

**CGIAR Research Program on
Climate Change, Agriculture and Food Security (CCAFS)**

**Organisational Baseline Study:
Overview report for Ma CSV,
Vietnam (VN01)**

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RESEARCH PROGRAM ON
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INTRODUCTION

According to the data provided by Yen Bai Statistics Department (YSD), the total area of Yen Bai about 668,628 ha, of which 87.5% (585,089 ha) are agricultural land. Most of the province's agricultural lands are sloping. The province shares the common features of the North-western Vietnam: terrain is complicated and are strongly fragmented by mountain and stream systems; climate is tropical and with different climatic sub- regions. Over 70% of the population (over 70%) are agricultural.

Yen Binh district locates in the south of Yen Bai province, with the total area of 77,262 ha, and is diverse and rich in natural resources.

Having diverse agricultural production activities (including crop, livestock, aquaculture and forestry) and sharing the common features with the province, Ma village has been facing important challenges caused by natural resource degradation, environmental pollution and climate variability. On the other hand, there are also great potentials for this village to develop sustainable and climate smart livelihoods and agriculture. Ma village, Vinh Kien commune, Yen Binh district, Yen Bai province has therefore been selected to be a site for building Climate Smart Villages (CSV) under the CGIAR Program "Climate Change, Agriculture and Food Security (CCAFS).

An organization baseline survey, was therefore conducted as part of the baseline effort for this village, which consists of three components – household survey, village study and organizational survey.

The objectives of this organization baseline study (OBS) include:

- Provide indicators to allow us to monitor changes in behaviours and practices of relevant local organizations over time;
- Understand the current status of provision of information/services at the local level that informs farmers' decision making about their livelihood strategies in response to climate change.

To gather necessary information, we conducted survey of organizations of which activities covered a wide range in all the aspects: natural resources management, environment and climate change, agricultural production, agricultural product processing and input supplying. The list of these organization is presented in Table 1.

INTERVIEWED ORGANIZATIONS

In total, 14 organizations having significant roles in the agricultural production, natural resource management (NRM), climate change (CC) and food security (FS) in Ma village was surveyed. These organizations were selected based on the results of focus group discussions organized previously under the framework of Ma village baseline study, and based on the importance of organizations to Ma village as evaluated by the NOMAFSI working team and in consultation with CIAT experts. The list of these organizations is presented in Table 1. As seen, this list includes organizations working at the provincial level (4 organizations), district level (3 organizations) and commune level (7 organizations). In term of working field, this list includes organisations working in all the aspects of CCAFS focus: NRM, CC, agricultural and forestry production, agricultural product processing and service/input supply.

Information was collected through conducting interviews. The questionnaire developed and provided by CCAFS were used for interviewing. Interviewees were representatives of the 14 organizations. They were either leaders or staffs of these organizations and knew well about the activities, functions, roles and responsibilities of their organisations. The list of the interviewees is in the Annex.

In addition in interviewing, secondary information was also collected from available sources (reports of the selected organizations, local authorities, relevant projects...) for cross- checking of the information.

This OBS was conducted in late November, 2014 by the NOMAFSI working team with the technical advice from CIAT experts.

