Enhancing Sustainability
and
Mitigating Disaster Risk

MID-TERM REVIEW

Project "Mangrove Reforestation – Disaster Risk Reduction"

Period 2011 -2015

Japanese Red Cross Society

International Federation of Red Cross and Red Crescent Societies

Hanoi, 2013

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ACRONYMS

CBDRM	Community-based disaster risk management
CC	Climate change
CCA	Climate change adaptation
CCM	Climate change mitigation
CFSC	Committee for Flood and Storm Control
DMC	Disaster Management Center
DP	Disaster Preparedness
DRM	Disaster risk management
DRR	Disaster risk reduction
FGD	Focus group discussion
IDI	In-depth Interview
IFRC	International Federation of Red Cross and Red Crescent
MARD	Ministry of Agriculture and Rural Development
PMU	Project Management Unit
RC	Red Cross
VCA	Vulnerability and Capacity Assessment
VNRC	Vietnam Red Cross

EXECUTIVE SUMMARY

1,208,130 USD

Total expenses of period 2011 – 6/2013

90.6 ha

Total area of mangrove newly planted

8,206 ha

Estimated area of mangrove cared and protected

25.6 ha

Total area of upstream protective forest newly planted

109,171

Total direct beneficiaries

56

Communes were trained on livelihood

This report presents main finding and analysis of the mid-term evaluation of the project from January 2011 to June 2013 and the main recommendation for the next 2 years of the project. The project "Mangrove Reforestation and Disaster Risk Reduction" from 2011 to 2015 is implemented by the Vietnam Red Cross (VNRC) under funding from the Japanese Red Cross Society (JRC). Total $ 1,208,130 was used for reforestation, disaster preparedness and awareness raising in 346 communities of 10 provinces.

In the period 2011-2013, the project has carried out a range of activities including caring activities, new and supplementary plantation of both mangrove forest and upstream protective forest. As a result, 8,206ha mangrove forest has been managed, taken care and protected, 90.6ha mangrove forest was newly planted, 25.6ha protective forest was newly planted in Hoa Binh and Vinh Phuc provinces, reaching 25.6% of the plan of 100ha forest to plant. The role of mangroves in coastal protection and provision of stable livelihoods for people in mangrove area has been evident in recent years.

In term of the progress of the program, over the past 2 years, the project management team has been actively implementing the project plan; however, some activities are behind schedule than initially planned for the first six months of 2011 and the first six months of 2013. It is shown by studying the International Federation of Red Cross and Red Crescent (IFRC) financial statements sent to the JRC that 100% of funds have been expended in the fiscal year. Besides, most indicators of the project were achieved/ mostly achieved against their targets.

Regarding the necessity and appropriateness of the program, the report shows that the project on mangrove reforestation/DRR was designated in consistency with the National Strategies for mangrove reforestation for disaster risk reduction (DRR) and climate change adaptation (CCA). Besides, the project was also appropriate in term of objective selection and project designation. All the objectives of the program are essential to the high-risk society, the coastal and mountainous communities vulnerable to disaster and climate change (CC) impacts.

Regarding the efficiency of the project, the first result of forest plantation, sustainable forest management and protection accounts for 6.8% of the total cost of the entire project. The activity of capacity building for project communes to protect themselves against disaster risks and impacts of climate change accounts for 93.2% of the total project cost with the view to enhancing capacity of 193 communes with 109.171 direct beneficiaries. Administrative costs for the program, including the cost for the Red Cross (RC), project management of central and provincial RC accounts for 31.5% of the total project cost (nearly 2% higher than the previous phase 2006-2010).

