hoi CPC has regularly assigned leaders and relevant officials to actively participate in the Project activities, from planning to implementation and monitoring. In particular, following the formulation of the project work plan of each village, the CPC has



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approved it after reviewing and comparing to the communal socio-economic development plan. This process helps to increase the ownership of the commune and the community to the project activities in the commune, which helps to ensure the integration and linkage between the project activities and the commune socio-economic development plans. In addition, leaders of Thanh Hoi Commune have fully participated in events and workshops organized by the Project o at district and provincial level. Moreover, while implementing project pilot activities in the villages, leaders of CPC has supported the Project by regularly directing and urging village heads and VMBFMLD to work closely with the Project Consultant Office to effectively organize and implement Project activities in order to bring maximum benefit to the local people.

5. Partnership relationship with facilitators

In order to assist the Project in carrying out pilot activities in Thanh Hoi Commune, Tan Lac DPC decided to set up a Project Facilitator Group in September 2016 with a total of 13 members, 5 of them are professional staff of Thanh Hoi CPC and the other 8 members are from functional divisions of Tan Lac district such as the Agriculture and Rural Development Division, District Extension Center, District Forest Protection Department. The District DARD is assigned to be standing agency which is responsible for monitoring, collecting and reporting to the DPC on the project activity implementation in the district. The Project Facilitator Group work on a concurrent principle. Their main tasks are to assist the Project in carrying out the pilot activities in Thanh Hoi Commune and provide advices to Tan Lac DPC on monitoring and supervising the activities of the Project in the district. Understanding the importance of the Project Facilitator Group, the Hoa Binh Project Consultant Office always focuses on building, maintaining, and developing a close relationship with the Group. Facilitators are invited to involve in all pilot activities of the project in Thanh Hoi commune, from planning to implementation and monitoring. Project. The extensive participation of the facilitators has enabled the Project's activities to be carried out smoothly and effectively. The facilitators have also helped connecting the Project staff with other project related stakeholders and direct beneficiaries. It is possible to say that the participation and support of the facilitators have contributed to strengthening the sustainability of the project activities and the success of pilot activities in Thanh Hoi Commune in the pass time.

6. Partnership relationship with the VMBFMLD

The VMBFMLD is community-based established. Members of the VMBFMLD are elected by the village community. They work under supervision of the villagers and related parties. The main task of the VMBFMLD is to collaborate with Project staff and



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facilitators to implement and monitor implementation of project activities in the locality. Thanh Hoi Commune has 9 community-based VMBFMLD, which were established under project guidelines. Its operational regulations have been formulated with support of project staff and approved by Thanh Hoi CPC. The pilot activities have been mainly carried out in the community, so the VMBFMLD plays a very important role in mobilizing community participation for implementation. Having recognized their important role, the Hoa Binh Consultant Office has built a very close relationship with the VMBFMLD through regular exchange and agreement with members of the VMBFMLD on relevant plans/ideas before implementing activities. All activities of the project in the community have had the participation of the VMBFMLD members with the role of organizing and mobilizing the community's participation. In addition, the VMBFMLD also act as supervisors, who regularly report on the project results achieved in the village to the Project Facilitators and Project Officers. The strong relationship between the Project Consultant Office in Hoa Binh province and the VMBFMLD is a factor of increasing the effectiveness of the project activities in the community that help the Project to meet demand of the people based on the designed objectives. In addition to capacity building for the members of the VMBFMLD through training courses, the Project Office in Hoa Binh also organized regular meetings with the VMBFMLD to update the results and agree on the work plan before implementation. Project staff maintain regular liaison with the VMBFMLD to guide and promote the activity implementation in the community as well as to monitor the progress and quality of the Project.

II. Integration into the Project

1. Gender Integration into the Project

Gender issue is always a concern and integrated into the project activities, from planning to implementation and monitoring. There are no activities which designed only for men or only for women. It is for all people who participate in the project regardless their gender. While organizing activities, the project staff are fully aware of gender equality and do it best to mobilize equal participation of both men and women. They often ask VMBFMLD members to mobilize women to join project activities, and gender equality is always paid attention to when project activities are carried out. Ideas of men and women are listened and respected. However, participation of men and women to each activity is different due to its typical characteristic. For example, beekeeping activity has attracted 100% of men participation, but vegetable cultivation has gained over 80% of women. This does not indicate gender differentiation in project activities but reflects respect for the advantages and strengths of each gender in every



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specific activity. In addition, the project activities have generated positive impacts on gender equality such as support of improved cooking stoves and biogas. The improved cooking stoves and biogas helps to reduce 50% of firewood consumption in comparison to traditional stoves. It also helps reduce cooking time, thereby contributing to save time of women in firewood collection and cooking. The saved time can be used for other work like looking after the kids or entertainment.

2. Do-no-harm

Do no harm is always a guiding principle throughout the Project, each activity is carefully considered before implementation to ensure there will be no harm to the Project beneficiaries, the community and the other stakeholders. The project always strives to harmonize the interests of the stakeholders from each activity in order to achieve the set objectives and maximize the benefits to the community. Thanks to the use of appropriate approaches and interventions through stakeholder engagement and participatory decision-making, the risk of interest conflict in the community is minimized while carrying out the activities of the project.

The project does not distinguish between the participated households and the remaining ones in the community. For example, in promoting the development of the Village Fund Management Regulations, the Project staff have participated to ensure that the Village Fund is a common resource of the whole community, not just the households who participate in the project activities. All people have right to access to small finance from the Village Fund to develop forest management and/or livelihood activities. In addition, while implementing the project activities, the project has also targeted vulnerable groups (**poor households, the elderly, etc.**) in the community by giving priority of being benefited from the Project to the poor, vulnerable, and remoted-living households who live dependently to the forest resource and being active livelihoods depend on forests.

III. Assessment to the pilot REDD+ activities implementation results in Hoa Binh Province

1. Establishment of Community-based Groups and institution development

a. Introduction

Groups and institutional development are approaches chosen by the Project to implement the project activities in a sustainable and effective manner. Community-based groups and institutions promoted and established by the Project in Thanh Hoi commune are VMBFMLD, Regulations on Forest Protection and Development, Village Funds for Forest Management and Livelihood Development (referred to as Village Funds). The objectives of establishing these groups and institutions are to: i) enhance



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participation and ownership of community to the project activities to ensure that it is by and for the community; ii) to closely and effectively manage the activities of the project and its generated results in the community.

b. Background

SNRM is a technical assistance project through pilot activities, thus, community involvement in the management, implementation and monitoring of project activities is very important. In addition, most of the pilot activities of the project are designed based on the needs of the community and implemented by the community in their areas. Therefore, it is importance to have participation of the community to the whole process of each activity from planning to implementation, monitoring and assessment. In order to promote participation of the community in a consistent and organizational manner, the Project has encouraged communities to establish community-based groups such as VMBFMLD, Village Fund. Moreover, in order to promote autonomy of the community in handling their issues, at the same time, exploiting and promoting the positive aspects of village charters, the project has promoted for development of Village Regulations on Forest Protection and Development in each targeted village. The main objective of the Village Regulations is to mobilize community participation in forest protection and development based on based on principles and rules that they have agreed on. The Village Regulations have been community-based formulated and by the community, while the Project only played a supportive role. Therefore, it is possible to say that these Village Regulations are products of the community, which is very important to ensure that the contents of the Village Regulations were not imposed from the 'outside', thus, contributing to the improvement of villagers' voluntary and active compliance.

c. Carried-out activities

Since the above-mentioned groups and institutions have been established and developed based on the principles of the community and by the community so all of the project's support for the whole process was made based on the community. The community has played a decisive role and the project only served as a supporter if needed. In order to develop community groups and regulations, the Project has formed a comprehensive supportive program. For example, during the process of VMBFMLD and Village Fund establishment, the project has supported the community by supporting them in selecting members to participate of the groups, developing regulations, and building capacity for members of the groups.



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For establishment of community groups, meetings were held with the participation of all or most of the representatives of the households in the village and the village heads (village party secretaries and village heads), village political organizations and mass organizations such as Women's Union, Youth Union, Project staff and facilitators. During these meetings the plan of the community group establishment was discussed and



Pic. 1: Village meeting for Village Fund Mgmt. Regulations

discussed in a democratic and open manner. After reaching agreement, the candidates for members of the VMBFMLD will be introduced and elected by the meeting participants. Depending on the size of the population of each village, the number of members of the VMBFMLD has changed accordingly. Usually, the number of members of each VMBFMLD are 3 or 5. After that, the tasks and duties of each member are clearly defined through consultation or voting during the first meeting of each VMBFMLD. Key positions in each VMBFMLD including one head, one accountant and one treasurer. After the establishment of the VMBFMLD, a working regulation of the VMBFMLD was also developed through village meetings. Regulation is an important basis to ensure that the VMBFMLD is managed and operated effectively. As stated in the Operational Regulations, tasks and responsibilities of the VMBFMLD are clearly defined. In addition, a Village Fund Management Regulation is also formulated to ensure that the Fund is managed and used in an effective and transparent manner. After the establishment of the VMBFMLD and Village Fund, the Project has helped to develop capacity to the members of the VMBFMLD through training courses and study tours. In addition, the Project staff regularly work with facilitators to guide and supervise the work carried out by the members of the VMBFMLD in order to ensure that it operates effectively and properly. As a result, this helped to not only enhance capacity for the members the VMBFMLD but also identify and timely solve raised issues during its operation at village level. One of core activities of the Project is to support the communities to build effective regulations to protect and develop the forest resource of each village. After consultation with the communities, the Project has implemented a series of activities to support 13 targeted villages in Thanh Hoi commune to develop 13 Village Regulations on Forest Protection and Development. In each of the targeted villages, two rounds of meetings were held to promote the villagers



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to draft their village regulations. During this process, the project supported villages to make consultation happened with related stakeholders such as Thanh Hoi CPC and Tan Lac District FPD on the content of the regulation of each village to ensure that the provisions of the regulation are in line with the current law. Once the regulation was approved by the CPC, the project has disseminated about it to all villagers and helped them understand and comply with the regulations. In addition, the Project staff also regularly monitored, promoted and supervised to ensure that the community effectively enforce the Regulations on Forest Protection and Development.

Functions and responsibilities of the Village Management Board

- 1. Motivate and call for participation of households to village meetings, forest management, and livelihood development activities. Announce meeting minutes, results of activities done by the community to villagers through village meetings, or bulletins on forest management and livelihood development;*
- 2. Direct, coordinate, check, and supervise implementation of forest management and livelihood development activities of the village as approved, including activities of the Village Forest Protection Team; Ensure effective work of the village community regarding to forest management and livelihood development activity implementation;*
- 3. Effectively and sustainably manage, and use village fund as stated in the charter;*
- 4. Work with relevant parties to handle violations to the Village Forest Management and Development Consent; collect compensation payments made by violators, and transfer to the village fund within scope of authority as under the Consent;*
- 5. Handle violation cases, where commitment to implementation of village forest management and livelihood development activities broken; collect compensation payments made by violators, and transfer to the village fund within scope of authority; ensure effective use of resources for forest management and livelihood development;*
- 6. Arrange and supervise implementation of the Village Forest Management Team; ensure forest resource managed, developed, and use by villagers as stated in the Consent of Forest Protection and Development, and in the 5 year/annual forest management and development plans of the village, or in the state regulations.*

(Source: Operational Regulations on Village Forest Management and Livelihood Development of Sung 2 Village, Thanh Hoi Commune)

Functions and responsibilities of the Village Fund Management Board

The VMBFMLD and Village Fund Management Board (for the village that doesn't have VMBFMLD) shall be responsible for management and use of the Village Fund for Forest Management and Livelihood Development (Village Fund) as following:



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1. *Develop annual revenue and using plans in a participatory manner and submit to CPC for approval. The plan will be adjusted at the beginning of the third quarter every year if there will be huge changes in revenue. The using plan will also be adjusted through consultation with village communities and approved by the CPC.*
2. *Direct in/outcoming transactions as agreed;*
3. *Make report on village fund in/outcoming transaction every 6 months*
4. *Filling invoices, receipts, and documents related to transactions to ensure that all transactions are transparent and recorded in accounting book;*
5. *Ensure transparency for all transaction of the Village Fund;*
6. *Ensure the coordination, integration, management and use of Village Fund with other funds of the village.*

(Source: Village Fund Management Regulations, Nhót village, Thanh Hói Commune)

d. Monitoring and evaluation

The VMBFMLDs have been meeting every three months in accordance with the Operational Regulations of the Boards, and extraordinary meetings were also held if new work raised. Their meetings aim to update implementation plans and project results in generated in the villages as well as to solve within scope of their authority and responsibility, for example, handling violations to Regulations on Forest Protection and Development Regulations, or Village Fund Management Regulation. Thanks to the establishment and operation of the VMBFMLD, the forest management and protection of the villages has been strengthened. Particularly, from March 2017 to June 2018, 10 cases of violations to forest management and protection have been detected and handled (total area of violations was about 6 ha). In addition, the management and use of the village funds have achieved remarkable results, the total revenue of the Village Funds reached VND 450 million, which has been managed and used effectively that contributed to forest protection and livelihood development of the villages. The resources of the Village Fund have been used to support the members of the VMBFMLD and the Forest Patrol Teams (FPT). (VND 50,000 /person/month), thereby promoting the forest protection in the local area. In addition, the Village Fund has been used as micro- finance provided to support villagers. **Households can get loans from the Village Fund for their own livelihood or forest management activities (crop cultivation, animal husbandry, small business).** Up until now, 50 households were lent money from the Village Fund for livelihood development with a total loan balance of VND 233 million. The project has checked the village fund management of the VMBFMLD to ensure that the Fund is managed as in accordance with the Regulations and to provide



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advices to the VMBFMLD members to get over difficulties and obstacles encountered during operation of the Village Fund.

e. Encountered difficulties

- Currently, according to the State Regulation, there are existing community management groups in each village, for example, Village Party Secretaries, Village Heads, Women's Union, Youth Union, thus, the establishment of the VMBFMLD in each village caused overlapping and did not maximizing the village available groups.
- The members of some VMBFMLDs were not very active in implementing their work but mainly done by the Head of the VMBFMLD without engagement and support of other members.
- Compliance with the Forest Protection and Development Regulations of the communities was inadequate sometimes. Communication to help people to understand and comply with the provisions of the regulations was not effective as many people do not clearly know the provisions of the Regulations.
- In/outcoming transactions of the Village Fund have not been recorded fully nor in a timely manner as stated in the Village Fund Management Regulations.

f. Lesson learned

- Establishment of community-based groups and institutions should be suitable and meet with the needs of the communities. Communities should be considered as center of every activity and it is necessary to help them aware that community-based community groups and institutions are for and by the communities.
- No subjective thinking should be imposed to the communities. The Project staff should know well their role as a supporter and consultant but not decision makers.
- Communities should have their own autonomy, be self-confident in addressing their own problems to avoid dependence on external resources, or misunderstanding that the Project activities are for the Project but not for or by the communities.
- It is necessary to have scientific plans and approaches before implementing project activities in the community to avoid patchy and fragmented activities, which are lack of systematic and strategic planning.

2. Forest protection community-based team

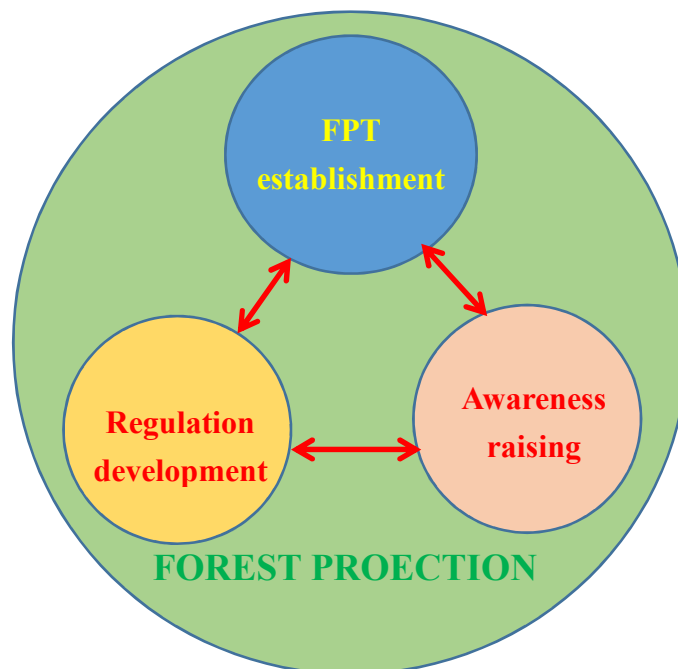


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a. Introduction

According to the results of forest inventory in 2015, there were over 1,872.39 ha of forestry land in total of 2,656.11 ha of natural land (accounting for 70.49%)¹. Forests and forestry land play a very important role to people in Thanh Hoi commune in terms of economic, society and environment. However, due to many reasons, the area of forest and forestry land in Thanh Hoi commune is decreasing, especially in the area of forest and natural forest lands. This negatively impacts to the environment, climate change responding and sustainable economic development. One of the causes leading to forest degradation and deforestation in Thanh Hoi commune is lacking of forest patrolling team or the available teams do not meet with the practical requirements. For many years, there is no village FPT in most of villages in Thanh Hoi commune (except in Nhot Village); the forest protection task is assigned to the forest owners (for forest and forestry land owned by a households, individuals or organizations) and to the communities (for forest and forestry land owned by the CPC) (without protection allowances). In order to improve the effectiveness of forest protection in the locality, the project has implemented community-based activities to promote forest protection through establishment of village FPTs, regulation development and awareness raising for the local people.

Figure 01: Community- based forest protection scheme in Thanh Hoi commune



¹ Result of inventory of 3 forest categories in Thanh Hoi commune, Tan Lac District, Hoa Binh Province in 2015.



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b. Background

In Vietnam, the forest protection and management has always been paid attention by the Government and concerned agencies. Especially, in recent years, the climate change problem is very complex. Vietnam is one of the countries that most affected by climate change. Experience in forest protection in Viet Nam has been extensively documented and legalized that put into enforcement throughout the country.