Table 1: Main activities of the 14 selected organizations

	Organization	Operation area	Main activities
1	Department of Agriculture and Rural Development of Yen Bai province (provincial DARD)	Yen Bai province	<p>On the behalf of Yen Bai Provincial People's Committee (PPC) realizing the government management over agriculture, forestry, irrigation, rural development, disaster risk management, foods safety and food security in the whole province;</p> <p>Planning long- and short-term plans for provincial agriculture and forestry production, including plans for CC adaptation and mitigation in agricultural sector;</p> <p>Deploying plans, programs, projects and activities in the area of agriculture and forestry in Yen Bai province;</p> <p>Building capacity in agricultural and forestry production, postharvest, and disaster risk management for farmers and related organisations in the province;</p> <p>Providing extension services and consultancy service to farmers and relevant organisations in the province;</p> <p>Implementing international cooperative activities for agriculture and rural development in the province.</p>
2	Department of Natural Resources and Environment of Yen Bai (provincial DONRE)	Yen Bai province	<p>On the behalf of Yen Bai Provincial People's Committee (PPC) realizing the government management over the natural resources and environment in the province, including land, water, mineral, geology, environment, meteorology, geodesy and cartography resources;</p> <p>Providing services related to environmental and natural resource exploitation, use and management;</p> <p>Building capacity environmental and natural resource exploitation, use and management for farmers and related organizations;</p> <p>Planning long- and short-term plans for provincial natural resource use, exploitation and management and for environmental protection, pollution mitigation and CC change adaptation and mitigation;</p> <p>Deploying plans, programs, projects and activities in the area of natural resource management and environment in Yen Bai province;</p> <p>Implementing international cooperative activities in related areas;</p>
3	Yen Bai Crop Seed Centre	Yen Bai province	<p>Conducting researches in the field of plant breeding and seed production (mainly for rice and maize only);</p> <p>Producing, trading and supplying seed of crops (mainly hybrid rice and hybrid maize);</p> <p>Transferring techniques, mainly for intensive cultivation of new varieties, to farmers in the province;</p> <p>Introducing, testing and releasing new crop varieties in the province;</p> <p>Realizing inspection of locally produced seeds.</p>

4	Department of Aquaculture of Yen Bai province (belonging to the provincial DARD)	Yen Bai province	<p>Practicing, on the behalf of the provincial DARD, the state management over the aquaculture and fishery resources in Yen Bai province;</p> <p>Producing, trading and supplying seed fishes (fingerlings) for farmers in Yen Bai province;</p> <p>Transferring aquaculture and fishery techniques to farmers;</p> <p>Implementing activities to support farmers in aquaculture and fishery.</p>
5	Department of Agriculture and Rural Development of Yen Binh district (district DARD)	Yen Binh district	<p>Functioning, on the behalf of Yen Binh district People's Committee (DPC), to realize the state management over agriculture, forestry, aquaculture, irrigation, rural development, disaster risk management; safety of foods and of agricultural, forestry and aquaculture products in the district;</p> <p>Playing the liaison role between the farming communities and organizations working in the district for supporting communities in agriculture and forestry production;</p> <p>Implementing activities supporting farmers in agriculture and forestry at the district level;</p> <p>Cooperating with organizations working in the district to implement researches and transfer technologies in agricultural and forestry production to local farmers.</p>
6	Department of Natural Resources and Environment of Yen Binh district (district DONRE)	Yen Binh district	<p>Functioning, on the behalf of Yen Binh DPC to realise the government management over the natural resources and environment in the district;</p> <p>Playing a liaison role between the local communities and organisations working in the district to support communities in natural resource and environment use, exploitation and management;</p> <p>Implementing activities supporting farmers in natural resource and environment protection, use, exploitation and management;</p> <p>Cooperating with organizations working in the district to implement researches and transfer technologies in natural resource and environment protection and management to local farmers.</p>
7	Yen Binh District Extension Station	Yen Binh district	<p>Training farmers in agriculture and forestry production in Yen Binh district;</p> <p>Cooperating with other organisations to develop demonstration models on technical innovations in the field of agriculture and forestry;</p> <p>Cooperating with other organisations to implement researches for technical innovations development/validation in the field of agriculture and forestry;</p> <p>Providing technical support to local farmers in crop production, animal husbandry, pest control, fishery production and forestry;</p> <p>Supporting farmers to access to input sources, including information sources.</p>