In term of the effectiveness of the project, the first period of Phase 4 has been successful in the task of protecting the area of mangrove planted in Phase 3 (2005-2010). In the first period of this phase, the project conducted supplementation

plantation of 90.6 ha of mangrove and 25.6 ha of upstream protective forest. The project is managing and protecting approximately 8,206 hectares of mangrove forest, which have effectively assumed the role of coastal protection, minimizing damage caused by storms, generating economic benefits as well as creating mental peace of mind for communities before many strong storms. As for livelihood activities, the project conducted livelihood trainings for 56 communes with 1.400 people participating. The model of aquaculture combined with mangrove planting has become relatively common in some localities. The project has organized 101 training courses in 101 project communes, with a total of 2,458 people participating, aimed at raising awareness within the communities about DRR and CCA, improving disaster preparedness (DP) planning by local authorities to be ready to respond to disasters. In addition, the project implemented 80 Vulnerability and Capacity Assessments (VCA) in 80 communes, 35 mitigation sub-projects, 35 disaster response drills and established 32 community disaster response teams. Disaster preparedness activities were also conducted in 14 schools and community communication via mass media for tens of millions of people. The project has implemented a number of capacity building activities for hundreds of RC staff at all levels on various topics. Furthermore, the project had a significant amount of personnel directly participating in and leading from central to local level. These trained and experienced staffs play as the core force to support improving the quality of human resources for project implementation.

Regarding the coverage of the program, the total number of direct beneficiaries of the project by the end of June 2013 was 112,737 people and millions of people who indirectly benefit from the project activities. Among 356 project communes, 163 communes in Phase 4 only conducted communication activities on the mass media (46%). The number of communes performing at least one project activity except communication is 193 corresponding to 54%. So far, there have been only four communes implementing all ten project activities (8%) and up to 61 communes performing only one activity (32%).

Considering the sustainability of the project, the role of mangroves in coastal protection and providing stable livelihoods for people in mangrove areas has been evident in recent years and has received great support from local authorities. Government leaders of most project sites have committed to preventing land use conversion in mangrove areas. Many coastal regions of Vietnam have attracted the attention of many organizations and funds for mangrove development projects. The component of DRR in phase 4 is regarded to be consistent with the objectives of 1002 Project of the Government. Thus, at the end of the project, with the agreement that the VNRC has achieved with Ministry of Agriculture and Rural Development (MARD) and Provincial People's Committees (PPC) to implement CBDRM activities, the ability to sustain the results of the project are totally feasible. Stage 4 of the project continues to strengthen the capacity of ToT trainers of VNRC on DRR, VCA facilitator group. These RC staff will ensure successful implementation of ongoing activities of the project and DP activities of the RC and have opportunities to participate in implementation activities of Project 1002, projects of INGOs on CBDRM and project on mangrove plantation of MARD.

101

Training on DRR

80

Communes conducted VCA

35

Mitigation sub-projects

37

Disaster response drills

32

Community disaster response teams

32.000.000

Estimated indirect beneficiaries from mas media communication to raise community awareness on DRR

The project also faces other challenges such as many areas of mangrove are being degraded due to extreme weather. That the time, regulation and mechanism for protection of mangrove and upstream protective forest is no longer top priority of this Phase also exposes a challenge in maintaining mangrove and upstream forest protection and development when the project ends. Challenges in DRR activities can be seen in ensuring the assessment progress of all other project communes. Mobilization of counterpart fund for implementation of mitigation sub-projects also poses a challenge to localities. The project has difficulties in human resources for project implementation due to changes in staff, pluralism.

Five strategic recommendations proposed all include technical suggestions. These recommendations include: The first is about program management, mentioning the progress, finance, human resources and project scope. The second is recommendation about the development of sustainable development strategy, including withdrawing strategy after 2015 which presents internal factors and external factors of the project. The third is recommendation on sustainable forest care and protection, which mentions the development of legal basis for mangrove development and protection, restart of research, optimizing local authorities, extensive communication campaign in community and local authorities. The fourth recommendation is about DRR activities, including content on integration of VCA results in local socio-economic development plan (SEDP), DP drills, communication on DRR and CCA, mitigation sub-projects. The last is recommendation to RC at all levels which includes VNRC, JRC, and the IFRC.

PART 1 – BACKGROUND

1 OBJECTIVES OF MID-TERM REVIEW

General objective

The mid-term review recommendations, findings will be applied by the VNRC, IFRC, JRC and selected communities into the project planning, monitoring and support process in 2014 and 2015 in order to successfully achieve the project objectives and expected outcomes mentioned in the five years project proposal or revise the project proposal if needed.