- According to the Article 9 of the Law on Forest Protection and Development in 2004: "forest protection is the responsibility of all agencies, organizations, households and individuals" because forests are of special importance to the socio-economic life of the people. In many places, forests are attached to people's daily life and activities; The local people who live closely to the forest are the best forest protectors. There is no guard force as strong as the people. Mobilization of the entire population for forest protection is aimed at creating the synergy of people, organizations and authorities in every area, at all times, in order to effectively prevent and handle the acts of destroying forests, natural resources and ecosystems in a direct or indirect manner

- Based on the Law on Forest Protection and Development 2004; Decision No. 1641 QD / BNN-HTQT, dated June 5, 2006 by the Minister of Agriculture and Rural Development approving the project "Community Forestry Pilot Program 2006-2007". On November 27, 2006, MARD issued Decision No. 106/2006 / QD-BNN on the issuance of the Village Forest User Guide. This is a guide to community-based forest management and protection.

- Recently, on 25/8/2016, the General Department of Forestry issued Decision No. 373-QD-TCLN-KL on the issuance of the Community Forest Management Guidelines for the Project "Protection and Integrated Management of Forest Ecosystems in Quang Nam, Kon Tum and Gia Lai Province "(KfW10 Project). Accordingly, the contents and steps of implementing community-based forest protection within the framework of KfW10 was clearly stated.

This shows that community-based forest management in Viet Nam is an indispensable and correct trend, based on the legislative framework adopted by the National Assembly, the Government, and leading forestry agencies of Viet Nam.

The results of forest protection and development in many places in Vietnam also show that it is necessary to bring into full play the strength of the local communities where have forests for successful forest protection and development.

In Nghe An province, when learning about the success of the community-based forest management and protection model in Tam Dinh and Xa Luong commune, Tuong Duong district, the author drawn on a lessons learned: "Accordingly, the core of the planning is to keep the forest from the root, it means, it should be based on tradition,



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the local people's enthusiasm for the protection. From there, mechanisms of support should be designed to spread the spirit throughout the community. "2.

- In Thanh Hoa, community-based forest management and protection models have been implemented effectively in many villages, including Buu village, Lo village, Nam Dong commune (Quan Hoa district) and Sua village, Dien Son commune (Quan Son district). These are the villages in the buffer zone of the Nam Dong Precious gymnosperms conservation area.

This model not only enhances people's awareness about forest protection and development but also limits forest exploitation. Implementing community-based forest protection has helped: "Households in the village who are well aware of their responsibility in forest management and protection, which is a common task, so far the forest area of the village has been protected stably. For many years, the FPTs have helped to stop tree cutting down or destroy the Natural Reserve. As assigned, the members of the FPTs always do their best, overcome difficulties to protect forests and ecological environment. Community-based forest management and protection not only enhance the sense of responsibility of the people in forest protection but also contribute to the biodiversity conservation and protect ecological environment in the Natural Reserve. "3

- The application of PFES policy or participation in the carbon market in the future helps people realize their rights and responsibilities for the task of forest protection and development. Son La is one of the first provinces in the country that has been implementing the policy on PFES. Thanks to the benefits generated from this policy, the community has increased their sense of responsibility for forest management, protection and development; illegal logging and deforestation have been detected and handled in a timely manner that helped protecting the local forest area. Understanding this issue in Hun village, Chieng Co commune, Son La city, the author has found that: "Through the policy of PFES, forest areas have been allocated for better management and protection. Illegal forest logging, deforestation and illegal forestry land encroachment have decreased. The contracted households have organized into contracted teams, or forest protection groups to create joined forces in forest protection; at the same time, attract the local people, especially the ethnic minorities to engage themselves in forest protection, contributing to job creation and income generation. "4

- When evaluating the results of community-based forest protection funded by the Caritas Project (Switzerland) in June 2013 in Nam Luong Village, Quyet Tien Commune, Quan Ba District, Ha Giang Province. Hien Long concludes: "Community forest management model has initially been effective; The forests in the village seems

² Community-based forest management and protection model in Nghe An - Ngân Phạm - Website: <http://www.nhandan.com.vn/chinhtri/item/31544202-mo-hinh-quan-ly-va-bao-ve-rung-dua-vao-cong-dong-tai-nghe-an.html>

³ [Commnuty-based forest protection](#) - Lê Hoi - Website: <http://www.baothanhhoa.vn/vn/kinh-te/n175972/Bao-ve-rung-dua-vao-cong-dong>

⁴ Forest protection: Community-based sustainable forest protection – Theo TTXVN - Website: <https://khen.mard.gov.vn/congtacmt/Pages/Bảo-vệ-rừng-Giữ-rừng-bền-vững-dựa-vào-cộng-đồng---.aspx>



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to be reforested thanks to the sense of responsibility of forest protection of the local people. Village heads, police officers and village groups are responsible for disseminating and advocating for forest protection. Accordingly, people in the rotational groups patrol the area of forests that have been allocated to them for management, not to allow the strangers to enter into the forests to exploit and hunt; Take initiative in forest fire prevention and fighting plans during dry season to forest fire hotspots and advise the CPC and the local forest rangers on the development of forest fire prevention measures. Based on the practical and initial results of forest management and protection in Nam Luong village, community-based forest management and protection using regulations have made achievements. This model needs to be replicated to contribute to awareness raising on watershed forests management and protection, increase forest coverage, income sources and living standards for the people.”⁵

However, community-based forest protection in reality also faces many difficulties. In some localities, there is no budget to pay for members of the FPTs (there is no PFES, no budget to pay allowances for forest management, etc.), thus, the responsibilities of the people have not matched with the forest protection interests. Due to the complexity of topography and population distribution, "the majority are ethnic minorities, living in the forest area, relying on forests, and their forest related deep-seated customary customs that lead to fragmented tree cutting"⁶. Violators of the forest protection regulations are often the people in the locality "so it is very difficult to denounce the forest destroyers because of the problem of brothers and family."⁷ Community-based forest protection is difficult in many places due to the fact that the community has not yet been allocated forests and forestry land by the community as they are not legally recognized as an organization. This limits the rights and interests of the village communities in managing, protecting and using the forest resource.

In Thanh Hoi, the drivers of forest area and quality degradation are as follows: (1) The income from forestry production is still low and the profit from the planted forest is only about VND 5 million / ha / year;⁸ (2) Lack of agricultural land, grazing pastures

⁵ Community-based forest management and protection – Hiền Long - Website:

<http://www.baohagiang.vn/phap-luat/201408/quan-ly-va-bao-ve-rung-dua-vao-cong-dong-480212/>

⁶ Dien Bien: participatory forest protection – Hoàng Châu – Nam Hương - Website:

<http://www.baotainguyenmoitruong.vn/suc-khoe-doi-song/201710/dien-bien-bao-ve-rung-can-su-tham-gia-cua-nguoi-dan-2853174/index.htm>

⁷ Dien Bien: participatory forest protection - Hoàng Châu – Nam Hương - Website:

<http://www.baotainguyenmoitruong.vn/suc-khoe-doi-song/201710/dien-bien-bao-ve-rung-can-su-tham-gia-cua-nguoi-dan-2853174/index.htm>

⁸ Report on socio-economic status of Thanh Hoi commune for the first 9 months 2017



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and lands for production of other sectors; (3) Demand for timber, firewood, bamboo and non-timber forest products; (4) Financial resources for forest protection and management are limited due to Thanh Hoi commune is not eligible for PFES. Therefore, in recent years, the local people have not been paid for contracted forest protection and management activity. (5) Institutional arrangements for forest protection and management are still limited. The developed village forest protection and development regulations (if any) contain so many points that are no longer valid. The village regulations that was established in early 2017, covering all areas, including one on forest protection and development, but the regulations were the same for all villages which are not detail enough to ensure it is suitable with natural, economic and social conditions of each village.

From the above-mentioned reasons, the reason which is related to organizational PFT which have not yet meet with practical demands, and the one which is related to lacking of regulations as basis for forest management and protection are two main reasons that need to be addressed.

c. Implemented activities

- ***Establishment and capacity building for members of FPTs***

Before Project implementation in Thanh Hoi, there were no community-based FPTs. Forest protection is assigned to forest owners. For forest areas owned by the CPC, the communities are assigned to protect, but the allocation is unclear (no contract, no agreement, no decision), no organization, or specific individuals are responsible for patrolling and protecting these forests. Therefore,



Pic 2: Conducting village forest patrolling by VFPTs

building and strengthening the organization of the FPTs in the villages is a very important work that has been implemented in since the first phase. The establishment and strengthening of the FPTs in villages was discussed directly with local communities; the local communities are the ones who make decision on the organizational model of the FPTs with the support of Project experts. Accordingly, if one village is assigned to manage and protect a natural forest area, which is not mixed with other villages (i.e., Nhot hamlet, Hamlet 1), independent FPTs should be established to carry out forest patrolling work within the village. In the villages that



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the communities assigned to manage natural forest area, which mixed with forests of other villages (Tam 1, 2, 3, 4, Sung 1, 2 village), inter-village FPTs should be established. For the villages where have no natural forest area allocated to the communities for protection and management (Bao village 2), FPT is not needed. Forest owners are households, individuals and other organizations that are responsible for managing and protecting their own forests. For the villages where the local people decided to allocate their planted forests for FPTs to protect and manage, in addition to the main tasks of protecting natural forests, FPTs shall be responsible for protection of assigned planted forests (i.e., in Nhot village). As results, four FPTs have been established and operating in 8 out of 13 villages with total of 17 members. Normally, each FPT has 3-5 members, depending on the area of forests that the FPT is responsible for protecting.

In order to ensure that the FPTs are organized, managed and operated effectively, each FPT has a clear and transparent working regulation that is developed with the participation of most households in the village. In addition, after the establishment, the Project has organized training courses to build capacity for the FPT members. In addition, the Project has also organized a study tour for FPT members to learn from other localities on forest patrolling and protection. At the same time, the project also equips FPTs with essential equipment and tools such as maps, binoculars, compasses and clothes to facilitate their forest patrolling work.

Thanks to the support of the Project, the FPTs members have developed a forest protection and patrol plans for each village. Based on the plan, the FPTs have conduct regular forest patrols, for example, once a month or more depending on actual demand at different times. Each month, the FPT shall produce report on their forest patrol results and submit to CPC. In addition, the coordination with local forest rangers in forest patrolling and dealing with violations is also emphasized. As a result, from March 2017 to June 2018, there were 10 violation cases detected and handled with the area of illegal encroachment to forest and forestry land was about 6 ha. For instance, by conducting forest patrolling a violation case was found timely by VFPT in Sung 2 Village (Thanh Hoi), a fence was installed by the violator to encroach about 0.3 ha of natural forest of the village for other purposes. After finding, the violation case was tackled in collaboration with VMBFMLD and the commune-base forest ranger of Thanh Hoi Commune. In order to promote and intensify coordination among FPTs and the local forest rangers, the Project has organized quarterly meetings (every 3 months).

As mentioned above, the protection of natural forests in Thanh Hoi is organized and implemented voluntarily and without community payment for the FPT members.



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- + Step 1: Collection of related documents. This step is to collect relevant documents and information for the development of the regulations.
- + Step 2: Draft of the regulation outline. A regulation outline is drafted to ensure the direction and objectives of the regulations.
- + Step 3: Develop the draft regulations. Village heads and other village group leaders held meetings to discuss and develop the draft regulations with detailed provisions.
- + Step 4: Organize village meetings to publicize the content of the draft regulations and get comments from the public on the draft; based on the comments, the regulations were improved and finalized. Finally, the content of the regulations agreed by the people who participated in the village meeting.
- + Step 5: Submission and approval. In order to increase the effectiveness of the regulations, after being agreed by the villagers during the village meeting, the final draft of regulations should be submitted to CPC for official approval.
- + Step 6: Share the contents of the regulations to every villager (publicly display on the public area, broadcast on the local broadcasting media, dissemination to the local people during the village meetings and contests on laws and regulations in order to increase the cohesion that all households in the village sign commitment to comply with the regulations.

- ***Awareness raising on forest protection for the people***

One of the drivers that led to deforestation in Thanh Hoi commune is low awareness of local people on the forest protection. Therefore, in order to protect forest effectively and sustainably, apart from forest patrolling and regulation development, awareness raising on forest protection and development is necessary. Having a goal of turning every individual to be a forest protector, the Project has supported to implement a series of communication activities in various forms to raise awareness and sense of responsibility of each community member in forest protection. For example, the Project has supported to build solid bulletin; install signboards; print and distribute leaflets and posters; and organize contest on forest protection.



Pic. 3: Forest protection billboard

Thanks to awareness raising activities on forest protection and development for the local people, so far, through the reflection of local people, the FPTs have collaborated with relevant stakeholders to verify reports on 17 suspected violations to forest protection



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regulations. The greatest success of raising people's awareness on forest protection is the sense of responsibility, the self-consciousness of people in forest protection and development have been significantly improved in all ages, genders and social class.

Table 01: List of carried-out supportive activities for community-based forest protection.

No.	Tasks	Unit	Quantity	Duration
1	Village meeting for FPT establishment	meeting	8	11-12/2016
2	Capacity building for FPT members	class	1	03/2017
3	Study tour on community-based forest protection	tour	1	12/2017
4	Provision of tools and equipment for FPTs	set	4	03/2017
5	Development of village regulations	regulation	13	3-5/2017
6	Contest on forest protection and development	contest	1	11/2017
7	Signboards for dissemination on forest protection and development (06 types)	Pcs.	218	6-12/2017
8	Poster for dissemination on forest protection and development	poster	50	5/2017

d. Monitoring

The coordinated and comprehensive activities such as the establishment of village groups (VMBFMLDs and FPTs), regulation development and awareness raising on forest protection for the people have shown an appropriate and effective approach of the project. The implementation of community-based forest protection activities has initially generated positive impacts on local forest protection.

Table 02: Community-based forest protection monitoring index

No.	Monitoring index	Unit	Quantity
1	Forest area protected by the FPTs	ha	760.9
2	Forest patrolling routes	route	12
3	Forest patrolling frequency	Time/month	1



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4	Using Village Fund to pay allowances for FPT members	VND/month /person	50,000
5	Verified suspected cases	Case	12
6	Detected and handled violations	case	10
7	Forest area that are subjects of violations	ha	5,9
8	Number of violators	person	6
9	Number of outside-commune violators	person	2
10	Number of illegal forest encroachment cases	case	6
11 ⁹	Number of illegal forest encroachment due to no clear boundaries	case	2
12	Reported handled violations	case	10
13	TTBVR Rate of village population who know there is existing village FPT	%	100
14	Assessment of natural forest protection after establishment of the village FPTs		
	- <i>better than before</i>	%	84,62
	- <i>no changes</i>	%	12,82
	- <i>worse than before</i>	%	0
15 ¹⁰	Rate of understanding to the Village Regulations on Forest Protection and Development		
	- <i>Know about it</i>	%	100
	- <i>Heard about it but not know it clearly</i>	%	0
	- <i>Do not know about it</i>	%	0

e. Problems and solutions

During the implementation of the community-based forest protection, many issues have been encountered that need to be resolved, thus, the Project and other stakeholders have worked together to identify suitable solutions.

⁹ Từ 1-11: monitoring data in 2017.

¹⁰ Từ 12-14: interview results to participated households in December 2017.



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Table 03: Encountered issues and solutions

No.	ISSUES	SOLUTIONS
1	Limited budget for PFTs	Members of FPTs should be key persons of the village/commune who work concurrently.
2	Misuse of forestry land is common, which is difficult to be thoroughly handled.	- Support CPC and concerned stakeholders to handle big case first. - Maximizing community force in handling violations.
3	People's understanding the regulations on management and use of forest resources is limited.	- Carry out dissemination activities in different forms (panel, poster, radio, and contests) in order to raise awareness of the local people on forest protection and development.
4	Violators do not comply with regulations	Request for presence of the violators at the CPC office or come to their home to educate them on forest protection and handle their violation acts.
5	Limited coordination among different stakeholders (FPTs, VMBFMLD, CPC, and local forest rangers)	Organize quarterly meeting to brief and report on previous quarter implementation results; develop plans, assign tasks to related parties for the following quarter.

f. Lesson learned

In order to achieve the Project results, many lessons learned have been drawn during implementation of the Project activities.

- The involvement of the local authorities and related agencies, especially, the role of the CPC and Tan Lac District FPD is a core for the Project's success. Thanh Hoi CPC have timely provided guidance and direction to FPTs, Village Heads, communal agencies to detect, verify and handle violations to Forest Protection and Development Regulations of the village. The District FPD has provided technical assistance to the CPC in the management and verification of suspected violations and advises on solutions to handle one it has been verified. Coordination between the CPC and the District FPD has been improved through quarterly briefings on forest patrolling and protection.
- Promotion of the spirit of democracy and self-reliance of the people has created the consensus of the communities in forest protection. Violators to the village



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Regulations on Forest Protection have not only shown their awareness of their illegal actions but also feel great pressure from the communities where they live that force them to seriously enforce the regulations and follow the decisions of the local authorities.

3. Af/reforestation

a. Introduction

Along with forest protection, af/reforestation is one of the main activities of the Project to facilitate sustainable forest development in pilot communes. Due to the custom of the people and market demands, the people in Thanh Hoi have long been monopoly planted acacia and harvested every 5-6 years. This affects the sustainable forest development strategy that MARD has been promoting through its recently promulgated policies. In order to promote the development of forests in a multi-purpose way that not only brings economic value but also contributes to environmental protection in a sustainable manner, the Project has adopted a new approach through support the local people for mixed forest tree planting in the pilot commune. Beneficiaries who have got support from the Project must ensure that the forest tree planting structure will consist at least 20-30% of long-term timber trees (i.e., *Canarium*, *Melia azedarach*, *Chukrasia tabularis*, *Michelia*, and *Erythrophleum fordii*) for production forests and 50% for protection forests.

b. Background

In the context of the increasing negative impacts of climate change, the economies of countries that are closely integrated with the world economy, the stringent quality requirements and production processes of commercial products including timber products on the international market are increasing every day. Hence, af/reforestation and sustainable forest product business in Vietnam are an indispensable trend contributing to raise incomes for the forest owners and protect the environment. From the point of view of sustainable economic forest product business, investing in big and long-term timber which combined with small and material wood and small timber from the thinning of planted forests and non-timber forest products is showing its sustainability, less vulnerable to adverse market fluctuations. This model provides a wide range of products that meets the different needs of the market. In addition, income is generated more frequent, including short-term income sources from non-timber forest products under forest canopy, medium-term income sources from forest thinning-wood products and long-term income sources from timber that exploited at the end of the forest business cycle. In regards to the environment, the mixed long-term multi-layered canopy forests have the greatest protection value. The mixed long-term multi-layered



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canopy forests are capable of protecting soil source from heavy rains. Stems, stumps, visible roots of the long-term forest timber trees help reducing soil erosion.