8	Vinh Kien Commune's People's Committees (CPC)	Vinh Kien commune	<p>As the local government at the community level, CPC is responsible for the state management over all activities related to production, trading, natural resources exploitation and management, environmental protection, livelihood development and food security, food safety in the commune;</p> <p>Playing the most important liaison role between the community and other organisations in implementing all the plans, programs, projects and activities in all aspects (agriculture, forestry, natural resources management, disaster risk management..);</p> <p>Monitoring and supporting the implementation of activities related to food security, food safety, agriculture, forestry, natural resource management;</p> <p>Deploying the local plans for agriculture, forestry and natural resources management at the commune level.</p>
9	Vinh Kien commune's Farmers' Association	Vinh Kien commune	<p>Playing a liaison role between farmers and input/service providers (input suppliers, extension service, microcredit, local traders) so that help farmers to negotiate for achieving better deals;</p> <p>In many cases playing the core role in awareness raising and capacity building for farmers through organizing meetings and discussions among household members;</p> <p>In many cases playing the leading role in adoption of advanced techniques transferred by the extension network or by some projects;</p> <p>Supporting household members in developing household agricultural production through providing micro-financial support and experience sharing.</p>
10	Vinh Kien Women Union	Vinh Kien commune	<p>Playing a liaison role between women and women care/supporting sources in order to facilitate the implementation of supporting-to-women- activities;</p> <p>In many cases playing the core role in awareness raising and capacity building for women, or representing the women in raising the voice for their rights and to increase the gender equity at the community level;</p> <p>In many cases playing the leading role in adoption of advanced techniques transferred by the extension network or by some projects, especially those focused on women's benefits;</p> <p>Supporting women members in developing household nutrition and production through providing micro-financial support and experience sharing;</p> <p>Cooperating with other organizations to organize training sessions in production techniques, food safety and nutrition for their members and also for other people in the commune</p>
11	Cassava procession facility of Nguyen Xuan Chien in Ma village, Vinh Kien commune	Vinh Kien commune	<p>Buying cassava roots from farmers in Ma village and nearby villages to produce cassava wet starch;</p> <p>Selling wet starch to different markets;</p> <p>Selling by-products of cassava root processing to farmers for use to feed pigs;</p> <p>(Also, none of the 5 cassava procession facilities in Ma provided any inputs/support to farmers. The purchase of cassava roots was just realized at the harvest time, and without any contract.</p>

12	Wood processing facility of Hoàng Đức Lai in Ma village, Vinh Kien commune	Vinh Kien commune	<p>Buying timbers from farmers in Ma village and nearby villages to process into plywood;</p> <p>Trading plywood (selling to Chinese markets or domestic markets).</p> <p>In addition to selling plywood, the wood processing facilities in Ma village also sell waste wood for paper companies in Phu Tho province.</p> <p>Like with cassava procession facilities, the wood factories also did not provide farmers with any inputs/supports in advance. No contract for the buying-selling activities.</p>
13	Production inputs store of Trần Thị Huyền in Vinh Kien commune	Vinh Kien commune	<p>Trading production inputs, mainly fertilizers and small working tools, and thus having role in facilitating farmers' access to these inputs required for crop production and forestry;</p> <p>Often selling fertilizers to farmers but get payment latter (only after farmers have harvested their crops, with higher price), and thereby indirectly providing support to farmers in crop production.</p> <p>Sometimes, with the new fertilizers, this agency and others input stores in the region could coordinate with the input producers to provide farmers with leaflets or handbooks guiding the use of the fertilisers.</p> <p>Selling in debt was applied only for farmers, in whom store owner could trust. The interest rate was of 5% for livestock feed and 10% for fertilizers per year.</p>
14	Animal feed and crop seeds store of Phạm Văn Quảng in Vinh Kien commune	Vinh Kien commune	<p>Trading production inputs, mainly animal feeds, and thus having role in facilitating farmers' access to these inputs required for crop production and forestry.</p> <p>Sometimes selling feeds to farmers but get payment latter (only after farmers have sold their animal, with higher price), and thereby indirectly also providing support to farmers in crop and animal production.</p> <p>Similarly to the above input store, selling in debt was applied only for farmers in whom the store owner could trust. The interest rate was of 5% per year.</p>

Note: The functions and missions of provincial DARD/DONRE of Yen Bai province and district DARD/DONRE of Yen Binh district are almost similar, but their operation areas are different. The bound activity of DARD of Yen Bai is whole province, while the bound activity of DARD of Yen Binh district in Yen Binh district only.

Difficulties, challenges facing the organizations

The following are main difficulties and challenges mentioned by the representatives of organizations during the interviews.