Specific objectives

The mid-term review will be conducted to achieve the following objectives:

1. To review the project activities' progress and achievements;
2. To assess beneficiary satisfaction;
3. To assess knowledge, attitudes and practices of target groups;
4. To derive recommendations and lessons learnt.

2 PROJECT INTRODUCTION

The mangrove reforestation programme has been implemented since 1994 by Vietnam Red Cross (VNRC). Phase 4 has been conducted since 2011 to 2015 under the support of Japanese Red Cross with total capital of 55 billion VND (equivalent to 215 million Yen). In Phase 4, the project will provide support for 345 vulnerable communities (communes) in eight coastal Northern provinces (Quang Ninh, Hai Phong, Thai Binh, Nam Dinh, Ninh Binh, Thanh Hoa, Nghe An and Ha Tinh) and will expand to 10 communes of two mountainous provinces of Hoa Binh and Vinh Phuc. 150 communes in 10 provinces will receive comprehensive technical and financial support to become safer and more resilient to disaster.

10

Project provinces in Phase 4; 8 coastal provinces and 2 mountainous provinces in the North

Phase 4 of the project includes three main components: (1) Forest management and protection/ Climate change mitigation (CCM); (2) Disaster Preparedness (DP) and climate change adaptation (CCA); (3) Capacity building for VNRC.

356

Expected communes benefited in Phase 4

Component 1 – Forest management and protection/ Climate change mitigation: In this component, forest management and protection teams will be established and supported in each project communes to develop and implement sustainable forest protection plan with community participation in planning. Technical support will be provided for reforestation of old forest, additional and new plantation to increase survival rate of trees, optimize economic benefit from forest in order to preserve biodiversity. At two new provinces, focus will be given to the protection of existing protective forest and pilot planting in some new area, advocating local authority to ensure forest land use right.

Component 2 - Disaster Preparedness and Climate Change Adaptation: Focus on improving the prevention and mitigation of project communes against the impact of disasters and climate change; Raising public awareness and local government

through trainings and refresher/updating trainings on DRM and CC; Vulnerability and capacity assessment (VCA) for DP and CCA planning of project communes; Establishing community disaster response team, providing facilities for communication and early warning.

Component 3 - Capacity Building for VNRC: Focus on strengthening the capacity of VNRC at all levels through training activities in monitoring planning, project management, volunteer management, fundraising, etc.

3 REVIEW METHODOLOGY

The mid-term review was conducted according to the following steps: evaluation preparation, data collection, data analysis and report writing. Mid-term evaluation used both qualitative method and quantitative method. Based on the project objectives and the information gathered from the literature review, the survey tools including structured questionnaire was developed for quantitative method and in-depth interview guide was developed for the qualitative method.

Preparation

The consultant team studied project documentation such as relevant project documents, progress reports, and annual plans of the project. Then the survey tool was developed based on the objectives of the project and the information gathered during the secondary research material. The quantitative survey tool will be transferred into tablets using data collection software. This means that data collection and data entry will be carried out simultaneously. After conducting field surveys, the information collected was exported to a statistical program for analysis and report writing.

Based on the objectives of mid-term review and information from the literature review, the consultant team developed a logical framework with objectives, indicators, and assumptions. The logical framework includes many aspects of the project: the impacts, effectiveness, efficiency, relevance and sustainability of the project.

Quantitative questionnaire was designed to collect data from households in the project area. This questionnaire consists of 97 multiple-choice questions for forest growers; assess their satisfaction with the support of the project; survey of knowledge, attitudes and practice (KAP) of people in the project area about DRR and CC. The questionnaire was originally longer was adjusted after the test interview. Guidelines for In-depth interviews and focus group discussions were also built based on information collected from the Red Cross staff and community.

AMDI team also developed a detailed field survey plan, which specified the time to conduct quantitative surveys and qualitative in each project site, clearly defined roles and responsibilities of each individual on field. AMDI team worked closely with the project staff, especially the local Red Cross officials to develop an effective plan to achieve the highest results of the survey. Field survey plan was also sent to the focal points in each province for comments prior to the survey.