The multi-layered deep-rooted of the mixed forests help rainfall easily deeply penetrate into the ground, increase the quantity and quality of groundwater, reduce surface flow and mitigate impacts of floods, ensuring water source for streams, rivers, and lakes, especially, during the dry season. The long-term mixed forests play a very important role in carbon sequestration in terms of both volume and duration that helps reducing emissions. As Vietnam participates in the international carbon market (CDM), following the long-term natural forests, the long-term mixed planted forests have highest contribution in store carbon stocks.

In India, a project of enhancing carbon sequestration through India's forests is underway for a 50-year period. According to the calculation, by the end of the project to be between 0.4 and 0.6 Mt carbon will have been sequestered. 8 years later, each ha of forest can sequester up to 25.44 tons, during the next 12 years, each ha can sequester up to 41.2 tons and after 50 years every ha of India' forest can sequester 58.8 tons of CO₂ (equivalent to approximate 3 tons CO₂/ha). In China, a newly approved project will be implemented in watershed area of the Pearl River, Guangxi Province with four objectives as following:

(i) Improve CO₂ sequestration capacity of forests in watershed area, (ii) enhance biodiversity conservation of natural forests, (iii) improve the soil quality and prevent soil erosion and (iv) increase income for local people. In order to achieve this objective, 4,000 ha of multi-purpose forest will be planted. Expected outcomes of the project are job creation for 18,000 households in the project area with 110,000 working days, and it is expected that the planted forest will absorb 320,000 tons of CO₂ by 2020. In Iceland, carbon stock in some planted forests has been estimated by scientists, which show that one ha of forest *Larix sibirica* forest at the age of 32 can sequester of an average of 2.6 tons CO₂ / year one ha of *Betula pubescens* forest can sequester up to 1.0 tons of CO₂ per year, and one ha of *Picea sitchensis* forest can sequester up to 3.0 tons of CO₂ per year¹¹.

Princeton University research shows that the role of tropical forests in offsetting the accumulation of CO₂ from fossil fuels depends on diversity of tree species, especially in post-harvested restored forests. Presence of legume species in these forests ensures rapid forest growth in the first 12 years, thus, it helps increasing the forest's

¹¹ Study on CO₂ sequestration in *Acacia mangium* forests in Dinh Hoa District, Thai Nguyen Province – Phạm Cao Bón - 2014



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carbon storage capacity significantly. In the first 12 years after forest restoration, the amount of carbon sequestered in these forests is equal to 40% of the carbon stock in mature forests. Legume species contribute more than half of the nitrogen needed for carbon storage.¹²

The CDM is bringing a new opportunity to the forestry sector which is forest environmental services through afforestation and carbon sale. Especially for the developing countries, the CDM is an opportunity to achieve economic development targets. This is also an opportunity for technology transfer, knowledge improvement for the people in the sustainable development of each nation. The development of the long-term big timber trees intercropped with legume species as acacia species is a high economic, biological and environmental value model, especially when Vietnam participates in the international carbon market. In Vietnam, afforestation, especially mixed planted forests have been paid attention. In 2010, researchers from the Mid-Central Forest Inventory and Planning Sub-institute, while conducting an assessment on results of native broad-leaved tree planting in the Mid-Central Vietnam, have commented that "in the past years, thanks to receiving domestic and foreign investments, area of planted forest is increasing. Every year, an average of 15,000 - 20,000 ha planted with forest trees in the whole area. Broad-leaved native tree species plantings have been doing since the 1980s, especially in the last 10 years with projects of afforestation 327, 661, and others. By 2003, the planted broad-leaved tree area was 34,940 ha with variety of native tree species that created forest tree diversity. Some of the planted broad-leaved tree species such as *Dalbergia tonkinensis*, *Litsea glusinos*, *Hopea odorata*, *Homalium hainanense*, *Sindora tonkinensis*, *Sindora cochinchinensis* H.Baill, *Dipterocarpus alatus*, *Michelia*, *Scaphium macropodum*, *Hopea siamensis*, *Chukrasia tabularis*, *Erythrophleum fordii*, *Peltophorum pterocarpum*, *Cinnamomum camphora*, *Senna siamea*, *Ormosia pinnata*, *Cinnamomum parthenoxylon*, *Melanorrhoea laccifera* Pierre, *Canarium album* Raeusch, *Canarium Bengalensis* Guill, *Syzygium cumini*, and *Aquilaria crassna*. Planting methods are also diversified including monopoly planting, mixed planting of native trees only, mixed planting of native tree species with *Acacia* species, mixed planting of native tree species with pine species, planted under forest canopy, or on bare-land, etc. Each planting method has different planting formulas, on different soil types, for example, planting by band, by row, by cluster with different formulas and densities on bare-land. Beside the well growth tree species, some native tree species have shown many disadvantages, which are not

¹² Study on CO₂ sequestration of tropical forests- Website:

<http://iasvn.org/tin-tuc/Nghien-cuu-ve-su-hap-thu-cac-bon-cua-rung-nhiet-doi-3780.html>



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suitable to be grown in this area that lead to low productivity.”¹³ Afforestation projects in two provinces of Thanh Hoa and Nghe An (KfW4 project) funded by the Government of Germany that have been implemented from 2002 to 2012. Farmers who participated in the project have been granted with land use right certificate granted; received free seedlings and fertilizer for trees planted on poor soil area; got payments for their forest planting labor through bank transfer. At the end of the project, 80% of the forest area has been planted with various tree species. The main adopted methods were af/reforestation and regeneration. Forest plots of the project were regrouped to form large scale forest plots¹⁴. The method was adopted by the project was mixed planting by row, band and cluster to address issues of mixed planting. For example, households’ finance capacity is limited that impacted on their investment for long-term planted forests; technical intensive planting capacity of the local people is low that impacted the effectiveness of intensive forest tree planting. This made people to do monopoly forest tree planting as it is easy and could be harvested in a short duration. The Forestry Development Project (KfW7) is an ODA project funded by the Government of Germany through the German Development Bank. The project was implemented in two provinces of Hoa Binh and Son La from 2006 to 2016. One of the objectives of the project is to afforest, regenerate and manage 20,356 ha of forest area, of which, 16,756 ha in the project targeted communes, 3,600 ha in the core zone of the nature reserve. By participating in the project, households and village communities were supported for costs of forest planting, tending and protecting through bank accounts opened at district branch Agribank. The project created jobs, increased income for a part of the people in the project area, contributed to the poverty reduction, achieve objectives of the National Target Program on building new rural area of the provinces and development of the local area project. One of the successes of the project is the community-based forest protection and development, linking forest development with community economic growth¹⁵. Af/reforestation, especially, mixed planting has been adopted long time ago. As a result, many lessons learned have been drawn to apply for other programs and projects.

¹³ Study on planted broad-leaved tree species forest in the Mid-Central of Viet Nam - Website: <http://tongcuclamnghep.gov.vn/tin-tuc/157/a-8/nghien-cuu-danh-gia-ket-qua-trong-rung-cay-ban-dia-la-rong-vung-trung-trung-bo-viet-nam.html>

¹⁴ Af/reforestation in Thanh Hoa and Nghe An province - KfW4 - Website: <https://daln.gov.vn/vi/ac194a463/trong-rung-tai-cac-tinh-thanh-hoa-va-nghe-an-kfw4.html>

¹⁵ Project of “Forestry development in Hoa Binh and Son La Province” - Website: <https://daln.gov.vn/vi/ac194a52/du-an-phat-trien-lam-nghiep-tai-cac-tinh-hoa-binh-va-son-la.html>



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In Thanh Hoi, according to the forest inventory results in 2015, there were over 1,872.39 ha of forestry land out of 2,656.11 ha of total natural land (accounted for 70.49 %) ¹⁶. Of which:

- Natural forest area: 493.88 ha.
- Stocked planted forest area: 141.83 ha
- Non-stocked planted forest area (newly planted forests): 532.51 ha.
- Other land area: 731.17 ha (5.7 ha water surface area and 104.04 ha of land used for non-forestry purpose).

The inventory result showed that the planted forests and land for af/reforestation were quite large, which were 1,399.81 ha, accounted for 74.76% of the total forestry land area of the commune. Forests and forestry land play a very important role to people in Thanh Hoi commune, in terms of economic, social and environment.

Annually, in Thanh Hoi commune, 100 ha of production and protection forests are being planted. ¹⁷ Major planted tree species in recent years is Acacia species (accounting for nearly 100% of the planted forest area, even in the planted protection forests of the households. Some mixed planted forests (acacia and native tree species), which have been developed under support of previous project, there was no native trees left when people harvest acacia (i.e., Tam 4 village). Due to the limited investment capacity forest planters, the level of investment for intensive forest tree planting was not effective with no fertilizer, poor quality seedlings. Monoculture afforestation of acacia trees for wood material in short duration generated low quality products due to the poor-quality seedlings, limited investment, and low level of intensive planting. This have led to unsustainable forestry sector development that did not contribute to environment protection. The forests and forestry land in Thanh Hoi commune have decreased due to low economic effectiveness and the pressure on land demands for agriculture production. This negatively affects to the environment, climate change response and sustainable economic development. Therefore, it is necessary to support people in doing af/reforestation and forest product business to ensure sustainable forestry development.

c. Carried-out activities

¹⁶ Results of forest inventory for 3 forest categories in Thanh Hoi Commune, Tan La District, Hoa Binh Province in 2015.

¹⁷ Socio-economic report for 2011-2016 period of Thanh Hoi Commune.



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In order to carry out the main activities that support the af/reforestation, the Project has implemented a series of comprehensive and systematic support activities, including planning, designing, technical training, seedlings supporting which aimed to improve the success of the forest tree planting.

The first carried-out activity was **organization of meetings for communication/dissemination and planning for forest tree planting**



Pic. 4: Training for local people on af/reforestation

purposes, planning the plantation. The forest tree planning was done from the bottom up, based on the actual needs of the households. There were 32 village meetings and 4 communal meetings on forest tree planting planning that were organized simultaneously with planning for other activities. During these meetings, households were provided with information on the project, the rights and responsibilities of the households and stakeholders in the forest tree planting, implementation plans of each stage, and registration for forest tree planting as well as the expected area. In order to promote sustainable forest planting and business, contributing to biodiversity conservation and promoting environmental protection as in accordance with the REDD+ objectives, the Project has had to not only carry out analyzing, communicating and encouraging people to plant native tree species with acacia but also has requested the local people to plant native tree species intercropped with acacia as compulsory to be eligible to receive support from the Project. The percentage of native trees planted must be at least 20% for production forests and at least 50% for protection forests. Moreover, for acacia production forests, the Project has requested the participated households to contribute at least 20% of the value of supported acacia seedlings to the Village Fund, but no contribution is required for the native tree seedling support. Technically, the Project has promoted to apply mixed-planting by cluster and band for production forest to create favorable conditions for farmers to apply technical measures in planting, tending and harvesting their plantations.

The Project has requested its experienced and qualified consultant to carry out survey and design for afforestation to the registered households to ensure it meets the State regulations on afforestation. The consultant has reviewed all registered land areas, eliminated the unqualified ones and developed the af/reforestation designs for the suitable ones as required by the forestry sector. During the survey and design process,



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local people's participation was also important to determine the boundaries of land plots, tree species selection, and mixed afforestation methods. The Hoa Binh Sub-FPD has checked and provided technical advices to ensure that it is in line with the sector and locality regulations. Based on the results of the survey and design, the list of households participating in afforestation project has been officially approved.

In order to improve the capacity on af/reforestation techniques, the project has organized study tours and trainings for the local people. Two study tours to learn about planting and tending for 88 representatives of registered households were organized. Three technical training courses on planting and tending were organized with 191 representatives of involved households. In addition to the technical training materials, the Project has also designed, printed, and distributed the technical guidance for forest tree planting and tending to every household.

In the long run in forestry production and business, the quality of the seedlings is very important as it greatly impacts the economic efficiency that required a special attention. Therefore, seedling preparation has been well implemented by the Project with very specific requirements of each species which meet criteria of the government. In order to provide sufficient quantity and quality seedlings to households, the Project has signed a seedling supply contract with a reputable and capable seedling center in Hoa Binh province (Hoa Binh Seedling Center under Hoa Binh DARD). The process of seedling nursing has been managed by not only the provincial competent authorities but also the Project to ensure quality and progress of seedlings before handling to the local people.

In 2017 and 2018, the Project provided 242,742 seedlings to the local people for af/reforestation, of which native tree species accounted for about 36%, while acacia accounted for 64%. Apart from the large-scale forest tree planting, the project has also promoted the development of forest tree planting intercropped with NTFPs (*Amomum Longiligulare* and *Michelia mediocris* Dandy) models and demonstration models of intensive planting. As a result, in 2017 and 2018, 146.41 ha were planted with forest trees (38.78 ha of protection forests and 107.63 ha of production forests), two NTFPs models and three models of demonstration plantation (acacia, *Michelia mediocris* Dandy, *Melia azedarach* Linn.).

Thanks to the quality seedlings and varieties of tree species, 100% of planted areas in Thanh Hoi commune were planted with native trees only or mixed planting of native trees and fast-growing tree species like acacia.

Table 04: Af/reforestation results

No.	Task	Unit	Quantity
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			2017	2018	Total
1	Planted area by tree species		113.40	33,01	146.41
1.1	<i>Planted area with 100% of native tree species</i>	<i>ha</i>	<i>18.89</i>	<i>2,72</i>	<i>22.61</i>
1.2	<i>Mixed planting of native tree species and acacia</i>	<i>ha</i>	<i>94.51</i>	<i>29,29</i>	<i>123.8</i>
2	Number of households	household	148	41	189
3	Number of planted forest plots by plot area	plot	241	45	286
1.1	<i>Number of plots that are less than 0,5 ha/plot (no design)</i>	<i>plot</i>	<i>157</i>	<i>29</i>	<i>186</i>
2.2	<i>Number of plots that are equal or more than 0,5 ha/plot (no design)</i>	<i>plot</i>	<i>84</i>	<i>16</i>	<i>100</i>
4	Planted forest areas by forest categories	ha	113.4	33,01	146.41
4.1	<i>Massive forest tree planting</i>	<i>ha</i>	<i>110</i>	<i>33,01</i>	<i>143.01</i>
4.2	<i>Intensive planting</i>	<i>ha</i>	<i>2.4</i>	<i>0</i>	<i>2.4</i>
4.3	<i>Non-timber forest product models</i>	<i>ha</i>	<i>1.0</i>	<i>0</i>	<i>1.0</i>

d. Monitoring

- **Survival rate**

There is no official data on the survival rate of planted trees that supported by the Project. The survival rate data collected from interviews with households is for reference only as they only estimated the rate. Accordingly, the average survival rate reached 85.40% with 48 households responded

There is a significant difference in the tree survival rates among the villages where households were interviewed. The villages where survival rates were estimated lower than 85% are Dong 2, Bui 2 and Tam 3 village with total areas of af/reforestation in 2017 were 18.93 ha (occupied 16.69% of total forest tree planting area that supported by the Project in 2017 in Thanh Hoi commune). This partly reflects the reality of the natural conditions in the villages as following: (1) in Dong 2 village where its



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af/reforestation area is in Na hill, the land conditions are not good, soil layers are thin and with rocks, not much rain during planting season; (2) in the Bao 2 village, land conditions of the forest planting area (2.8 ha of Na hill out of total of 5.5 ha of planted forest of the village) are very bad, soil layers are thin and with rocks; (3) in Tam 3 village; land conditions of the planting area very bad; The VMBFMLD has not well urged and instructed the local households to plant forest trees.

- ***Planted trees' growth***

The interview results showed that 85.42% of the interviewed people said that, under support of the Project, the planted tree growth was good; 14.58% interviewed ones said it was in medium. 83.33% interviewed people said that the growth rate of planted forest trees without support of the project is better than the ones which got support; 16.67% of those who said it was the same. People's assessment shows that the quality of seedlings supported by the Project was good; seedlings were planted and tended at right time with suitable techniques.

- ***Location for native tree species on the planted forest plots***

The interview results showed that there was not huge difference in selection of area for planting native tree species on the forest plots. Forest tree planting by the local people has followed the State regulation on mixed planting. For production forest development, mixed planting by band on the top or down of hills; mixed planting by cluster and by plot boundary are considered as a technical solution to handle encountered problems of mixed planting, for example, poor technical capacity of the local people may lead to breaking native trees while logging fast-growing trees.

- ***Acceptance of native tree species in the forests***

Because of their short-term income objectives, the plantation structure in Thanh Hoi was generally focused on short-term tree species, for example, acacia. Promoting and persuading the local people to intercrop native tree species for sustainable forest development and environmental protection is very difficult that requires a series of integrated solutions. The project has carried out many parallel solutions to increase the percentage of native tree species in the forest tree species structure. For example, the Project has disseminated to the local people to help them understand the benefits of planting native trees, organized study tours, trainings for people on forest tree planting and tending techniques, encouraged people to do mixed planting by cluster or band for production forest as that do not require application of complicated techniques for planting, tending and logging. Monitoring results show that:

+ Regarding to the forest plots: 100% of the planted forest plots planted with native tree



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species, of which 43.15% of plots planted with only native tree species; 56.85% of plots got mixed-planting of native tree species and fast-growing species like acacia.

+ Regarding to the planted forest area: 100% of the planted areas got planted with native tree species, of which, 15.45% of area planted with native tree species as only; 84.55% of area got mixed-planting of native tree and other fast-growing species (acacia)¹⁸.

+ Regarding to engaged households: 70.84% of households who were interested in mixed-planting of native tree species and acacia; 14.58% of households who accepted to plant native tree species; 14.58% of households (out of 48 interviewed households) who were encouraged by the project to plant native tree species¹⁹.

The above-mentioned values partly reflect efficiency of the Project in changing mindset of the local people in planting native tree species. However, planting native tree species is greatly affected by natural, socio-economic conditions that is difficult to change completely in short term. Thus, it requires a series of solutions to be applied to change mindset of the local people and their practices in forest native tree species planting.