Department of Agriculture and Rural Development of Yen Bai (provincial DARD)

- Complicated topographical features, high diversity of sub-climatic regions and ethnic groups with different traditions and costumes have prohibiting impacts on the adoption of technical innovations by farming households, and this causes difficulties for DARD to implement activities;
- Poorly developed infrastructure causes difficulties in travel and transportation. This together with limited human power prohibits DARD to reach some remote and difficult communities;
- Poorly developed market linkage causes limited access of farming households to information and inputs sources, and thus prohibiting their adoption of technical innovations;
- Poorly developed farmers organizations and poorly developed links between farmers – scientists – decision makers – businessmen, as well as links between private and public sectors cause problems in implementing and/or sustaining activities;
- Limited capacity of staff in CC adaptation and mitigation, lack of appropriate practices for CC adaptation and mitigations for local farmers to easily adopt.

Department of Natural Resources and Environment of Yen Bai (provincial DONRE)

- Lack of well-educated man power, especially in the field of climate change; staff involved in climate change are mostly part time working and with limited knowledge and experience;
- Lack of appropriate toolkits and equipment items for evaluation of environmental pollution as well as for monitoring the environment;
- Limitation of inputs (financial and human resources);
- Limited awareness of enterprises on the environmental protection; they often do not follow the laws, regulations and policies;
- Limited consciousness of people on protecting environment and natural resources;
- At the present, pollution of water and erosion/degradation of cultivated land are an alarming issue, but there are not enough inputs and activities to deal with the problems.

Department of Aquaculture of Yen Bai (belonging to the provincial DARD)

- The weather variability is unpredictable, and this greatly affects the production of fingerlings in particular, as well as aquaculture and fishery in general;
- Prices of production inputs have been continuously increased, and this affects negatively the production activities by local households;
- Limited and unstable markets and volatile prices of aquaculture products badly impact the production;
- Large area of operation (in the whole province) together with poorly developed infrastructure cause difficulties for the organization in monitoring, managing and protection of aquaculture resources and well as in providing support to farmers;
- Lack of appropriate techniques for pest control in aquaculture.

Yen Bai Crop Seed Centre

- Lack of parental varieties with desired traits;
- Climate change, natural disasters and pests badly affect seed production, storage and supply;
- The strong and sometime unfair competition between enterprises for the markets for seed supply;

- Lack of appropriate facilities for quality seed production, processing and storage of crops other than rice.

Department of Agriculture and Rural Development of Yen Binh district (district DARD)

- More complicated and unpredictable changes of weather and occurrence of disasters;
- Complicated occurrence and developments of diseases on crops and animals;
- Volatile and unstable prices and limited markets of agricultural products;
- Limited awareness and capacity of local people, both farmers and staff, especially in climate change and disaster management;
- Lack of conditions and facilities for farmers to adopt technical innovations, such as poorly developed irrigation canal systems and lack of equipment items for applying direct seeding method;
- Limited inputs (financial and human power) for conducting extension activities, including demonstration and validation of practices as well and trainings of farmers and providing advices to farmers.

Yen Binh District Extension Station

- Unfavourable weather conditions which change unpredictably, and thus cause problems and failure of demonstration and testing/extension of practices. This required practices with good adaptation value, but in reality these kind of practices are not available. Some practices are available but too complicated for farmers to adopt;
- Complicated and unfavourable developments of pests and diseases in crop production, livestock and aquaculture;
- Constant increase in prices of production inputs while the markets and prices of agricultural products are unstable;
- Limited man power, in term of both capacity and number of staff, while the working area is large, with complicated topography and poorly developed roads;
- Limited awareness and capacity of farmers and staff, especially in climate change and disaster management.

Vinh Kien Commune's People's Committees

- Weather conditions are complicated, the extreme conditions occurred more frequently and unpredictably;
- Irrigation canal system is poorly developed and this causes great difficulties in agricultural production in the commune, especially for rice production;
- The quality of seeds, seedlings, breeds is low, causing low production profits;
- Limited awareness of farmers in sustainable development;
- Limited knowledge of staff in climate change adaptation and mitigation;
- Unstable markets and prices of products and inputs;
- Lack of practices, technical innovations for farmers to adopt to increase crops and animal yields, especially techniques for controlling pests, for soil erosion control and for safe production of different products. Sometimes practices are introduced but are not easy enough for farmers to adopt;
- There are great problems of pollution of water, but still not much inputs spent for solving the problem.