Sample size

In this survey, the consultant team used Cochran's formula to estimate the sample size. Survey team aims to have sample size with 95% confidence interval and 10% marginal of error. With the total beneficiary household of 23,000, the sample size for target households computed using the two formulas is 200 households.

Due to the cluster sampling method was used to select the households for interview; the sample size was adjusted accordingly. In order to correct the potential loss of sampling efficiency, the design effect (D) was added in the equation to correct the sample size (Magnani, 1997). Design effect of 1.5 was commonly accepted. Therefore, total sample size for survey of target households is (1.5*200) 300 households.

In this survey, multistage-cluster sampling method was applied. Sampling was carried out in the following procedure: 1. Determination of cluster and sample size per cluster; 2. Selection of districts and communes; 3. Selection of households. From a sampling precision point of view, smaller clusters are to be preferred over larger clusters. As a general rule, selection no more than 40-50 households per cluster should be relatively safe according to Magnani (1997). With the timeframe and budget of the project, the consultant team selected 24 clusters for household survey, each cluster is a commune.

Picture 1: Map of survey sites

The selection of survey site was basically following the suggestion of VNRC which included 12 communes of 7 districts in 6 project provinces, 4 provinces with mangroves (Quang Ninh, Hai Phong, Thai Binh and Thanh Hoa) and 2 provinces with protective forest (Vinh Phuc and Hoa Binh). In surveyed districts, the consultant

team selected one communes with most project activities and one commune with only some project activities. The selection of households was made random, head of communes leaded data collectors to the center of communes, from this point, data collector selected their directions and visited every three households on their way. In case selected households were not available, data collectors came to next households to interview. The process was repeated until the number of households was sufficient as required.

Data collection

Data collection was conducted through structured interview with households as mentioned above. Additionally, the consultant team collected data to understand the capacity of local authorities in protection and management of forest, DRR and CCA. Eight IDIs were conducted with VNRC, IFRC, Vietnam Administration of Forestry, Disaster Management Center (DMC) – MARD, four National Red Cross Societies (Germany, Australia, America and Netherlands). Six (6) group discussions with provincial stakeholders including Project Management Unit (PMU), the provincial Red Cross, representatives of Committee for Flood and Storm Control (CFSC), Forestry Department representative. Twelve (12) focus group discussions with commune stakeholders including commune PMU, Red Cross, CFSC, the Women's Union, Farmer's Union, Youth Union, teachers, members of the forest protection team and members of community disaster response team and people. There were total 105 people participating in IDIs and FGDs.

305

Households surveyed

In fact, the consultant team conducted survey with 305 households and the number of households in each commune areas was adjusted based on the actual situation of each locality but ensuring that the number of households surveyed in each province was relatively equal. Table 1 shows detailed statistics the number of people involved in the interview questionnaire by survey areas.

6

FGDs in 6 provinces

Table 1: Number of surveyed households

No	Province/city	District	Commune	Sample size
1	Quang Ninh	Quang Yen (Yen Hung)	Ha An	27
2			Lien Vi	25
3	Hai Phong	Duong Kinh	Tan Thanh	26
4		Kien Thuy	Dai Hop	24
5	Thai Binh	Tien Hai	Nam Hung	26
6			Nam Thinh	24
7	Thanh Hoa	Nga Son	Nga Linh	18
8			Nga Tan	33
9	Hoa Binh	Tan Lac	Man Duc	26
10			Tu Ne	26
11	Vinh Phuc	Lap Thach	Lien Son	24
12			Ngoc My	26
	Total	**7**	**12**	**305**

12

FGDs in 12 communes

8

IDIs conducted at central level

Table 2: Number of IDIs and FGDs

No	Level	IDIs	FGDs	Participants
1	Central	8	0	8
2	Provincial	0	6	11
3	Commune	0	12	86
5	**Total**	**8**	**18**	**105**

Picture 2: FGD in commune

Data analysis

Quantitative information obtained from household surveys was processed and analyzed using SPSS, STATA software. Statistical data about the beneficiaries and financial review was analyzed by Excel. Information from qualitative in-depth interviews and focus group discussions were recorded and transcribed after the survey to serve the analysis and report writing.