Table 05: Forest tree planting monitoring indicators

No.	Monitoring indicators	Unit	Quantity
1	Average of survival rate ²⁰	%	85.40
2	Growth of forest trees under project support in comparison to growth of trees from outside ²¹		
	<i>Better</i>	%	83.33
	<i>Same</i>	%	16.67
	<i>Worse</i>	%	0.00
3	Planting position of the native trees ²²		
	<i>Row by row, or tree by tree</i>	%	43.75
	<i>By band on the bottoms of hills</i>	%	16.67

¹⁸ Monitoring data since 2017

¹⁹ Project forest tree planting household interview in December 2017.

²⁰ Project forest tree planting household interview in December 2017.

²¹ Project forest tree planting household interview in December 2017.

²² Interview results to households in December 2017.



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	<i>By band on the tops of hills</i>	%	18.75
	<i>By plot boundaries</i>	%	20.83
4	Acceptance to native tree species of the local people		
	<i>Interested in planting native tree species</i>	%	70.83
	<i>No interest but no objection</i>	%	14.58
	<i>Encouraged by the Project</i>	%	14.58
5	Contribution to the village fund (VND 29,325,000 / VND 448,310,000) ²³	%	6.5

e. Encountered problems and solutions

The project has met many challenges in promoting sustainable forest development and business, in terms of both economic and environmental objectives, by encouraging the local people to plant long-term big timber trees or intercrop fast-growing tree with long term timber species. However, with the appropriate approach in disseminating to people about the benefits of growing big timber species, the encountered problems have been resolutely solved.

Table 06: Encountered problems and solutions

PROBLEMS	SOLUTIONS
Not familiar with intensive planting, less investment (no fertilizer, no tending)	Communication/dissemination, trainings, and building models.
Only plant short term acacia for material wood.	<ul style="list-style-type: none"> - Communication/dissemination, organization of trainings and study tours on mixed-planting, planting long term big timber trees. - Requirement of planting at least 20-30% of native trees as a criteria to be supported by the Project. - No contribution for the supported native seedlings. - Support for livelihood development activities like beekeeping and fuel-saving stoves.
Some areas where soil is not good	Check land conditions and advise the local people in selection of tree species (native tree

²³ Monitoring data in 2018



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that caused acacia death	species) for planting.
Requirement of high techniques in plating, tending, and logging forests.	<ul style="list-style-type: none"> - Allow flexible mixed-planting for production forests in order to reduce complicated technical requirements in planting, tending and logging. - Organisation of technical trainings for planters.

f. Lesson-learned

- In order to promote the planting of big timber tree species, it is necessary to help the local people to know about benefits of sustainable forest plantations. In addition, it is necessary to develop a mechanism to encourage people to plant native species by applying flexible planting methods without contribution to the Village Fund, and for that they will be eligible to be benefited by the Project. The most important lesson to be learned from this activity is to discuss democratically with the local people in order to reach a consensus within the community, avoid external arrangement.
- Regularly inspect, urge and support the households in the process of forest tree planting and tending to ensure that the afforestation activities are in accordance with the technical requirements and the plan.

4. Development of watershed forest maps

a. Introduction

In Thanh Hoi Commune, forest source plays a very important role in protection of water source that serve crop watering and daily living demands of the local people. Water for agriculture production and daily living is mainly supplied from watershed forests. In recent years, forest protection in general and watershed forest protection in particular has been facing challenges and difficulties due to illegal logging, forest encroachment and conversion. These have created pressure and threated critical important forests in the locality. Therefore, the Project has supported to develop watershed forest map to facilitate better forest protection and awareness raising for the local people on watershed forest protection.

b. Background

According to the Circular no. 60/2012/TT-BNNPTNT issued on November 9, 2012 which stated that the basin area is a natural area limited by the watershed to receive falling water and converge to a rivers and streams, lagoons, lakes, defined by boundary line closed by watershed from basin to outlet point, each basin may be divided into smaller ones called sub-basins. Identification of priority basins which significantly



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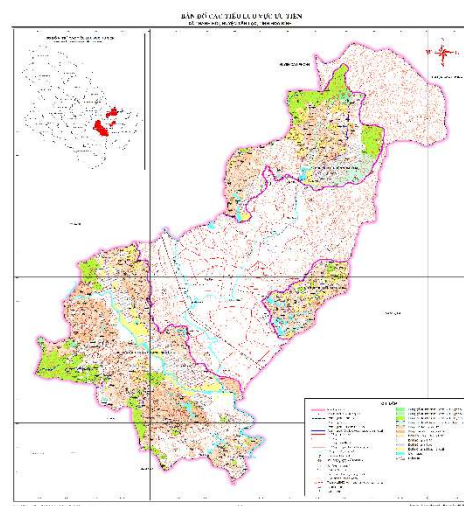
supply water for local people's daily living and agriculture production. In order to achieve target of this task, it is necessary to carry out the following work: (1) Determination of the geographical location of the basin outputs that play an important role in water supply for domestic use and production; (2) Setting out baseline boundaries of the basin outputs based on the elevation model; (3) Completion and building map and data system.

Thanh Hoi is a mountainous commune, where economic is mainly based on agriculture production and livestock. There is no fresh water system in Thanh Hoi commune, people have to get water from streams for domestic use. Water for agriculture production is from 9 big reservoirs/lakes supplied by watershed forests in the area.

In the context of unpredictable and unprecedented climate change, serious drought during dry season, and increasing demand of agriculture land have created great pressure that narrow the forestry land and affect to the water source of domestic use and production demands. Thus, protection of water source is very important to people in Thanh Hoi commune. In addition, it is necessary to help people and authorities in the locality raising their awareness on the forest protection in the priority basins and identify critical forests that need to be protected for the benefits of water source protection in order to effectively use resources for forest protection and development.

c. Implemented activities

The watershed mapping was conducted in a participatory manner, involving all stakeholders such as commune and village authorities, and villagers. The involvement of stakeholders in the watershed mapping process is very important that not only reflected both the need and importance of developing a watershed forest map but also identified the role of government and community in this activity, while the Project only played a role of promoting and supporting. Consultation meetings have been organized with participation of stakeholders such as local forest rangers, commune land officer, village heads and leaders of CPC in order to develop implementation plan, collect necessary information and feedback. In addition, data collection on field were also implemented to ensure accuracy. As a result, maps of the three critical watershed forests have been developed.



Pic. 5: Map of major basins in Thanh Hoi commune.



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d. Monitoring and supervision

Table 07: Monitoring indicators

No.	Indicators	Outputs
1	Water outputs (streams for household domestic use and reservoirs for production)	20 streams for domestic use and 14 reservoirs
2	Basin/watershed area	1,892.67 ha
	<i>Basin 1: Tam Village</i>	<i>792.51 ha</i>
	<i>Basin 2: Dong Village</i>	<i>141.32 ha</i>
	<i>Basin 3: Sung and Nhot Village</i>	<i>958.84 ha</i>
3	Watershed forest map	4 basin maps (basin map of the whole commune, map of basin 1, basin 2, and basin 3)

e. Encountered problems and applied solutions

The awareness of the local people and the relevant stakeholders about the importance of watershed forests for water source protection is still below standard as they do not fully understand about relation between forest area, forest quality and forest capacity of water source protection. Thus, it remains as a real challenge in helping the local people and the relevant stakeholders to see the importance of watershed forest protection and turn their understanding to action. In order help raising awareness of the local people, the Project will provide them with information through watershed forest maps which will be displayed in public areas and interpretation of the maps to the local people.

f. Lesson-learned

Promotion of engagement of the local authority and the relevant stakeholders since the beginning of the process of watershed forest mapping and implementing is essential element. If the relevant stakeholders still do not fully know the need of watershed forest mapping, it would result in unexpected negative impacts to sustainable forest protection and development.

5. Support for vegetable cultivation

a. Introduction



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Project's support for vegetable cultivation for the purpose of diversifying and increasing income sources for the participated households, and contributing to reduce dependence of household economy to forest income source. The Project have implemented designed activities to promote and support for vegetable cultivation and business in Thanh Hoi commune in general and in 3 participated villages (Bao 2, Sung 1 and Sung 2) in particular. These villages have practice in vegetable production and potential to develop in the future. The Project has supported by providing the participated households with technical assistance, seeds/seedlings, supplies and market access information.

b. Background

Income from cultivation of the local people in Thanh Hoi commune is mainly from crops of rice, pomelo, sugar cane, and vegetable. Rice is considered as major crop which ensure food security while sugar cane is significant annual income source of the local people in Thanh Hoi commune. However, sugar cane crop duration is about one year and requests big investment in fertilizer, tending and it price significantly depends on buyers. Although pomelo is significant source of income of the local people, it takes about 4 years to harvest the first crop and investment for input materials and tending is relatively high. Therefore, income from vegetable cultivation plays essential role during crop season transitional time with low investment and fast income generation (30 days).

Distance to huge market like Hoa Binh and Ha Noi City is not too far so vegetable production is a potential of the locality. In order to promote this activity in the commune, a number of projects of vegetable production have been implemented, for example, P-SARD project, development of vegetable cultivation project of Hoa Binh DARD and Tan Lac District Plant Protection Center. In 2016, the Agricultural Development Denmark Asia – ADDA started implementing a Project of “Strengthening the Framework for Production and Marketing of Organic Agricultural Products in Northern Vietnam”. The project duration is from 2016 – 2018 and its expected outcome is to build capacity for technical officers of the project and participated farmers on organic production process, product chain management to enhance living standard and health of the local people as well as environment protection. The Project of ADDA supported the engaged people in Sung 1 and Sung 2 Village to form a cooperative with 73 members. In addition, this project of ADDA has cooperated with cooperative in Sung village to organize a training course on organic farming techniques for 30 representative households of the group and a field trip with the participation of cooperative members and specialists on vegetable cultivation. However, the project only focuses on technical support and group building, but not market development²⁴. In addition, the engaged

¹ <http://baohoabinh.com.vn/PrintPreview/56816>



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households of Sung village, within the supportive vegetable production program, have been provided with technical training by Tan Lac district plant protection center. Moreover, the vegetable sector support program of DARD has been implemented in Thanh Hoi Commune but quantity and variety of seeds/seedlings are below people's demand.

Although the vegetable production in Thanh Hoi has had positive changes in recent years, however, vegetable products in Thanh Hoi Commune have not been granted a PGS (Participatory Guarantee System) certificate because soil and water quality of the production area has not been tested. Therefore, clean vegetable products in Thanh Hoi commune are not well-known, and are consuming only in the district and in the commune markets as mainly. Production of organic vegetables takes longer than traditional vegetable cultivation, but organic vegetables are normally sold as inorganic products in marketplaces with equal prices. The price of products is not equal the quality of the vegetables and the effort paid to the production so people in Sung village has returned to normal vegetable production in a traditional manner¹.

In fact, support of the separated projects and programs which have been implemented without coordination or integration that led to overlapping with low efficiency. Therefore, the SNRM Project have designed and implemented a series of activities to support vegetable production in Thanh Hoi commune such as enhance technique application, provision of seeds/seedlings and materials, and promotion of market access.

²⁴ <http://www.adda.vn/index.php/vi/tin-tuc/ban-tin1/313-hiep-hoi-nong-nghiep-huu-co-va-to-chuc-adda-tham-mo-hinh-rau-huu-co-tai-luong-son-tan-lac>



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Table 08: Seasons of major crops in Thanh Hoi Commune

No.	Type of crops	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1	Rice	Land preparation, sowing seed		Tending		Harvesting and seedling preparation	Land preparation and cultivation	Tending			Harvesting		
2	Sugar cane	Harvesting	Land preparation and cultivation	Tending							Harvesting		
3	Vegetable	Land preparation, cultivation tending, and harvesting			Vegetable production for domestic use						Land preparation, planting, tending, and harvesting		
4	Pomelo	Tending									Harvesting		

(Source: Socio-economic survey in Thanh Hoi commune in 2016)



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c. Implemented activities

- *Technical support*

The SNRM Project has organized a technical training for 80 farmers in order to enhance their technique application capacity toward clean vegetable production for increasing quality and price of products. Trainer of the training is officer of the Plant Protection Center of Tan Lac District who shared with the farmers the vegetable cultivation technique in summer-spring season. The training was consisted of two parts of theory and practice on field. The participated households were trained on application of cultivation techniques, pesticide, land preparation, fertilizer, and seed sowing for popular vegetable. They also guided how to use agriculture production film for some of vegetables like green pumpkin, cucumber, and aubergine, etc., in order to reduce effort of weeding, volume of fertilizer, diseases and chemical as well as input costs.



Pic. 6: Technical training on vegetable

- *Seedling and material provision*

The Project provide not only the technical training but also vegetable seeds and agricultural film for the participated households. The provided seeds/seedlings for summer season were morning glory, cowpea, pumpkin, water spinach, and green mustard; the vegetables seeds/seedlings for winter season were cabbage, kohlrabi and broccoli. The imported seeds/seedlings supplied by reputable suppliers to build habit using quality seeds/seedlings. Some of F1 seeds that imported from Japan and Korea like cabbage, kohlrabi and broccoli. The 80 households were provided with 20.52 kg of seeds for summer and winter crops. The amount of vegetable varieties provided to households in 2017 was approximately 241.5 g/household. The Project also provided to the households with agriculture film if needed (500kg in total). Using agriculture film for vegetable production will help to save time in watering, weeding, pest control, and increase crop productivity through enhanced photosynthesis. Each household who had received the agriculture production film contributed to the Village Fund with VND100,000/10 - 12 kg (equivalent to 17% of its value), and each household was supported 1 time only by the Project. The contribution to the Village Fund is to increase sense of responsibility of the households to what they received and create local



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available funds to support forest protection and livelihood development activities.

Table 09: Material support for vegetable cultivation for the households

No.	Village	Number of households	Provided materials (kg)			Contribution to the Village Fund (VND)
			Summer crop	Winter crop	Total	
1	Bào 2	4	40	0	40	400,000
2	Sung 1	16	70	108	178	1,600,000
3	Sung 2	29	80	252	332	2,900,000
	Total	49	190	360	550	4,900,000

- **Support for market access**

A study tour on production and market access was organized for key farmers in Thanh Hoi. Through the visit, the key farmers have had the opportunity to learn about production to produce products that meet market requirements, how to control the quality of products, and product consumption. The collected and learned information from the visit is important as it help the farmers to produce the products that meet the market demands and can help maximizing the profitability from vegetable production.

d. Monitoring

Monitoring and evaluation activities have been carried out by different stages of vegetable development. Information on the production and consumption of vegetables and markets was collected through questionnaires and in-depth interviews with households and extension workers. Results of a survey showed that the germination rate of vegetable seeds provided by the project was over 90%. However, some of households planted vegetables at the time of heavy rains that vanished away and destroyed the seedlings/seeds. Regarding to the use of agriculture film for production, the survey results show that the farmers mainly used it for production of high-economic value vegetables such as pumpkin, bitter melon and cucumber. The use of agricultural film helped to save time for weeding, watering, and prevent diseases better.

e. Encountered problems and solutions

The time for spring-summer crop was later than the vegetable crop season of the farmers due to late plan designing and approving for 2017 which was carried out at the



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end of 2016. Thus, some farmers planted other crops such as rice, and maize. Having learned that experience, the Project has provided seeds/seedlings to the farmers earlier to meet the time of winter season that allowed them to harvest earlier to sell at better price.

f. Lesson-learned

During the period of Project implementation in the area, the Project staff have to work closely with commune extension staff, VMVFMLD members to explore information of other projects, which has been carrying out in the area, to develop suitable cooperation mechanism with them to meet demands of the local people. In fact, since 2009, many projects on vegetable cultivation have been implemented in Thanh Hoi commune but it mainly focuses on technical assistant without focusing on market access. The SNRM has organized only one technical training course for the local people for spring-summer crop but not for winter one and continue providing inputs for both crops as well as adjusting supportive plan for 2018, which focuses on marketing and market access for the products.

6. Support for fruit tree cultivation

a. Introduction

Fruit production is one of strengthens of Thanh Hoi commune, especially, pomelo which is planted popularly in the locality. However, pomelo production has been developed without control that led to illegal forestry land conversion to pomelo cultivation. In addition, the improper use of chemical for fruit production is threatening people's health and environment. The local people have not properly applied techniques while cultivating. Furthermore, market access is considered as a risk to the outputs. In order to solve these issues, the Project has provided technical assistance to the local people in pomelo production and also support them in cultivation of other fruits in the locality to diversify the products and reduce risk of pomelo monoculture.

c. Background

Pomelo area has been significantly increased in the last 5 years in Thanh Hoi commune. However, the cultivation of pomelo in Thanh Hoi is mainly based on the farmer own experience or/and learned from others. Lack of experience in cultivation, especially in pomelo garden management such as creation of canopy, pruning, flowering and disease diagnosis has led to the widespread use of chemical pesticides without following manufacturers' recommendations. Besides, pomelo in Thanh Hoi are mainly produced by the local people. Layerage is a popular propagation method and is widely applied by the local households for its advantages as cheap, easy to implement and the local people



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can take advantage of home parent stock. However, most households carry out layerage when the parent trees are too small (2-3 years old) and unstable quality of fruit that results in poor quality outputs. Propagation by grafting is a method that provides high quality seedlings but it has not been applied and due to lack of knowledge of grafting techniques.

In addition, conversion of agricultural land to pomelo cultivation has been increased in recent years, raising a problem of diversification of fruit trees in order to diversify income sources, reduce the risk of dependence on pomelo. In addition, diversification of fruit trees can help mitigating the risk of crop failure due to natural disasters, bad weather and pests. The selection of local fruit varieties should be based on a number of factors such as local natural conditions, local people's experience, meeting consumers' demands and potential consumption market.

c. Carried out activities

- *Technical assistance*

The project has been providing technical training to the local people on fruit production, which carried out by the experienced and qualified trainers.

The local people have high demand in enhancing technical skills in planting and tending pomelo due to their lacking of knowledge. In order to meet their requirement, the Project has organized technical trainings on for them. The trainings focused on (1) skills and methods of planting and tending



Pic. 7: Technical training on pomelo cultivation for farmers

(planting, tending, preventing of pest, harvesting and preservation) and (2) knowledge of using chemical on pomelo that helps people to ensure technical process and protect environment.