Vinh Kien Commune's Farmer's Association

- Limited and uneven capacity and awareness of farmers. This created a need for great patience and time inputs for communication and awareness raising while staff (people involved in the Association management) are mostly part-time working and without any allowance.
- Very limited financial sources for the association operation;
- Limited capacity and skills of staff involving in the association management.

Vinh Kien Women's Union

- Limited capacity and skills of staff involving in the association management;
- The staffs are working without allowance, and thus are not always active;
- Very limited financial sources for the union operation;
- Limited awareness of women and men.

Cassava Processing Facility in Ma village, Vinh Kien commune

- The facility can only process cassava in some months during the year, at the harvest time and shortly after the harvest time of cassava. In the rest time of the year, no raw cassava root materials for operation;
- Highly volatile prices of cassava wet starch;
- Unstable volume and price of cassava roots; at the pick time there is too much but in other time not enough;
- High price of electric power;
- Lack of water for processing activities;
- High cost of waste management.

Wood processing facility in Ma village, Vinh Kien commune

- High cost of electric power;
- Volatile prices of both inputs and outputs;
- Low quality of raw materials resulting in high ratio of waste and low profit of the processing process.

Crop Seed Centre and inputs stores

- Taking a long time to get back money from selling inputs to farmers (buy in debt by farmers);
- Constantly increase in the prices of inputs;
- Difficulties on the keeping material quality due to poor quality of warehouses.

SUMMARY OF ACTIVITIES BY FIELDS

For natural resource management and agricultural production

Except cassava and wood processing factories and inputs stores, the rest organizations under the survey play a significant role in the natural resource management, and agriculture and forestry production of Ma village.

Agriculture and forestry land management

- The provincial DONRE and district DONRE cooperate with the provincial and district DARD to plan plans for exploitation and utilization of lands.

- For land use and protection, the DARD of Yen Bai province and DARD of Yen Binh district, especially the Extension Station of Yen Binh district, have the role to support farmers to adopt practices which help protect lands, reduce soil erosion while increase the economic profits for households.
- DARD also have the responsibility to monitor the use of land according to the land use purpose approved by the local authorities.

Water resource management and use

- Similarly with the land resources, DONRE of the district and DONRE of the province are responsible for planning and deploying plans for managing and use of water sources.
- In cooperation with DARD, DONRE have to manage and protect water resources in the province.
- The exploitation of water resources for aquaculture by households is supported by DARD of Yen Bai. Thus, DARD is in charge for supporting households in adoption of practices which help to protect water from being pollution while increase the yield and profits of aquaculture. To this end, DARD of Yen Bai assigned its Department of Aquaculture to play the prime role in developing aquaculture in the province.
- The exploitation and use of irrigation water and irrigation canal system is also managed directly by DARD. DARD and its extension network are to support farmers to adopt appropriate irrigation techniques to save water and also to reduce the GHG emission and environmental pollution caused by the farming systems.

Forest resource management

- Previously, this responsibility was assigned to DONRE. However, at the present, it is assigned to the Forest Ranger Department of Yen Bai, which is under DARD of Yen Bai.
- DARD and DONRE of Yen Bai have the responsibility in planning for allocation and reallocation of land areas for planting forests.
- DONRE also acts as the monitor to ensure that forest lands are used for right purpose and following the regulations of the government.
- For plating forests, DARD are in charge for transferring techniques (including also trees and seedlings) to farmers with the aim to increase the income for households but also to improve the natural resources and environmental protection.

As seen above, the Commune's People's Committee (CPC) plays the main liaison role and is responsible for implementing all policies, programs, plans and projects in the commune. Normally, CPC cooperates with local mass organizations (women union and farmers association) for this purpose. In this regard, the commune's farmers' association and women's union and the district extension station play very important roles, especially in communication and information sharing.