PART 2 – ANALYSIS AND FINDINGS

4 PROGRESS, OUTCOMES AND DIFFICULTIES

Phase 4 of the project "Mangrove reforestation and DRR" adopted the recommendations of the two previous assessment reports which were the "Breaking the waves" (2010) report and the "Plant and Protection" (2011) report. The recommendations were reflected in the project design and activities implementation of Phase 4. Specifically, Phase 4 was initially successful in implementing the activities planned for 2011-2013 in all three components: 1. Mangrove management and protection/ CC mitigation; 2. DP and CCA; 3. Capacity building of the Vietnam Red Cross. Specifically:

1. Mangrove reforestation and protection/ CC mitigation objective: The project focused on sustainable management and protection instead of expansion. Regarding the goal of planting Protective forest, it is still early to assess the impact and sustainability of this activity.
2. DRR objective: The project was implemented in a comprehensive manner with many activities in most communes, such as training; vulnerabilities and capacity assessment (VCA); drills and propaganda; sub-project on disaster preparedness and mitigation in schools, etc.
3. CCA objective: The project has not really focused on climate change adaptation activities as outlined in the project. Most of the activities were only training for government officials without integration into VCA and realization of CCA planning and scenarios.
4. Capacity building objective for Vietnam Red Cross: The project has implemented comprehensive capacity building activities in all four levels of VRC, focusing on capacity building for the staff of the project management unit (PMU) of the Central and provincial RC, and commencing capacity building activities for district and commune Red Cross.

25,6 ha

Area of upstream protective forest newly planted (25,6% planned)

1.208.130 USD

Total disbursement (100% planned)

Progress

[4-1] Over the past 2 years, the PMU has been actively implementing the project plan; however, some activities are more behind schedule than initially planned for the first six months of 2011 and the first six months of 2013. Specifically, in 2011 the progress of activities was delayed due to the long launching period of the project, baseline assessment and admission of two new provinces participating in the project (Hoa Binh and Vinh Phuc). The local Red Cross' (district and commune) organized 5-year meeting was also a cause of project delays. In the first 6 months of 2013, the progress of activity implementation was also slower than planned, for instance: mitigation sub-projects only reached 16%, drill activities reached 7% and DRR/CCA activities for teachers reached 12%. The area of upstream protective forest planted to date was 25.6ha against 100ha in plan (25.6%). (Source: Annual progress report of the project).

Disbursement [4-2]: It is shown by studying the IFRC financial statements sent to the Japanese Red Cross that 100% of funds have been expended in the fiscal year. By the end of 6/2013, the project had disbursed a total budget of $ 1,208,130. There was only a delay in the settlement of advances by the provincial Red Cross. This was due to limited capacity in financial planning and payment of the provincial PMU's accountants for implementation of small mitigation measures, as it needed to mobilize community contribution and planning capacity building for commune RC staff.

Indicators implementation progress: Analysis of indicator data based on household surveys, in-depth interviews of key stakeholders and desk review shows that most indicators were achieved/ mostly achieved against their targets. Details are presented in the table of data below.