With the aim of diversifying income sources for people and based on the needs of the households in Thanh Hoi, the SNRM Project has provided seedlings such as grafted longan, Thailand water-apple, Taiwan grafted apple, and Thailand jack fruit. However, fruit production technical skills of the local people are below requirements, especially to grafted fruit trees. Thus, the Project has organized technical trainings for the local people to enhance their skills and techniques to meet their needs. The trainings focused



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on (1) providing information and technical knowledge on land preparation including hoeing and fertilizing, planting technique on steep slope (monopoly and intercrop with other types of fruit trees), garden designing and planting technique, etc., (2) Providing technical information on tending for planted fruit trees (including both grafted trees and seeded seedlings), for example application of fertilizer and branch pruning. (3) Providing information on main pests to some of fruit trees like earlier ripe longan, Thailand sugar apple, Taiwan apple, and jackfruit as well as methods of preventing pests for fruit tree during the initial stage.

- ***Provision of seedlings/seeds***

In order to diversify fruit crops, the Project has provided varieties of fruit trees that are suitable with local land conditions and potential markets. To ensure the support of the project meets the needs of the people, fruit varieties are proposed and selected by the household through the planning meetings in 2018. In addition to the expectation of generating income from the sale of fruit, the diversification of fruit trees is expected to provide a source of feed for bee keeping that the project is promoting and supporting to the local people in this area. The varieties of fruit trees selected by the people include early ripe longan, Thailand sugar apple, Taiwan apples, and Thailand jackfruit. To ensure the effectiveness and sustainability of this activity, the Project has discussed and agreed with the villagers on criteria to receive support from the Project including (1) the received support households must contribute at least 30% of the value of seedlings to the Village Fund, (2) support level of the project is from 5-20 seedlings per household, (3) HHs are not allowed to grow fruit varieties supported by the project on the forestry land. As a result, the Project has provided 5,947 seedlings of fruit trees to 250 households.

d. Monitoring

The total number of trainees trained in pomelo cultivation was 112, 108 of them were households, and the rest of participants were commune and district extension workers. The trainees have made their own pre/post self-evaluation based on questionnaire form of 15 issues on planting and tending for pomelo tree. The pre/post self-evaluation results show that 8% of participants who fully understand these 15 issues, 88% of them fairly understand, and 4% of them do not understand this. The participants can apply trained techniques to their pomelo cultivation. According to the survey results, some of households have applied the learned techniques to the practice such as grafting technique and tending. In addition, also the Project has organised a training on fruit trees plantation techniques for 216 households.

e. Encountered problems and solutions



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Since the demand of the local people on fruit trees are various, thus, in order to ensure large scale fruit production toward commodity production, the Project has requested the villagers to register 3 kinds of fruit tree varieties as maximum per village, which is suitable with land condition and villagers' demands. This is considered important to avoid fragmented as it do not support the formation of commodity area.

f. Lesson-learned

Support for the diversification of fruit trees should be based on the potential of the future market of these fruits, their suitability with soil and the needs of the people, and to avoid external apposition. In addition, to ensure the support is provided scientifically, before providing seedlings to farmers, the Project have provided training on planting and tending techniques in order to ensure the seedlings will be planted and tended properly.

7. Support for beekeeping

a. Introduction

Forestry land in Thanh Hoi Commune is large, of which over 400 hectares of natural forests, where is a natural supply source of native bee colonies and abundant food for beekeeping. Beekeeping is an activity that has been implemented by people for a long time and has brought substantial income to the people with small investment cost and the product is easy to sell. However, the bee keeping business in Thanh Hoi commune is mainly spontaneous, which is based on experience of the local people so diseases prevention and development of beekeeping have been facing challenges. Support of the Project will help the local people to develop beekeeping professionally and sustainably. The project has implemented a number of activities to support the development of bee keeping in the local area such as capacity building, breeding and supplies as well as production arrangement.

b. Background

Forestry land of Thanh Hoi Commune is 1,872.39 ha (accounts for 70.5% of natural land of the commune), of which natural forests occupy for 493.88 ha and planted forests (acacia as major tree variety) occupy 674.34 ha where is source of feed for bees. Acacia trees have been planted popularly in the forestry land of Thanh Hoi commune which is source of feed for beekeeping. The beekeeping activity not only generate income for people in Thanh Hoi commune but is also associated with forest protection. It is very potential for development of this activity in the future.

The local people in this area are interested in keeping domestic bees as it is suitable with natural condition. Beehives are placed in the gardens or in the area where is close to



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protection forests. Each household has about 7 bee colonies, and maximum is 20 bee colonies kept in their garden due to the far distance from nectar and pollen sources or garden scale is not big enough for bigger bee colonies scale. In the area where is near by the protection forest, each household can have about 16 colonies as an average, some of them have bigger scale of bee colonies from 30 – 50 colonies per household.

Moreover, pomelo cultivation in the garden is one of element that reduce number of bee colonies due to the use of chemical that is not good for bees. Honey is mainly from the bee colonies that placed near by the natural forests where are rich sources of bees' food. Number of bee colonies in Thanh Hoi commune increased from 480 colonies in 2013 to 490 in 2014.

However, the local people who do the bee keeping only based on their own experience so there is limitation in bee management, especially during abscond. Queen bee rearing to build up more bee colonies or for prevention of diseases is under expectation. Increasing of bee colonies depends on two steps of placing round beehives into natural rock holes and then move to improved beehive boxes to divide bees naturally. The households have been using the improved beehive boxes for beekeeping but its size or design does not meet standard requirements so it is difficult to open/close the beehive boxes. The beekeeping households do not invest for beekeeping inputs, for example, they do not purchase supplies for beekeeping such as wax foundations, head cover hats or smoke makers. They also do not provide additional food for bees during hot and cold seasons that leads to abscond in summer (July, August, and September) and in winter.

Honey product of Thanh Hoi has been sold in the market for long time but harvesting techniques should be enhanced to ensure quality of honey, for example, harvesting at the right time, or honey filtering techniques. Honey products from Thanh Hoi commune do meet consumers' demand but it mainly contained in glass bottles which covered by self-made covers that is not good in case of far transportation and long-time preservation. Moreover, investment for packaging and sample is below standard.

Based on the fact of beekeeping in Thanh Hoi and demands of the local people, the Project have supported them to enhance their knowledge in this regard, develop bee colonies to increase household income and raise their sense of responsibility in forest protection.

c. Carried out pilot activities

The Project have organized meetings with registered households to collect information on beekeeping in Thanh Hoi Commune and demands of the households before carrying out this activity. Accordingly, the Project have implemented number of activities in



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enhancing beekeeping techniques, provision of bees and supplies, for example, (1) organization of study tours and technical training; (2) provision of bees and supplies; (3) establishment of beekeeping interest group; (4) enhance market access to the honey products.

- ***Technical support for beekeeping***

The Project has helped the local people to enhance their technical skills in beekeeping through study tours and technical trainings. Destinations for study-tour have been selected to meet the needs of the local people, for example, study-tour to beekeeping group in My Duc district, Hanoi, to VietGap beekeeping households in Hoa Binh City, and to Tropical Beekeeping and Research Center of the University of Agriculture in Ha Noi.



Pic. 8: Study-tour on beekeeping

During the tours, the participants have had opportunities to exchange and learn about techniques applied for bee colony dividing, caring, preventing diseases and collecting honey/non-honey products, tools and materials for beekeeping. In addition, the Project have organized three technical training courses for the beekeeping households in Thanh Hoi commune. The training courses facilitated by professional trainers from the Ha Noi University of Agriculture. Due to the complexity of the beekeeping techniques, the Project has designed a 3-day training course with suitable content and methods, which focus on practice, to provide the participants with basic techniques of beekeeping, for example, beehive box making that meet requirements, artificial queen bees rearing; bee management technique (including diseases prevention); ways of developing bee colonies and honey collection. After the training, the Project has carried out other activities to support the beekeeping households and promote them to apply what they have been trained to the practice. As results, there were 87 farmers have been trained with beekeeping techniques and have basically applied what they have learn to their beekeeping practice so far.

- ***Provision of breeding and supplies to beekeepers***

The Project provided the beekeepers with bees and supplies after they had attended the technical training by the Project on beekeeping techniques and mastered the basic knowledge of beekeeping. Each beekeeper has been provided with 3 bee colonies (3 bars of bee per colony) with a value of 1,950,000 VND/3 bee colonies. The supported



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beekeepers requested to contribute minimum of 30% of bee value (equivalent to VND 540,000 per household) to the Village Fund. The technical support for bee transportation, placing, and stabilizing and checking bee colonies plays a very important role, especially to new beekeepers. As a result, 249 bee colonies have been provided to beekeepers in Thanh Hoi Commune. In addition, supplies for bee keeping were provided to beekeepers to promote this activity. A number of beekeeping supplies were provided to each household such as wax foundations, knife for cutting bee comb, pollen, stations for bee feeding, and smoke maker, plastic bottles. Some supplies are provided by household groups, for example, honey extractors, Portable Fractometers (honey quality controllers), etc. In addition, the beekeepers have invested by themselves in wax foundations, pollen, needle for rearing queen bees and head covers. This shows that the promotion and support of the project has had positive impacts on the long-term sustainable development of beekeeping, reducing dependence on external support.

- ***Establishment of beekeeping interest groups***

The bee keeping business in Thanh Hoi has been generating significant income for the people, but all beekeepers are individual households. Their access to inputs is limited, and often meet price pressure during harvesting time. Some of the new beekeepers are not master in beekeeping technique application that lead to bees abscond, thus, it is necessary to form beekeeping group to support each other in both beekeeping and product selling. In order to overcome the above-mentioned issue, the project has promoted the establishment of interest groups of beekeepers in Thanh Hoi commune. The interest groups will help increasing access to sources of inputs, which is particularly important since Thanh Hoi commune is located far from the sources of supplies for beekeeping while the average number of bee colonies per household is small. The groups will also support to create a production area and increase access to potential markets for honey products and facilitate the negotiation of product prices as well as enhance application of science and technology advance into honey bee production. Total of 3 interest groups with 87 members have been established based on the geographical location, population characteristics, number of bee keeping households and the history of village formation. Each group has its own rules of operation. Moreover, the beekeeping interest groups also formed their funds to spend for the purpose of maintaining the group's activities and for micro finance to members of the group to develop beekeeping.

- ***Support for market access for honey products***

Not only supports for the production, the project, at the same time, also pays much attention to assist beekeepers in Thanh Hoi commune in selling honey product to gain



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sustainable profits. The Project has also organized study tour to learn about market access for honey products. The local beekeepers, through the study tour, have learned about market information, trend and demands of consumers to honey and other honey-related products as well as ways of marketing and product distribution. The information collected through the study tour play an important role to the beekeepers in Thanh Hoi Commune as it helps changing their mindset in development of the products and how to meet market demand. The Project will continue support and promote for the interest groups of beekeepers in the coming time to enlarge achievement and development of beekeeping in a sustainable way.

d. Monitoring and supervision

In 2017, 43 households were supported by the Project with the total of 129 bee colonies were provided to them (3 bee colonies/household). Thanks to application of trained technique, 48 new bee colonies have been newly created from the provided ones by the Project. According to collected statistic, there were a total of 591 bee colonies in Thanh Hoi commune in 2017. A survey result show that, honey production quantity by 59 beekeepers in 2017 was 1,559 litters, of which 1,414 litters were sold, which accounted for 91% of the total production. Average selling price of honey products was VND 211,200/l, total income from bee keeping was VND 298,550,000, and average revenue was VND 5,068,800 /household/year.

Table 10: Economic efficiency of bee keeping in 2017

No.	Content	Unit	Value (VND)
A	Production costs		947,130.5
1	Bee breeding	VND/year/HH	393,559.3
2	Supplies (pollen, sugar, wax foundation, bottles)	VND/year/HH	553,571.2
3	Other cost (land renting, land tax...)	VND/year/HH	-
4	Fixed asset depreciation (A)	VND/year/HH	-
B	Profits		
1	Quantity (l)	l/year/household	24
2	Price	VND/l	211,200
3	Revenue	VND/year/househol	5,068,800



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		d	
4	VAT (VA)	VND	4,121,669.5
5	Profits (MI)	VND/year/household d	4,121,669.5

Beekeeping is source of profit generation for the local people with an average of VND 4,121,669.5/household/year. Investment for beekeeping is low since the beekeepers do not have to pay for renting fee, labour, supplies, wax foundation, pollen, sugar and breeding. Profits gained from beekeeping is 4.4 times higher than initial investment costs.

e. Encountered problem and solutions

Thanh Hoi is located quite far from the input sources for the beekeeping industry such as wax foundation, pollen and headcovers so the local beekeepers are relying on the support of the project staff to access these sources. However, in order to ensure sustainable development and reduce dependence on external support, the project has promoted the bee-keeping interest groups to nominate their own members who act as focal point and being responsible for procurement of the needed supplies for the groups.

In the early stages, some new beekeepers were poorly managed their production due to low effective technique application that led to bee abscond during the food shortage season, thus, the Project staff have worked with the leaders of interest groups to effectively support these new beekeepers. The new beekeepers should be grouped separately for more training and being supported by experienced beekeepers.

f. Lesson-learned

The establishment of beekeeping interest groups is very helpful for the development of beekeeping industry as it helps the members in procurement of supplies, facilitates them to exchange experience, and creates foundation for larger-scale production development. In fact, the beekeeping interest groups have helped building relationship among the members, not only to share the beekeeping technology but also to promote household economy through contribution to the Village Fund that provide micro finance to households for beekeeping and other livelihood development activities.

8. Fodder grass cultivation

a. Introduction

In order to support the livelihood development, for example, cattle and cow farming, and to reduce unexpected impacts of this activity to forests, especially, newly planted forests (less than 3 years), the Project have provided fodder grass seedlings to



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households for cultivation.

b. Background

Buffalo and cow farming is popular in Thanh Hoi for gaining traction, selling calves/poddies, and meat. Its manure can be used as fertilizer for sugar cane, pomelo beside pig manure. However, many areas are facing trees being destroyed due to free grazing by the local people, especially, to the newly planted forests. Therefore, fodder grass cultivation plays a very important role in making stable source of food for cattle,



Pic. 9: Provision of fodder grass cuttings

especially, during cold season. This helps reducing free grazing to community forests, saving time for grass collection, and contributing to increase household economy. The fodder grass cultivation is considered as an essential activity since the number of cattle have reached an average increase of 40% in recent years.

Table 11: Number of cattle in four years from 2013 – 2016 in Thanh Hoi commune

No.	Species	Number of cattle				Average increase (%)
		2013	2014	2015	2016	
1	Buffalo	1,250	1,200	994	1.200	44.2
2	Cow	720	700	520	550	40.5
3	Goat	70	110	210	210	64.9

c. Carried-out activities

The Project has received registration of households for this activity, discussed with VMBFMLD and facilitators in this regard before provision of grass cuttings to the registered households. Based on local soil and natural conditions, the Project has provided to the households with 3 species of grass as VA06, Arachis pintol and Guinea Mombasa. These species are high productivity and nutrition that can live in cold weather and used for cows, buffalos, and goats. In addition, the Project has also provided the households with technical trainings on planting and tending.



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VA06 is a hybrid and perennial plant; standing tall 2.5 - 3 m; leaf/stem ratio accounts for 53%; productivity is 150 - 350 tons/ha/year if it planted on good soil, or 400-500 tons/ha if intensive cultivation applied; VA06 grass can live in cold and drought seasons with temperature varies from 18⁰ - 40⁰C; its roots develop strongly and centralized. People often plant this species to create grass fence for fruit garden, or plant surround dykes to prevent landslides, or plant in sandy soil to keep sand and to cover bare-land with green.

***Arachis pintol:** It is a nitrogen fixation plant, which has the effect of covering the soil, preventing soil erosion, protecting and improving the soil and used for fodder; nit grows faster if it is planted under a trees canopy; leaves and stem/trunk can be used as fertilizer for fruit trees, or as food for cattle.*

***Guinea Mombasa** Also known as the big leaf lemongrass, is a herbaceous grass, grows by cluster; Grass is sweet, high nutritional value that is be suitable for cattle and poultry; originating from Thailand; easy to plant and tend, can live during drought season, under industrial and fruit tree canopy, can be grown in different types of soil; can live in slight saline soils but not in prolonged wet land; Each year 8-10 generation can be harvested, the output volume varies from 100-200 tons/ha/year; Crude protein content: 8-14%.*

d. Monitoring and supervision

The total number/volume of cuttings and seeds provided to households in Thanh Hoi Commune was 16,524kg of grass for 98 households to be planted on about 5 ha, of which, 2,510kg of Arachis pintol, 14,000kg of VA06 and 14 kg of Guinea Mombasa.

The survival rate and effectiveness of each type of grass was assessed through direct interviews with households that was conducted along with regular field visits. The survey results show that (1) VA06 has highest survival rate with 95%; tending, and harvesting require simple techniques; and big volume of biomass. The VA 06 can be harvested for the first time after 60 days since the date of planting, 40 – 45 days after the previous cutting. From June to December 2017, total times of harvesting of VA06 was 3-4 times. (2) Mombasa Ghine has survival rate of 80%. This type of grass requires careful soil digging and sufficient moist for germination. Grass grows fast after germination and will was ready for harvesting after 60 days of sowing. It is a high productivity species. Its leaves are soft, less leaf hair, stand tall is from 70 – 100 cm, which is easy to harvest. It can be used for different animals like chickens, goats, buffalos, and cows. The second harvest is 30 -40 days after previous cuttings. From June to December 2017, total harvesting times were from 4-5 times. (3) Recorded survival rate for Arachis pintol was 40 -60%. It requires careful soil digging and good fertilizer application for development of grass. This species of grass often be planted in fruit tree garden of the households for the purpose of soil covering and food of cattle and poultry. The survival rate of this kind of species is not as high as expectation due to



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high requirements of planting and tending techniques. However, from the initial support, the Project will continue promoting to plant this kind of grass on the larger area.

e. Encountered problems

People's following to time and technique requirements and nursing cuttings/seeds before planting/sowing were not good so survival rate of some species was not as high as expectation, especially, to the *Arachis pintol*. In order to address this issue, the Project staff have worked with VMBFMLD and facilitator to regularly push and urge the local people to follow requirements, but the outcomes have not yet meet expectation. Therefore, to the households, who did not follow requirements, will not be supported by the Project in the coming time.

f. Lesson-learned

Due to the technical requirements for planting and tending are different among grass species, some varieties require very simple planting and caring techniques such as VA06 and Mombasa Ghine varieties, but not for *Arachis pintol*. For *Arachis pintol* grass species, it requires thorough soil preparation before planting and fertilization after planting as in accordance with the technical process. In addition, due to the local people's habits and practices, the project was experimented with only a small number of *Arachis pintol* grass species to ensure that resources were not wasted if the results were not as good as desire.