For example, according to the information that we obtained from the survey, Vinh Kien is one of the communes in Yen Binh district where many households apply animal waste treatment through using biogas system (about 300 households). This commune also has been implementing excellently the waste sorting program of the province. After the provincial program ended, now, approximately 200 household are still practicing waste sorting approach. All this was obtained with active involvement of the women union and farmers association and support from the CPP.

Nevertheless, regarding the environmental protection in Ma village, there are 15 wood processing and 5 cassava processing facilities in the village. Although these facilities have tried to protect environment, their waste management is still very problematic and pollution of the environment, water in particular, has become an important issue.

Regarding agricultural production, the district extension station plays a great role in transfer of technical innovations to farmers through organizing trainings and discussions, developing demonstration models, organizing field visits and providing technical advices to households.

Yen Bai Crop Seed Centre also takes part in helping people to develop their agricultural production through supplying crops seeds. However, still, farmers often buy seeds from other sources, including those without clear origins. Fertilizers, feeds and other inputs are supplied by private sector through many stores in the commune and district. Normally, farmers can buy inputs in debt with interest rate of about 10% for fertilizers and 5% for livestock feed per year.

For preparation to withstand extreme events

Sharing the common problems of the Northern mountainous region, the districts and communes of Yen Bai province have been facing the following 3 main extremes of weather conditions: (i) concentrated heavy rains causing serious flash floods, soil erosion and landslides during the rainy season; (ii) long dry period without rains during the dry seasons causing problems to crops and animal production; and (iii) damaging cold spans in the winter.

During some past years, DARD, in particular the district extension station, cooperated with research organizations such as NOMAFSI, HUA (now VNUA- Vietnam National University of Agriculture), CATDE (Centre for Technology Development and Agricultural Extension) have provided support to farmers to validate techniques and varieties appropriate for the local conditions and adaptable to bad conditions, such as drought and cold. In addition, forest planting and forest protection activities, and adoption of animal disease prevention practices have also been promoted with supports from some projects, and especially from the local extension programs. However, the adoption of sustainable farming practices remain limited, especially for crop cultivation in sloping lands and for aquaculture in the Thac Ba Lake. Due to the application of conventional practice (slash and burn), sloping lands in Yen Binh district in particular and Yen Bai province in general are becoming increasingly degraded and eroded.

Regarding the natural disasters such as floods, landslides, the most effective measures taken in the whole province of Yen Bai, including Ma village, are prevention and avoidance. Communication activities are taken to persuade local people to properly carry out the prevention activities, meanwhile the responsible offices (PC, DARD, DONRE) are to provide information on warning and forecasting of natural hazards, so that people have enough time to take prevention and avoidance measures.

Local authorities (PC at different levels) are to conduct different preparation measures, such as:

- For floods: upgrading information systems to ensure the information flow in all situations; allocation of standing officers 24/24 h in rainy season; cleaning drainage canals; destruction of structures that prevent water flow for mitigating damages caused by floods...
- For cold winters: supporting farmers to build/improve cages for animals; preparing spare seed amount for re-sowing of crops if needed; early warning on the conditions....
- For drought: not proper measures taken.

For reduction of risk due to climate variability

Yen Binh district DARD, Yen Binh district extension station implemented some activities to support communities to reduce bad impacts caused by weather. Yen Binh DARD has been worked in partnership with Vinh Kien commune's people's committee to concrete some parts of the irrigation canal systems in the commune in general and in Ma village in particular. They also cooperate with the commune's farmers' association and women's union to organize trainings in System of Rice Intensification (SRI), cage fish production, cold prevention for livestock in the winter and etc.

Activities' Relationship to Climate Change

As mentioned above, the climate extremes and variability seem to occur, as observed by the local people and by the local authorities, at increasing frequencies and with increased severity. Also, data recorded by the meteorology stations in Yen Bai province show clear trends of increase in the average temperature and reduction in the rainfall of the dry season during the past 50 years, and the statistical data of the provincial DARD revealed serious damages caused to crops and animals by the extreme

weather conditions (see the VBS report for more details). And, this is believed to be attributed to the global climate change (CC).