9. Fuel-saving stoves and biogas

a. Introduction

In Thanh Hoi commune, the Project have supported the local people with fuel-saving stoves and biogas plant installation with the purpose of reducing volume of firewood used for cooking domestically, reducing forest tree cutting, and contributing to forest protection and development accordingly. Moreover, the reduction of firewood used for cooking also help reducing time spent for firewood collection that indirectly contribute to household economic development.

b. Background

Currently, in Thanh Hoi commune, besides using gas cookers for daily cooking, most households use firewood for cooking. They collect firewood mainly from natural forests, from planted forest tree thinning of planted forests or utilizing wood from post-harvest acacia crops such as bark, branches, and tree tops (5.5 m³ of firewood



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equivalent to 5.5 tons of firewood). Reduction of firewood consumption will help to save time for firewood collection by the household while limiting the use of firewood from protected and natural forests that managed by village and CPC, contributing to forest protection and development.

In addition, livestock is a strong economic sector of the locality. It not only generates income for households but also produces waste for agricultural production and biogas. Pigs raising really contribute to economic development and thanks to favourable conditions, number of pigs in Thanh Hoi increased rapidly in 4 years from 2013 to 2016. In 2013, total pigs were 2,560 individuals, 2,750 individuals in 2014, 3,420 and 4,112 individuals in 2015 and 2016 respectively which marked an average increase of 52.1%. According to the Project's survey, people in Thanh Hoi do not have the habit of putting rice straw or other bedding materials into pigsty to make compost and reduce environmental pollution. They just let the pig manure being discharged directly into their home gardens and only use it to fertilize trees/crops 1-2 times per year and that lead to environmental pollution issue in rural areas. Therefore, the development of biogas contributes not only to the reduction of fuel consumption for domestic cooking but also to labor saving for the firewood collection and environmental protection. Biogas waste water is also used as a safe source of fertilizer for vegetables and fruit trees planted in their gardens.

Table 12: Characteristics and gas generation of some commonly used manure.

No.	Animal	Fresh manure (kg/individual/day)	Dry manure (%)	Carbon/Nitrogen (C/N)	Gas generation performance (lit/kg crude material/day).
1	Cow	15 - 20	18 - 20	24 - 25	15 - 32
2	Buffalo	18 - 25	16 - 18	24 - 25	15 - 32
3	Pig	1.2 – 4.0	24 - 33	12 - 13	40 - 60
4	Poultry	0.02 – 0.05	25 - 50	5 - 15	50 - 60

The efficiency of gas generation from pig manure is highest compared to others, which is at 40-60 liters per kg of raw material per day. Therefore, with the number of 5 pigs that weights 50kg or more each, it can ensure sufficient input materials for the biogas system.

c. Carried-out activities



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- ***Provision of firewood saving stoves***

The Project has conducted a number of surveys on available stoves in the market to find the most suitable firewood saving stove in order to introduce and provide to the local people to ensure it fits their needs and practices with the high efficiency. Having carried

out the surveys, the Project has decided to select TK90 stove to introduce to people during their village meetings to develop action plan of the project in their locality. In addition, when the TK90 kitchen was introduced to the people, the project discussed with the villagers about the support mechanism of the project to ensure sustainability and efficiency of the support. Accordingly, each household will be provided with maximum of 2 TK90 firewood saving stoves (depending on size and style) and each household will contribute 50% of stove value to the Village Fund. Any household, who receive support for building fixed stove that made of fire-clay and other



Pic 10: Improved cook stoves



materials like cement, brick and sand, have to contribute 50% the supported material value to the Village Fund. Having contributed to the Village Fund, the registered households have been provided with stoves by the Project as agreed. They've also been provided with technical assistance by the technical staff of the TK90 stove provider. Liquid for stove frame protection and manual have been provided together with stove to each household. A results, 1,998 stoves/materials for building stoves have been supplied to 1,053 households in 13 villages of the Project.

- ***Support for biogas plant installation***

Having received registration list from the VMBFMLD, the Project Officers have worked with facilitators and members of the VMBFMLD to carry out a survey on the number of animals and the site for biogas plant construction and installation of each household prior to signing a support agreement with them. Having considered required criteria in terms of number of livestocked animals and capacity to contribute to the Village Fund, the VMBFMLD have signed support agreements with the households under witness of CPC and the Project staff. According to the agreed support mechanism and other related stakeholders, the Project supported the people with construction



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materials including bricks, cement, steel, and iron, equivalent to VND 6million per biogas plant or provided them in cash to buy composite tank. Each support-received household contributed VND 1million (17% of the support value) to the Village Fund. The Project staff and members of the VMBFMLD have checked/accepted and assessed performance the products once it completed. As results, 20 biogas plants have been built and installed for 20 households in Thanh Hoi Commune.

d. Monitoring and supervision

According to the survey, TK90 stoves help saving 40-60% of firewood in comparison to the traditional ones. It can be used and moved easily with less smoke, can cook two cookers simultaneously with less firewood.

For biogas, survey results showed that the households who installed biogas plant and were raising an average of 12 pigs, average volume of the biogas tank is 16.6 m³. Total investment for a biogas plant is about VND 19 million. The biogas plants help saving up to 90% of firewood for daily cooking of every household (excluding cooking alcohol and for animals)

e. Encountered problems and solutions

Some households who do not follow the recommended maintenance procedures that led to small cracks to the stoves. As a result, the Project has regularly monitored and promoted people to use and maintain the stoves by following technical requirements of the providers. In addition, the project also requested the supplier to provide supplemental liquid for protection of the stoves for the households.

The cost of building/installing biogas plant is quite large compared to household income. In order to effort this, the local people have to sell pigs. However, in 2017, the price of pigs reduced by 40% and that affected the capacity of households to invest in biogas. The Project staff regularly encouraged the households to build biogas plants as planned.

f. Lesson learned

Since the TK90 firewood-saving stove was new to the local people so only 108 households registered. Having understood this issue, the Project not only introduced the stove to the local people but also provided samples of stoves to them for learning and using. Thanks to this the local people realize that the TK90 stove is suitable with their demands so that number of registered household significantly increased. Therefore, the Project staff understood that in order to help the local people to know about the new products, it is necessary to identify and apply the most appropriate approach to raise their demands to high quality products.



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APPENDIX

Appendix 1: List of VMB members in Thanh Hoi Commune

No	Village	Name of member	Position	Female member
1	BÀO 1	Ms. Bùi Thị Ghi	Leader	x
2		Mr. Bùi Văn Đính	Vice-leader	
3		Ms. Bùi Thị Hiến	Cashier	x
4	BÀO 2	Mr. Bùi Văn Thái	Leader	
5		Ms. Bùi Thị Nghi	Vice-leader	x
6		Mr. Bùi Văn Minh	Cashier	
7	NHÓT	Mr. Bùi Văn Năng	Leader	
8		Mr. Bùi Văn Thắng	Vice-leader	
9		Ms. Bùi Thị Nguyệt	Cashier	x
10		Mr. Bùi Văn Cầu	Member	
11		Mr. Bùi Văn Khoa	Member	
12	SUNG 1	Mr. Bùi Văn Đông	Leader	
13		Mr. Bùi Văn Ặng	Vice-leader	
14		Mr. Bùi Văn Thanh	Cashier	
15		Ms. Bùi Thị Thơm	Member	x
16	SUNG 2	Mr. Đinh Văn Hậu	Leader	
17		Mr. Bùi Văn Nhấp	Vice-leader	
18		Mr. Bùi Văn Phòng	Cashier	
19		Ms. Bùi Thị Khánh	Member	x
20	TAM 1	Mr. Bùi Văn Nhật	Leader	
21		Mr. Bùi Văn Nhiên	Vice-leader	
22		Mr. Bùi Văn Ân	Member	
23		Ms. Bùi Thị Khuyên	Cashier	x
24	TAM 2	Mr. Bùi Văn Khanh	Leader	
25		Ms. Bùi Văn Toàn	Vice-leader	
26		Ms. Quách Thị Định	Cashier	x
27	TAM 3	Mr. Bùi Văn Huệ	Leader	



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28		Mr. Bùi Văn Đăng	Vice-leader	
29		Ms. Bùi Thị Hẹm	Member	x
30		Ms. Bùi Thị Mịch	Cashier	x
31	TAM 4	Mr. Bùi Văn Đam	Leader	
32		Mr. Bùi Tiến Nhỏ	Vice-leader	
33		Mr. Bùi Văn Kháng	Member	
34		Ms. Bùi Thị Nga	Cashier	x

Appendix 2: List of VFPT member in Thanh Hoi Commune

No.	VFPT team	Name of members	Village	Position
1	BÀO 1	Mr. Bùi Văn Điệp	Bào 1 village	Leader
2		Mr. Bùi Văn Đăng	Bào 1 village	Vice Leader
3	NHÓT	Mr. Bùi Văn Lon	Nhót village	Leader
4		Mr. Bùi Văn Tuấn	Nhót village	Vice Leader
5		Mr. Bùi Văn Bảy	Nhót village	Member
6		Mr. Bùi Văn Năng	Nhót village	Member
7	SUNG 1, SUNG 2 (Joint team)	Mr. Bùi Văn Thịnh	Sung 2 village	Leader
8		Mr. Bùi Văn Nhiệt	Sung 1 village	Vice Leader
9		Mr. Bùi Văn Thư	Sung 2 village	Vice Leader
10		Mr. Bùi Văn Minh	Sung 1 village	Member
11	TAM 1, TAM 2, TAM 3, TAM 4 (Joint team)	Mr. Bùi Văn Nhiên	Tam 1 village	Leader
12		Mr. Bùi Văn Khánh	Tam 4 village	Vice Leader
13		Mr. Bùi Văn Tuấn	Tam 3 village	Vice Leader
14		Mr. Bùi Văn Biện	Tam 3 village	Member
15		Mr. Bùi Văn Quyền	Tam 2 village	Member
16		Mr. Bùi Văn Nội	Tam 4 village	Member
17		Mr. Bùi Văn Tùng	Tam 1 village	Member



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Appendix 3: Monitoring indicator for forest watershed mapping

Activity	Water supply sources	Identified areas (forest watershed)	Maps
Forest/Watershed mapping	20 streams, 14 lakes	Watershed 1: 844,62 ha; Watershed 2: 145,63 ha; Watershed 3: 958,84 ha	4 maps (commune map, watershed map 1, watershed map 2 and watershed map 3)

Appendix 4: Summary of forest areas being protected by VFPTs

No.	Name of village	Forest protection areas (ha)				Total (ha)
		Protection forest	Production forest	Planted forest	Natural forest	
1	Tam 1, 2, 3, 4	472.5			472.5	472.5
2	Sung 1, 2		21.56		21.56	21.56
3	Bào 1	27.5			27.5	27.5
4	Nhót		239.34	229.45	9.89	239.34
	Total	500	260.9	229.45	531.45	760.9

Appendix 5: Summary of afforestation

No.	Name of village	Number of seeding	Species	Planted areas (ha)		
				Production forest	Protection forest	Total
1	Nen 1	24,972	<i>Acacia mangium, Melia azedarach, Chukrasia tabularis, Canarium album, Hopea odorata</i>	14.20	0	14.20
2	Nen 3	10,154	<i>Acacia mangium, Melia azedarach, Canarium album Raeusch, Hopea odorata</i>	5.92	0	5.92
3	Nhót	13,728	<i>Acacia mangium, Melia azedarach, Chukrasia tabularis, Canarium album, Hopea odorata</i>	8.20	0	8.20
4	Đông 2	14,968	<i>Acacia mangium, Melia azedarach, Chukrasia tabularis, Canarium</i>	10.39	0	10.39



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			<i>album, Dracontomelon duperreanum, Hopea odorata, Michelia tonkinensis</i>			
5	Bào 1	42,193	<i>Acacia mangium, Melia azedarach, Chukrasia tabularis, Canarium album</i>	27.42	0	27.42
6	Bào 2	19,423	<i>Acacia mangium, Melia azedarach, Chukrasia tabularis, Canarium album, Michelia tonkinensis</i>	3.78	7.5	11.28
7	Sung 1	5,452	<i>Acacia mangium, Canarium album, Hopea odorata</i>	3.20	0	3.20
8	Sung 2	7,126	<i>Acacia mangium, Canarium album, Canarium tramdenum, Dracontomelon duperreanum, Hopea odorata, Michelia tonkinensis</i>	4.05	0	4.05
9	Tam 1	8,592	<i>Acacia mangium, Chukrasia tabularis, Canarium tramdenum</i>	0.00	5	5.00
10	Tam 3	24,791	<i>Acacia mangium, Melia azedarach, Chukrasia tabularis, Canarium tramdenum, Hopea odorata, Michelia tonkinensis</i>	2.42	13.41	15.83
11	Tam 4	66,855	<i>Acacia mangium, Melia azedarach, Chukrasia tabularis, Canarium album, Canarium tramdenum, Dracontomelon duperreanum, Michelia tonkinensis, Hopea odorata, Amomum longiligulare.</i>	26.20	11.75	37.95
12	Tam 2	2,641	<i>Acacia mangium, Chukrasia tabularis,</i>	0.80	1.12	1.92
13	Tân Hương 2	1,847	<i>Acacia mangium, Hopea odorata, Michelia tonkinensis</i>	1.05	0	1.05
	Total	242,742		107.63	38.78	146.41



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Appendix 6: Summary of technical training course for FM

No.	Name of training course	Number of trainee				Target village
		Villager	Other	Male	Female	
1	Training on operation, management skills for VMB members in Thanh Hoi	34	3	26	11	Bào 1, Bào 2, Đông 2, Nen 1, Nen 3, Nhót, Sung 1, Sung 2, Tam 1, Tam 2, Tam 3, Tam 4, Tân Hương 2
2	The forest management study-tour to Ba Vi commune, Ha Noi city and Cam Thach Commune, Thach Thanh District, Thanh Hoa	35	5	36	4	Bào 1, Bào 2, Đông 2, Nen 1, Nen 3, Nhót, Sung 1, Sung 2, Tam 1, Tam 2, Tam 3, Tam 4, Tân Hương 2
3	Training for VFPT members in Thanh Hoi commune.	33	1	33	1	Bào 1, Nhót, Sung 1, Sung 2, Tam 1, Tam 2, Tam 3, Tam 4,
4	Training on afforestation for villagers in Thanh Hoi	154	3	116	41	Bào 1, Bào 2, Đông 2, Nen 1, Nen 3, Nhót, Sung 1, Sung 2, Tam 1, Tam 3, Tam 4
5	Study tour for VFPTs to Son La Province	27	6	33	0	Bào 1, Nhót, Sung 1, Sung 2, Tam 1, Tam 2, Tam 3, Tam 4
6	Training on forest plantation techniques for villagers	43	3	41	5	Bào 1, Nhót, Sung 2, Tam 1, Tam 2, Tam 3, Tam 4
7	Training on forest fire prevention and extinguish for VFPTs and related sides in Thanh Hoi commune	31	7	35	3	Bào 1, Bào 2, Đông 2, Nen 1, Nen 3, Nhót, Sung 1, Sung 2, Tam 1, Tam 3, Tam 4
8	Training on taking care of planted forest	87	11	82	16	Bào 1, Bào 2, Đông 2, Nen 1, Nen 3, Nhót, Sung 1, Sung 2, Tam 1, Tam 3, Tam 4, Tam 2
9	Study tour to learn about Village fund management in Tien Yen district and Ha Long city	21	12	25	8	Bào 1, Bào 2, Đông 2, Nen 1, Nen 3, Nhót, Sung 1, Sung 2, Tam 1, Tam 3, Tam 4, Tam 2



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Appendix 7: Indicators for livelihood development monitoring

No.	Activities	Training and technical documents	Beneficiaries	Technical application	Impacts (productivity/fuel-saving)	Economic impacts (income generation/labour saving)	Community arrangement (status of farmer groups)	Impacts of community arrangement (marketing, group procurement, financial access)
1	<p>Support for vegetable cultivation</p> <p>1) Technical assistance</p> <p>2) Support for inputs</p> <p>- seeds/seedlings</p> <p>- agriculture film</p> <p>3) Support for market access</p>	<p>1) Training materials (ppt, video, and handout)</p> <p>2) Seeds/seedlings</p> <p>3) Agriculture film (black agriculture film)</p> <p>4) Study tour to best practice models</p>	<p>1) Technical training for 80 participants</p> <p>2) 19.56 kg of seeds were provided to 81 HHs.</p> <p>3) Agriculture film was provided to 49HHs</p> <p>4) Market access (25 HHs, 3 commune/district staff)</p>	<p>1) Techniques for safe vegetable cultivation</p> <p>2) Safe and effective ways of using chemical/pesticide</p> <p>3) Using agriculture film</p> <p>4) Cultivating high quality vegetables species</p>	<p>1) Number of HHs who applied trained techniques</p> <p>2) Number of HHs who use agriculture film for high valuable vegetables</p> <p>3) Build Village Fund from Project's support for agriculture film. The Fund can be used to provide micro finance to the participated HHs.</p>	<p>1) Vegetable-planting household economy</p> <p>2) Reduction of chemical for vegetables.</p>	<p>1) A cooperative of 73 farmers who plant vegetable in Sung village has been established in July 2017. It started operating and selling</p>	<p>1) Scale of safe vegetable production, Regulations and requirements on group operation and product quality as well as the use of pesticide.</p> <p>2) Role of cooperative in safe vegetable</p>



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							products	production
2	<p>Support for fruit tree cultivation</p> <p>1) Technical assistance</p> <p>- Technical training for pomelo cultivation</p> <p>- Technical training for fruit production</p> <p>2) Provision of seedlings</p>	<p>1) Training materials (handout)</p> <p>2) 5 varieties of fruit trees: early ripe longan, Thailand jackfruit, sugar apple, and Taiwan apple.</p>	<p>1) Technical training organized for 108 farmers and 4 extension staff.</p> <p>2) Provision of fruit seedlings for 120 HHs</p>	<p>1) Technical transfer for designing of pomelo garden using ruler (A shape) to prevent soil erosion</p> <p>2) Thinning technique applied for fruit trees during basic design process</p> <p>3) Flowering control technique (girdling, or push for flowering)</p> <p>4) Seedling techniques, for example grafting</p> <p>5) Used grafted trees to improve quality of the fruit trees</p> <p>6) Diversify varieties of fruit</p>	<p>1) Number of HHs who followed trained techniques for thinning, girdling for prevention of flower differentiation</p> <p>2) Number of HHs who applied grafting technique</p> <p>3) Build Village Fund to support the local people with micro finance</p>	<p>1) Amount of pesticide used for fruit trees that thinned appropriately</p> <p>2) Economic values for households generated from fruit production</p>	-	-



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				trees				
3	Support for fodder grass cultivation	<ul style="list-style-type: none"> 1) Technical guidance leaflets 2) Technical assistance on fields 3) Provision of seedlings: cuttings of Arachis pintol and VA06, seeds of Mombasa Ghine 	<ul style="list-style-type: none"> 1) Technical training for 30 participants 2) 16,601 kg of fodder grass provided to 106 households, planting area was 4.3 ha. 	<ul style="list-style-type: none"> 1) Planting and tending techniques 	<ul style="list-style-type: none"> 1) Saved time from grass cutting compared to before or to grazing 2) Reduction of dead cows/buffalos during winter (%) 	<ul style="list-style-type: none"> 1) Economic efficiency from livestock. 2) Time saving for other livelihood development activities 	-	-
4	Support for beekeeping	<ul style="list-style-type: none"> 1) Study tour to best practice models of beekeeping 2) Training materials (ppt, video, and handout) 3) Provision of bees and supplies 	<ul style="list-style-type: none"> 1) Study tour organized for 21 beekeepers and 2 CPC staff. 2) Technical assistance: + Basic technical training on beekeeping for 	<ul style="list-style-type: none"> 1) Basic beekeeping techniques including, advanced beekeeping boxes making (size, and technical specification requirements, 	<ul style="list-style-type: none"> 1) % of beekeepers who have been applying trained techniques. 2) % of beekeepers who know how to treat bee diseases like dead adult/young bee larvae, or worms that eat bee wax 3) Number or increased 	<ul style="list-style-type: none"> 1) Economic efficiency of beekeepers: net income generated from beekeeping is about VND 4.2 mill./year/household 	<ul style="list-style-type: none"> 1) Establishment of beekeeping interest group of 76 members to enhance technical 	<ul style="list-style-type: none"> 1) Beekeeping interest groups have their own regulations and fund to support each other to develop and expand beekeeping production. 2) Supervise



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		<p>4) Market access to honey products</p> <p>5) Regulations of beekeeping interest groups</p>	<p>50 participants</p> <p>+ Technical support at site of 26 households</p> <p>+ Technical training on nursing bees during winter for 60 beekeepers</p> <p>3) Provision of 129 bee colonies and 7 types of supplies for 55 beekeepers.</p> <p>4) Market access tour for 37 people and (35 beekeepers and 2 CPC staff).</p> <p>5) Support for establishment of beekeeping interest groups with 76 members.</p>	<p>queen bee rearing, multiplication of bee colonies, feeding bees during seasons of less/no pollen, disease and cold prevention, etc.</p> <p>2) Guidance on how to use supplies for beekeeping; wax foundation, smoke makers, and feeding station</p> <p>3) Methods of packing and enhance quality of honey products</p> <p>4) Techniques of mitigating bee absconding in fall and winter</p>	<p>bee colonies after trainings</p> <p>4) Formulation of Village Fund through Project's provision of bees and supplies. Micro finance for beekeepers from the Village Fund.</p> <p>5) Influence of beekeeping industry to plant diversification (fruit trees, and native trees) by the local people to serve demand of beekeeping.</p>	<p>2) Rate of households faced bee absconding in 2017</p> <p>3) Number of beekeepers in 2018</p>	<p>support among them and market access to their hone products.</p> <p>2) Need to follow number of beekeepers who participate in group activities</p>	<p>procurement of beekeeping supplies by the person in charge of the groups.</p>
5	Firewood saving							



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5.1	Firewood saving stoves	<ul style="list-style-type: none"> 1) Technical guidance leaflet 2) Technical training on building fixed firewood saving stoves and maintenance 3) Provision of firewood saving stoves 	1) 991/1059 have received firewood saving stoves	<ul style="list-style-type: none"> 1) Stove is close to save firewood and to keep heat. 2) Easy to move and can be used for multi-purposes 	<ul style="list-style-type: none"> 1) Save 50% of firewood compared to traditional stoves and therefore, save time for wood collection. 2) 79% of the village fund contributed by the local households who had received stoves. The Village Fund is used as micro finance to promote production. 	1) Save time for the supported households so they can participate in other activities.	-	-
5.2	Biogas plant construction and installation	1) Materials for construction of biogas plant (reference documents from a project of SNV)	1) 20 biogas plants have been built and installed	<ul style="list-style-type: none"> 1) Building biogas plants using bricks or composite tanks 2) Utilize pig manure to produce gas 	1) Reduce firewood consumption by households	1) Save time for the supported households so they can participate in other activities.	-	-



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Appendix 8: Summary of technical training courses for LD

No.	Name of training course	Number of trainee					Target village
		Total	By target beneficiary		By target gender		
			Villager	Other	Male	Female	
1	Pomelo cultivation technique training	114	108	5	71	43	Tam 1, Bao 1, Bao 2, Sung 1, Sung 2 and Nhot villages
2	Vegetable cultivation technique training	78	78	0	21	57	Bao 2, Sung 1, Sung 2 villages
3	Study-tour for beekeepers on beekeeping techniques (March.2017)	23	21	2	23	0	Tam 1, Tam 2, Tam 3, Tam 4, Bao 1, Sung 1, Sung 2 and Nhot villages
4	Training on basic beekeeping techniques for beekeepers in Thanh Hoi commune	50	50	0	50	0	Tam 1, Tam 2, Tam 3, Tam 4, Bao 1, Sung 1, Sung 2 and Nhot villages
5	Study-tour for beekeepers on beekeeping techniques and market access (October.2017)	38	35	3	38	0	Tam 1, Tam 2, Tam 3, Tam 4, Bao 1, Sung 1, Sung 2 and Nhot villages
6	Training on honeybee management in winter season for beekeepers in Thanh Hoi commune	61	59	2	59	0	Tam 1, Tam 2, Tam 3, Tam 4, Bao 1, Sung 1, Sung 2 and Nhot villages
7	Study-tour on market access for vegetable cultivators in Thanh Hoi commune	29	25	4	10	19	Bao 2, Sung 1, Sung 2 villages
8	Training on fruit trees cultivation technique for villager	334	216	18	219	115	Tam 1, Tam 2, Tam 3, Tam 4, Bao 1, Sung 1, Sung 2 and Nhot villages
9	Training on beekeeping techniques for beekeepers	97	87	10	90	7	Tam 1, Tam 2, Tam 3, Tam 4, Bao 1, Sung 1, Sung 2 and Nhot villages



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Appendix 9: Summary of LD activities carried out

No.	Activities	Target village	HH	Input	Type	Contents of support
1	Vegetable cultivation (spring summer autumn winter)	3	80	- 550 kg of mulching film. - 20.52 kg vegetable seeds	- Summer: morning glory, cowpea, pumpkin, water spinach, and green mustard - Winter season: cabbage, kohlrabi and broccoli	Technical training, seeds supply
2	Fruit cultivation	9	250	5,947 fruit tree seedlings for 250 HH	Early ripe longan, Thailand sugar apple, Taiwan apples, and Thailand jackfruit, Custard - Apple	Technical training, seedling supply
3	Pomelo technical training	6	108	NA	NA	Technical training
4	Beekeeping	9	87	- 249 bee colonies - 56 smoke makers - 55 Uncapping knives - 1,245 Wax foundations - 111 Veil hats - 17 honey extractors - 195 sugar feeders - 20 kg of pollen - 3 Portable Fractometers (honey quality controllers)	Honeybee colonies, Wax foundation, Veil hat, Smoke maker, Uncapping knife	Technical training (including study tour, Material supply)
5	Grass cultivation	9	98	- 2,510 kg of Arachis pinto cuttings, - 14,000 kg of VA06 cuttings. - 14 kg of Guinea Mombasa	Arachis pinto, VA06, Guinea Mombasa	Technical training, seedling supply
6	Improved cooking stove	13	1,053	- 1,988 improved cook stoves.	Portable ICSs and fixed ICSs	Material supply and training
7	Biogas	9	20	20 biogas systems		Material supply



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Appendix 10:

Operational regulations of Nhot Village

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Thanh Hoi, November 25, 2016

OPERATIONAL REGULATIONS

of Nhot Village, Thanh Hối commune, Tân Lạc District, Hòa Bình Province

CHAPTER I: VILLAGE MANAGEMENT BOARD OF FOREST MANAGEMENT AND LIVELIHOOD DEVELOPMENT (VMBFMLD)

Article 1. Name

Official name: “Village Management Board of Forest Management and Livelihood Development of Nhot Village” (hereafter called the “Village Management Board”);

Article 2. Members and term of office of the VMBFMLD

1. The VMBFMLD has 5 members:

- + Mr. Bùi Văn Năng, Head of VMBFMLD
- + Mr. Bùi Văn Thắng, Deputy Head of VMBFMLD
- + MR. Bùi Thị Nguyệt, Cashier cum accountant
- + Mr. Bùi Văn Cầu, member
- + Mr. Bùi Văn Khoa, member

2. Term of office: 2 years.

3. Members of the Village Management Board elected through village meetings. The village meetings are considered eligible if over 1/2 of total households attend the meetings.

4. Every member of the community who is 18 years old and above, has stamina, regardless of gender, holds Vietnamese nationality, and permanently live in the village.

5. Members of the Village Management Board must be approved by the Commune People’s Committee (CPC) to be eligible.

6. In case any of the Village Management Board member cannot continuing their mission due to force majeure reason, a successor should be elected by the village community through village meetings. Any replacement of the Village Management



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Board members should be approved by the CPC.

Article 3. Functions and responsibilities of the VMBFMLD

1. Motivate and call for participation of households to village meetings, forest management, and livelihood development activities. Announce meeting minutes, results of activities done by the community to villagers through village meetings, or bulletins on forest management and livelihood development;
2. Direct, coordinate, check, and supervise implementation of forest management and livelihood development activities of the village as approved, including activities of the Village Forest Protection Team; Ensure effective work of the village community regarding to forest management and livelihood development activity implementation;
3. Effectively and sustainably manage, and use village fund as stated in the charter;
4. Work with relevant parties to handle violations to the Village Forest Management and Development Consent; collect compensation payments made by violators, and transfer to the village fund within scope of authority as under the Consent;
5. Handle violation cases, where commitment to implementation of village forest management and livelihood development activities broken; collect compensation payments made by violators, and transfer to the village fund within scope of authority; ensure effective use of resources for forest management and livelihood development;
6. Create village forest management and livelihood development papers and submit to competent authorities for approval (if needed);
7. Arrange and supervise implementation of the Village Forest Management Team; ensure forest resource managed, developed, and use by villagers as stated in the Consent of Forest Protection and Development, and in the 5 year/annual forest management and development plans of the village, or in the state regulations.
8. The Village Management Board shall be responsible to, one time per month, write a bulletin on forest management and livelihood development, and work with Village Head to read the bulletin to villagers through village speaker on the first day of the next month.

Article 4. Decision making mechanism and implementation of the Village Management Board

1. The Village Management Board shall meet every 3 months, or meet unregularly (if needed).
2. The Village Management Board can, within its scope of authority, make decision to



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handle an issue if it is agreed by over ½ of the members.

3. All the village meetings should have its minutes documented and signed by the meeting chairpersons (Head of the board or authorized person) and secretary; Meeting minutes should be filled at the Village Management Board.

4. Head of Village Management Board shall be responsible to direct implementation of agreed activities. Other members of the Village Management Board shall stay under direction and assignment of their Head.

5. Members of the Village Management Board shall be responsible to make accountability to other members to their performance.

Article 5. Allowances for members of the VMBFMLD

1. Members of the Village Management Board and Forest Patrolling Team are volunteers and they work for benefits of the community.

2. Allowances (if any) for the members of the Village Management Board, and Forest Patrolling Team shall be paid from the Village Fund. Allowance rates shall be agreed by village community and approved by CPC

CHAPTER II: VILLAGE FUND

Article 6. Sources of the Village Fund

Sources of the Village Fund are as following:

1. The first source of the Village Fund is contribution (co-funding) of interest groups and households who receive support from the Project in order to carry out forest management and livelihood development activities.

2. Interest from small lending facilitation of the Village Fund to households to implement forest management and livelihood development activities.

3. Compensation that will be made by violators to the Village Forest Protection and Development Charter, and the Charter of Forest Management and Livelihood Development of the Project.

4. Other subsidies and support provided by the state, donors, projects, non-government organizations, units, individuals for the village forest management and livelihood development; volunteer contribution of the community (if any).

5. Payments for forest protection activities, payments for forest environmental services (PFES), participation in carbon stock market, tourist services, and other payments as prevail regulations for forests managed by the local communities (if any).



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6. Revenue source from non-timber logging; business revenue generated from non-forest products whenever it is suitable for growing and harvesting from the forests managed by the community (planted forests, non-timber products).

Article 7. Expenditures to be spent from the Village Fund

Expenditure identification should meet using rules of the Village Fund that agreed by villagers through village meetings and approved by CPC. Expenditures are as following:

1. Small lending to local households to implement forest management and livelihood development activities;
2. Allowances for members of the Village Management Board, the Forest Patrolling Team;
3. Regular expenditures of the Village Management Board (materials, printing, stationaries, tea, water, etc.);
4. Award to good achievement holders according to the Forest Protection and Development Consent;
5. Tea, water expenses for meetings, workshops, activities of the whole village regarding to forest management and livelihood development such as tending, regeneration, restoration, development to forests managed by the local community.
6. Expenditures of other public activities as agreed by the community;

Article 8. Cost norm

1. Cost norm for activities shall be agreed by the village community;
2. Ground for development of the cost norm is balance of the Village Fund on the day of plan making; Specific cost norm shall be agreed by the village community after establishment of the Village Fund.
3. By the end of each quarter, and year end, outstanding balance and additional funding (if any) shall be transfer to village fund using plan of the Village Fund for next year.

Article 9. Village Fund using mechanism

The Village Management Board shall directly manage and use the Village Fund, including:

1. Motivate the community to establish and develop the Village Fund;
2. Direct in/outcoming transactions as agreed. Make plans and balance, and report to village community during regular village meetings;



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3. Filling invoices, receipts, and documents related to transactions to ensure that all transactions are transparent and recorded in accounting book;
4. Implement Village Fund Using Plans;
5. Ensure transparency for all transaction of the Village Fund;
6. Create linkages between credit activities and other services;
7. The Village Management Board shall make annual Village Fund using plans based on activities of forest management and livelihood development of the community that approved by the CPC and the Project;
8. Village Fund using planning should be carried out at the same time with forest management and livelihood development planning that is suitable with socio-economic development plan of the community. Steps of planning are as following:
 - Identify available financial capacity and potential revenue of the Village Fund;
 - Balancing incomes and expenditures in order to select official activities to put into the plan with priority orders;
9. Village Fund using plans shall be shared with the village community and submit to CPC for approval to be valid. The plans would be revised during 3rd quarter every year if there are any significant contributions to the Fund. The revised Village Fund using plans shall be shared with the village community and approved by the CPC to be effective.

Article 10. Responsibilities of the village community and households

1. Contribute to the Village Fund as stated in the Article 6 hereof;
2. Contribute to the Village Fund using planning;
3. Promote individual spirit of local villagers in monitoring transactions of the Village Fund and propose in a timely manner to the Village Management Board, CPC, and the Project to check and clarify un-complied transactions;

Article 11. Supervision to the use of the Village Fund

1. The Project and CPC shall check the Village Fund every two quarter or randomly (if needed).
2. List of expenditures and incoming transactions shall be made accurately and in a timely manner. Accountant shall make monthly transaction on the accounting book and get it signed by the Head of the Village Fund and accountant as it will be used as base of regular checking evident;



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3. The Village Management Board shall make written reports on transactions of the Village Fund and plans for next quarter and share it with the villagers every six months or one year. The reports shall be fully filled with meeting minutes at the Village Management Board working place to serve purpose of management and checking.

Article 12. Support of local authority to the Village Fund

1. CPC shall be responsible for reviewing and approving the Village Fund using plans based on the village meeting minutes.
2. CPC shall be responsible for supporting village community to handle violations to Village Fund using rules, which are beyond capacity of the Village Management Board.

CHAPTER IV: IMPLEMENTATION TERMS

Article 13: Effectiveness of implementation, and adjustment

1. The VMBFMLD shall work under supervision and direction of CPC and the SNRM Project in terms of project activities and management of Village Fund. It is responsible for making report and submit to the CPC and the SNRM Project.
2. The Charter is agreed by Nhot villagers through village meeting on building Operational Charter of the Village Management Board of Forest Management and Livelihood Development.
3. The Charter shall take effect on the date of approval of the CPC.
4. Members of the Village Management Board for Forest Management and Livelihood Development of Nhot village, Thanh Hoi Commune shall base on the Charter to work.
5. Any modifications or additions to content of the Charter shall be agreed by villagers through village meeting and approved by CPC.

Village Head

CPC approval



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Appendix 11: inter-village regulations for forest patrolling team of sung 1 and sung 2 village

SOCIALIST REPUBLIC OF VIETNAM

Independence - Freedom - Happiness

Thanh Hói, November 24, 2016

INTER-VILLAGE REGULATIONS FOR FOREST PATROLLING TEAM OF SUNG 1 AND SUNG 2 VILLAGE

I. Organization and operation

1. The Inter-Village Forest Patrolling Team should have 4 members including 1 team leader, 1 vice team leader(s), and 2 members. Members of the Forest Patrolling Team are elected through village meetings, accordingly, each village will nominate 2 members.
2. The elected members, after being elected, will meet to discuss about tasks and titles of each person. Members of the Forest Patrolling Team are elected through village meetings. Election results must be approved by Thanh Hoi CPC.
3. Term of office of the Forest Patrolling Team is 2 years. It is possible to replace or add new members to the Forest Patrolling Team (if necessary) through village meetings. Results of replacement must be approved by Thanh Hoi CPC.
1. The Forest Patrolling Team shall work under direct management and supervision of the Village Management Board for Forest Management and Livelihood Development of Sung 1 and Sung 2 village.