To respond to the CC, Yen Bai province has established a steering committee (CCSC) of which the provincial DARD and DONRE are key members. The CCSC is responsible for planning programs and action plans for implementing the National Target Program to Respond to Climate Change in Yen Bai province. The establishment of this CCSC and other actions implemented by the province express the intention of the province to cope with climate change.

In 2014, DARD of Yen Bai cooperated with NOMAFSI to organize a training course on climate smart agriculture (CSA) and food security for extension workers and for village, commune and district agricultural officers and decision makers. The training course was organized within the framework of a FAO CSA project (funded by EC) and aimed to provide participants with knowledge in climate change concept, its causes and adaptation/mitigation solutions, as well as in the farming practices with climate change adaptation and mitigation impacts.

Except cassava and wood processing facilities and inputs stores, all the rest organizations have, either intentionally or unintentionally, spent some inputs for CC through implementing their activities as described above. For example, through building capacity for households and supporting them to apply technical innovations (using quality seeds, applying fertilizers properly, disease prevention for animals...), DARD, extension network support farmers cope with bad conditions caused by CC. Also, the preparation efforts by the PC, MONRE, DARD and other organization to support households to withstand the extreme events as mentioned above have value also in responding to CC.

No specific activities however have been implemented in the region focusing on CC and CC adaptation and mitigation, except the above mentioned training course organized by NOMAFSI and DARD.

IMPLICATIONS FOR CCAFS

The study finding show that the provincial DARD of Yen Bai, district DARD of Yen Binh, provincial DONRE of Yen Bai, district DONRE of Yen Binh, district extension station of Yen Binh, and the Commune People's Committee of Vinh Kien are playing very important roles in supporting Ma village to implement activities, projects, plans and programs for developing their production, managing their natural resources and environment and for responding to CC.

Thus, these organizations should be of priority for CCAFS to work with to implement its CSV program in Ma village. From functions, missions, areas and spheres of activities of the above mentioned organizations, it is seen that these organizations are directly involved in CC and FS. Their activities to support farmers to manage and exploit natural resources, and develop aquaculture, crop production, animal husbandry and forest plantation so far are directly or indirectly related to CC response. These organisation also have close link with the farming communities and local households, and have experience in working together with research institutions and linking different partners.

Private enterprises for wood and cassava root processing, and input stores have role in facilitating the farmers' access and linkage with markets. The processing enterprises are also important factors causing the environmental pollution. Thus, these organizations may also of consideration to cooperate for developing market linkage and for better environmental protection.

For some concrete activities, such as capacity and awareness raising for the villagers, women union and/or farmers accusation can be selected to play the liaison role.

Annex 1: The list of the interviewees

No.	Interviewees	Position	Organization
1	Vu Thi Luu	Head of crop department	DARD of Yen Bai
2	Pham Thu Hang	Head of Water resource and Hydrometeorology department	DONRE of Yen Bai
3	Pham Huu Thoai	Head of Technic department	Yen Bai Crop Seed Center
4	Nguyen Van Truong	Head of fisheries resource and fisheries management department	Department of Aquaculture of Yen Bai province
5	Nguyen Thi Nga	Deputy head of department	DARD of Yen Binh district
6	Nguyen Quang Trung	Deputy head of department	DONRE of Yen Binh
7	Tran Van Tiep	Head of Extension Station	Yen Binh District Extension Station
8	Nguyen Van Chien	Deputy chairman	CPC of Vinh Kien
9	Luu Duc Vuong	Chairman	Vinh Kien commune's Farmers' Association
10	Nguyen Thi Ai Van	Chairman	Vinh Kien Women Union
11	Nguyen Van Chien	Cassava procession facility owner	Cassave procession facility of Nguyen Xuan Chien in Ma village, Vinh Kien commune
12	Hoang Duc Lai	Wood processing facility owner	Wood processing facility of Hoàng Đức Lai in Ma village, Vinh Kien commune
13	Tran Thi Huyen	Owner	Production inputs store
14	Tran Van Quang	Owner	Animal feed and crop seeds store