II. Functions and missions

1. Develop monthly/quarterly/annual plans to protect the 2-village community forests (including production forest and protection forest).
2. Patrol the forest that managed by the village community 1-2 times/month and protect forests under contract signed with other forest owners (if any).
3. The Forest Patrolling Team shall submit monthly village forest change report to forest rangers and the Village Management Board for Forest Management and Livelihood Development of the two villages.
4. The Forest Patrolling Team shall work closely with the Village Management Board for Forest Management and Livelihood Development of the two villages and forest rangers as well as other related parties to handle violations.



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5. All members of the Inter-village Forest Patrolling Team shall strictly follow the Forest Protection and Development Consent of the 2 villages and other government regulations on forest management and protection.
6. Members of the Inter-village Forest Patrolling Team shall follow instructions and assignments of the team leader in forest patrolling activity implementation.
7. The Forest Patrolling Team shall meet 1 time per month to share information of forest protection and issues in this regard that they face up with.

III. Rights

1. The Forest Patrolling Team voluntary work for the shake of the village forest protection of the two villages.
2. Members of the Inter-village Forest Patrolling Team shall be trained on how to read and use maps, make forest change report, ways to handle forest protection violations.
3. The Inter-village Forest Patrolling Team shall be provided with maps and other required equipment to carry out forest patrolling work.
4. Members of the Inter-village Forest Patrolling Team are eligible to have priority in receiving benefits of activities of forest management and livelihood development provided by the Sustainable Natural Resource Management Project.
5. If the Village Fund have capacity, members of the Village Forest Patrolling Team shall be paid allowances for the work of the forest patrolling that they perform, allowance rate shall be decided based on capacity of the Village Fund and by the Village Management Board for Forest Management and Livelihood Development of the two villages.

IV. Rewards and disciplines

1. Active members who contribute to forest protection of the village will be rewarded and encouraged. Rewards will be paid from the Village Fund and the rate will be decided by the Village Management Board for Forest Management and Livelihood Development of the two villages.
2. Members who are not active in participating in the team activities will not be eligible to access those benefits and they will be replaced by others by the villagers.

Village Head

Approval



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Appendix 12: Village Fund Management Regulation

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REGULATIONS ON MANAGEMENT AND USED OF VILLAGE FUND FOR FOREST MANAGEENT AND USE

Article 1. Sources of the Village Fund

The main sources of the village fund are:

1. Co-contribution of interest groups and families who have received support of the Sustainable Natural Resource Management (SNRM) Project for performance of forest management and livelihood development.
2. Interest of micro financing of the village fund for implementation of forest management and livelihood development by the villagers.
3. Compensation payments made by violators, who breach agreements signed by beneficiaries and the Project.
4. Other subsidies and support provided by the government, donors, projects, non-government organizations, individuals, and organizations for performance of forest management and livelihood development activities of the village.
5. Payments for performance of forest management and protection under contract terms; payments for forest environmental services, carbon stock market joining; payments for tourist services or other payments as regulated by the government, which is applicable for forest area managed by the village community (if any).
6. Revenues of non-timber products collected from community forest; business revenues generated from forest products collected from planted forests of the community (i.e. planted forest, non-timber products).
7. Other sources

Article 2. Village Fund management responsibility

The VMBFMLD and the Village Management Board (for villages which do not establish VMBFMLD) shall be responsible to manage and use the Village fund. Details are as following:



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1. Development of annual revenue and expenditure plans of the Village Fund with participation of the villagers and submit to CPC for approval. The plans shall be amended in the beginning the quarter 3 annually if there is any significant change to the fund and fund sources. Any adjusted using plans need to be agreed by the villagers and approved by CPC.
2. Collect revenues and use Village Fund to as planned.
3. Develop 6-month reports on Village Fund collection and use.
4. Filling receipts and invoices as in accordance with regulation of financial management to ensure every single transaction proved by financial evidence and clear records in accountant book.
5. Ensure transparency use of Village Fund
6. Ensure coordination and integration in management and use of the village fund of the Project and other funds of the village.

Article 3: Principles of managing Village Fund for Cashiers/Accountants

1. Do not use the Village Fund for personal purpose
2. Do not use Village Fund for personal financing
3. Record as soon as transaction takes place
4. Record every transaction that use Village Fund clearly, accurately, and scientifically
5. Do not place personal money with money of the Village Fund
6. Ensure cash of the Village Fund is kept safely
7. Filling invoice and every supporting document carefully
8. Conduct monthly Village Fund cash inventory
9. Perform in/out coming transaction as in accordance with regulation and do not make any transaction without direction of the VMBFMLD or the VMB.

Article 4. Cost norm for VFs

No.	Transactions	Unit	Cost norm (VND)
1	Allowances for members of the Village Forest Patrolling Team	Person/month	50,000



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2	Allowances for members of the VMBFMLD or village heads the VMB where have no VMBFMLD	Person/month	50,000
3	Expenditures for printing, tea, and water used by members VMBFMLD and VFT for working purposes	Village/ year	240,000
4	Rewards to outstanding performance holders	Village/ year	100,000
5	Micro finance		
5.1	To Bào 1; Bào 2; Nhót; Sung 2; Tam 1; Tam 2; Tam 3 and Tam 4 village	HH/time of financing	Not over VND 5 million
5.2	To Đông 2; Nen 1; Nen 3; Sung 1 and Tân Hương 2 (if available)	HH/time of financing	Not over VND 2 million

Article 5. Management of micro finance

1. Money used for micro finance is balance of the Village Fund after deducting all allowances and regular expenditures.
2. Micro finance from the Village Fund should be used for forest protection and livelihood development of the supported households.
3. Process of micro finance including i) HHs register with the VMBFMLD/VMB to be financed, ii) registration processing, iii) sign micro finance agreements.
4. The HHs who are financed and amount of financing will be decided by the VMBFMLD/VMB based on using plan of the HHs. If there are many HHs who are eligible for being financed but the balance of the Village Fund is not enough to fully meet their demands then sortation will be applied.
5. Only village HHs are eligible to request for micro finance; priority will be given to poor HHs, HHs who made outstanding performance in forest protection, and HHs who haven't had access to micro finance of Village Fund. HHs who violated the Village Regulation on Forest Protection and Development will not be considered.
6. HHs who want to access to VF micro finance need to sign agreement with the VMBFMLD/VMB. The agreement should be signed by both husband and wife unless one of them are no longer available (dead or lost capacity for civil acts of individuals).
7. Duration: Not exceed 12 months.



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8. Interest rate is 0.7%/month (equivalent to 8.4%/year).
9. Interest shall be paid monthly to the Village Fund.
10. Principle shall be paid one time at the end of the term. A part or entire principle can be paid before due date. Interest rate shall be calculated based on the balance of the month.
11. The VMBFMLD/VMB is responsible for checking and urging the granted HHs to use the money for the right purposes to enhance effectiveness of the Fund. If the HHs do not use it for the right purposes, the VMBFMLD/VMB has right to request the HHs to return the grant (principle and interest that calculated until the time of payment).
12. If there is any conflict, for example, the HHs do not pay interest and principle, and the related parties cannot solve the problem themselves then the VMBFMLD/VMB shall report to CPC for handling it under provisions of laws/regulations.

Article 6. Monitoring report

1. The Project and CPC will check the Village Fund every two quarters or any time, if needed.
2. All in/out transactions must be recorded accurately in a timely manner. The Accountant shall make monthly balance report on the in/out transactions of the Village Fund. The Head of the VMBFMLD/VMB and the Accountant shall sign on the monthly balance reports, which are basis for regular checking by the Project and CPC.
3. The VMBFMLD/VMB shall report in detail all transactions of the Village Fund and plan for the following 6 months before all villagers. The reports shall be submitted to CPC, and also filled at the VMBFMLD/VMB for later use of checking.

Article 7. Effectiveness of enforcement and amendment

1. This regulation has been shared during the meeting of the key representatives of villages in Thanh Hoi commune on May 10, 2017;
2. Any amendment or addition to the content of the regulation must be shared during village meeting and approved by CPC.
3. This regulation takes effect on the date of signature of the CPC.
4. VMBFMLD or Village Head of the VMB and villagers are responsible to



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implement this regulation.

Village Head

CPC approval

Appendix 13: Regulation of Forest Protection and Development of Sung 2 Village

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VILLAGE REGULATION FOR FOREST PROTECTION AND DEVELOPMENT

Of Sung 2 Village, Thanh Hoi Commune, Tan Lac District, Hoa Binh Province

Forests and forestry land in Sung 2 Village, Thanh Hoi Commune, Tan Lac District, Hoa Binh Province are precious resources of the local people. Forests are sources of products that directly serve demands of the local people, protect water resource that serves daily living and production demands, contribute to keep fresh air, cool and mild weather, mitigate negative impacts of storms, floods, and climate change, etc. Moreover, forests play very important part in the ecological environment in the region, which have great value in economic development and link closely to the life of the local people. Having recognition of the importance of this resource, all people in Sung 2 Village aware that "forest management, protection and development" is not only the task the forest ranger force but also responsibility and obligation of each person in the community.

Since the forests are very important to livelihoods of the local people, thus, it is essential to implement well the forest management, protection and development. In order to achieve the targets of forest protection and development, not only enforcement of law and implementation of regulations on forest protection and development are important, but also village convention development on this regard as it will promote the local people to volunteer and contribute for achievement of the targets on forest protection and development in particular and socio-economic development and environmental protection in general.

The Village Convention on Forest Protection and Development developed by Sung 2 villagers, who were volunteer and committed to follow plans and orientations of the Party, policies and laws of the Government, and other related forest protection and development regulations of the competent authorities that promotes good tradition and practices of the local people in forest protection and development.



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LEGAL BASIS FOR VILLAGE REGULATION

- Law on forest protection and development in 2004, which was approved by the XIth National Assembly, 6th session dated December 3, 2004.
- Decree No. 23/2006/NĐ-CP dated March 3, 2006 of the Government on enforcement of law on forest protection and development.
- Decree No. 157/2013/NĐ-CP dated November 11, 2013 of the Government on administrative fine applicable for violations to law and regulations on forest protection and development and forest products management.
- Decision No. 17/2015/QĐ-TTg dated June 9, 2015 of the Prime Minister on promulgation of management regulation applicable for protection forests.
- Decision No. 49/2016/QĐ-TTg dated November 1, 2015 of the Prime Minister on promulgation of management regulation applicable for production forests.
- Decision No. 106/2006/BNN-PTNT on development and management of community forests.
- Meeting minutes on adoption of Village Convention on Forest Protection and Development by the Sung 2 villagers that was voted during the meeting held on April 4, 2017.

Chapter I

GENERAL PROVISIONS

Article 1. Objectives of the forest protection and development

1. Ensure the improvement of forest quality and area, as well as its biodiversity.
2. Forest and forestry land of Sung 2 Village are managed, protected, and used sustainably by strictly following laws and regulations on forest protection and development as well as regulations issued by competent authorities.
3. Enhance traditional institutions and indigenous knowledge in sustainable forest and forestry land management.

Article 2. The Village Convention is applicable for all villagers in Sung 2 Village and other people living outside the village or commune, who commits violation to the Convention.

Article 3. All forests and forestry land of Sung 2 Village are subjects of protection and development.

1. Natural forests managed and protected by local communities;
2. Plantations of the local households;
3. Wild animals, non-timber forest products in forests and forestry land of the local



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households and the natural forests managed and protected by the local communities.

Chapter II

SPECIFIC PROVISIONS

Article 4. The villagers are encouraged to

1. actively participate in forest protection and development;
2. strictly follow regulations of the competent authorities on forest fire prevention and fighting while conducting land clearing after harvesting the planted forests or cutting and burning vegetation;
3. plant diverse of forest trees (long-term and fast growth trees) while conducting forest plantation on the land managed by the households;
4. raise awareness on forest fire prevention and fighting, inform village head, local authority, and forest rangers on fire in a timely manner, if detected;
5. collect dried branches while logging timber to not prevent growth of trees below forest canopy;
6. to non-timber products such as vegetable, forest flowers, honey, medicinal plants, etc., clear harvesting is not allowed, but only selective harvesting, in order to ensure sustainable use;
7. participate in protection and development of natural forests managed the local communities by regenerating and enrich forests;
8. combine and apply local experiences with suitable science technology into forest maintenance and planting.

Article 5. Prohibited acts

Prohibited acts	Handle violations and compensation
Group 1.	Households, organizations and individuals who commit violations listed under the Group 1 provision of this Convention shall be simultaneously penalized by applying the following forms of sanctions: 1. Violations will be informed to the competent authorities (forest rangers and Commune People’s Committee) in order to be handled by following effective regulations; and the village head will make public announcement on the detected violations; 2. Compulsory compensate for loss of forest owners as agreed by the two parties based on effective regulations and laws. 3. Compulsory take responsibility and fulfil obligations within
1. Illegal forest clearing/logging	
2. Illegal hunting forest wildlife	
3. Violate regulations on forest fire	



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prevention and fighting	<p>scope of the community as follows:</p> <ul style="list-style-type: none"> - pay a fine of VND 200,000 to the village fund for the first violation; - pay a fine of VND 400,000 to the village fund for the second violation; will not be given priority to be benefited by the Project; - pay a fine of VND 500,000 to the village fund for the third violation; will not be given priority to be benefited by the Project; not considered to be ranked as cultural household.
4. Encroach, or convert forests into different land use purposes without permissions	<p>Households, organizations and individuals who commit violations listed under the Group 2 provision of this Convention shall be simultaneously penalized by applying the following forms of sanctions:</p>
Group 2	<p>1. Violations will be informed to the competent authorities (forest rangers and Commune People’s Committee) in order to be handled by following effective regulations; and the village head will make public announcement on the detected violations;</p>
1. Cattle grazing in young forests (less than 3 years-old forests).	<p>2. Compulsory compensate for loss of forest owners as agreed by the two parties based on effective regulations and laws.</p>
2. Illegal mineral exploration and other natural resources within area of household forests and natural forests managed and protected by the local communities.	<p>3. Compulsory take responsibility and fulfil obligations within scope of the community as follows:</p> <ul style="list-style-type: none"> - pay a fine of VND 100,000 to the village fund for the first violation; - pay a fine of VND 200,000 to the village fund for the second violation; will not be given priority to be benefited by the Project; - pay a fine of VND 300,000 to the village fund for the third violation; will not be given priority to be benefited by the Project; not considered to be ranked as cultural household.

Chapter III

AWARDS AND DISCIPLINES

Article 6. Awards and disciplines

1. For individuals and households who made outstanding achievements of forest management, protection and development, strictly following the Village Conventions forest protection and development, shall be awarded at the end of the year in cash or in-kind (rewarded/awarded using the Village Fund).

2. Persons who detected violations without notifying the responsible persons for



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handling; or the persons who acts to conceal or cover for the violations will be admonished in front of the community and not be given priority to be benefited by the project.

Chapter IV

IMPLEMENTATION ARRANGEMENT

Article 7. The village head is responsible for implementation arrangement of the Village Convention.

Article 8. Individuals, organisations and associations in the village are responsible for following and implementing all provisions on forest protection, management and harvesting as stipulated in the Village Convention, laws, and regulations.

Article 9. The fines paid by people who commit violations or owners of cattle will be distributed as following:

1. if the subjects of the violations belong to the management and use rights of individuals and households in one village, the fines will be paid to the village fund of that village;
2. if the subjects of the violations belong to the management and use rights of the inter-villages including Sung 1 and Sung 2, the fines will be divided and contributed equally to the two village funds of the two villages;

Article 10. This Village Convention will replace other conventions on forest protection and development (if any) of Sung 2 Village. The Village Convention will take effect on the date of signature.

Date xxx, 2017

Village Head

**Approved by Commune People's
Committee**



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Annex 1 of Appendix 13: Template for violation record

THANH HOI CPC **xx Village**

SOCIALIST REPUBLIC OF VIETNAM

.....

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Số:/20....

....., date..... month 20....

MINUTES OF VIOLATIONS TO THE VILLAGE REGULATION ON FOREST PROTECTION AND DEVELOPMENT

Today, date xxx....., at xxx (place of that violations took place)

.....

Representative of the Village Forest Patrolling Team:

Mr./Ms.....

Mr./Ms

Mr./Ms

And the detector (witnessed by)

.....

Formulate violation minute to the Village Convention on Forest Protection and Development for the following persons:

No.	Full name	Age	Occupation	Address

Regarding to:

Exhibits are:

Violation means include:

All evidences and means of violation shall be brought to the village for handling under the Village Convention on Forest Protection and Development and regulations of the Government.

This minutes made into three copies, publicly read and signed by the related parties.



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This minutes recorded at ...hrs....., at.....

Person commits violation	Witnessed by	Village Forest Patrolling Team	Village Head
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Annex 2 of Appendix 13: Template of fine payment for violation

**THANH HOI COMMUNE
PEOPLE COMMITTEE
XXX Village**

**SOCIALIST REPUBLIC OF VIETNAM
Independence – Freedom – Happiness**

No..... /20....

....., date..... month 20....

**COMPULSORY MINUTES OF TAKING
OBLIGATIONS AND LIABILITIES FOR VIOLATION OF
THE VILLAGE REGULATION ON FOREST PROTECTION AND
DEVELOPMENT**

Pursuant to the Village Convention on Forest Protection and Development that approved by Thanh Hoi Commune People’s Committee dated

Pursuant to the Violation Minutes..... dated..... developed for Mr./Ms.....

.....who committed violation to.....

Representatives of Village Management Board of Forest Management and Protection Xx Villageinclude:

Mr./Ms.

Mr./Ms.....

Mr./Ms.....

Request the violator whose name mentioned above to fulfil obligations and take responsibilities by paying a fine of VND xxx

Evident includes.....



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and means of violation such as xxxx will be handled by the competent authorities (forest rangers and Commune People’s Committee).

The violator must fulfil obligations and take responsibilities for their violation by paying the fine of VND XX to the village fund of XX Village within 03 day from the date of this minute.

This minute developed athrs....., dated.....

Violator

Village Management Board of XXX village



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References

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7. Decision No. 373-QĐ-TCLN-KL dated August 25, 2016 of VNFOREST promulgating guidelines for community forest management, the Project of “Protection and Inclusive Sustainable Management of Forest Ecosystems in Quang Nam, Kon Tum and Gia Lai province (KfW10)”.
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