Picture 3: Mangroves in project site

Indicators	Plan	Achieved	Source of data
OBJECTIVE 1: To increase the existing ability of project communes to effectively protect and manage their forest plantations/resources.			
Outcome 1: Communes have improved skills and knowledge to manage and protect their forest resources/plantations.			
Commune leaders have skill and knowledge in management and protection of forest resources	75%	100%	IDI
People have skill and knowledge in management and protection of forest resources	75%	67%[1]	HS
People and forest resource exploiters have knowledge of one or more sustainable resource use	75%	64%[2]	HS
Outcome 2: Communes are actively managing and protecting their forest resources/plantations			
Project communes have volunteer teams to effectively care and protect forest	70%	14%	DR
Project communes actively implement forest management plans	90%	100%	
Project communes can mobilize resources to protect forest	20%	25%	IDI
Outcome 3: The forest plantations have contributed to improved physical safety and livelihoods within the project communes			
The area of planted forest in all project communes is not destroyed or changed land-use purpose	75%	100%	IDI
Households maintain or increase benefit from protected forest	50%	77%	
OBJECTIVE 2: To increase the capacity of communes for self-protection from disaster risks and climate change impact			
Outcome 1: Communes have increased skills and knowledge about disaster and climate change risks and DRR/CCA measures			
Commune leaders have increased skills and knowledge about DRR and CCA	90%	100%	IDI
People in communes have increased skills and knowledge about DRR and CCA	90%	88%[3]	HS
Teachers and students can identify major disaster and risks/impacts of CC and describe at least one mitigation measure	90%		
Outcome 2: Communes are able to more effectively warn residents of, respond to, and protect themselves from, disaster events/climate change impacts			
The early warning system works effectively and is connected to national level	90%	100%[4]	IDI
Project communes have disaster management plans	100%	100%	IDI
Households in project sites have preparedness plans	75%	90%	HS
The number of mitigation sub-projects implemented in communes	-	35	DR
RC volunteers are trained	100%	100%	IDI
Outcome 3: Communes have a more sustainable resource base in place for effective disaster preparedness and response			
Communes have sufficient supply in emergency aid	60%	-	
OBJECTIVE 3: To strengthen the VNRC capacity to effectively design and deliver sustainable CBDRM			
Outcome 1: The VNRC systems and procedures for the design, delivery, financial support and monitoring of CBDRM programming are more efficient and sustainable, including internal and external knowledge-sharing and coordination			
Provincial and district financial staff make report with good quality and on schedule	100%	70%	IDI
Provincial and district project staff have increased skills and knowledge in project proposal development, planning, management and monitoring CBDRM project	50%	Not achieved	IDI
10 provincial and district level RC have increased capacity in financial or material support	increase 5-10%	Increase[5]	IDI
VNRC at all levels mobilize and coordinate better with local authorities and communities			N/A
Outcome 2: The reputation of VNRC as a leading organization in disaster management in Viet Nam has been enhanced			
Commune leaders are satisfied with support of VNRC in CBDRM	---	100%	IDI
The number of RC volunteers participating in CBDRM activities	Increase 5-10%	?????	N/A

Note: IDI – In-depth interview, DR – Desk review, HS – Household survey, N/A – Not applicable

[1] Score ranging 0-4 for 04 questions about forest planting and protection. One point for each correct answer
[2] Exploiters of forest/mangroves know at least one proper exploiting measure
[3] Calculated by the number of people having five or more correct answers out of 11 questions related to DRR/CCA
[4] All communes have basic warning system (loudspeaker, warning sign...), but insufficient information to assess the effectiveness of t
to the national warning system
[5] Compared to the previous phase (contributed by salary of commune and district staff)

Findings

Forest plantation activities

The component of sustainable forest plantation, management is a core activity of the project at this stage. The project has undertaken caring activities, new and supplementary plantation of both mangrove forest and upstream protective forest. Total operating costs for forest plantation was $ 56,509 (accounting for 4.7% of the total cost disbursed).

Mangroves: In the first period of Phase 4, the project conducted management, care and protection of 8,206 hectares of mangroves, and plantation of 90.6 ha. Also during this period 42 hectares of mangrove planted in 2011-2012 in Ninh Binh was destroyed by Son Tinh storm (in 2012), however the local authority has had plan to plant 60 hectares in the next years including compensation for the upgradation of Binh Minh sea dike[6]. [4-3] The local Red Cross has been actively seeking funding outside the project to expand the area of mangrove. For example, Quang Ninh newly planted 80ha from other funding, Ninh Binh planted 28ha and Nghe An planted 1ha outside project funding. The project also noted the commitment of local authorities in the protection of forests, such as maintaining forest area, preventing conversion of land use and improvement of local forest protection teams).

When the project ends, many degraded mangrove areas affected by extreme weather will face challenges in maintaining mangrove protection and development activities, especially in the area of protection. [4-4] Furthermore, the rights, obligations and responsibilities for forest protection of stakeholders have not been defined and made explicit. Although mangroves are considered as Coastal Protective forest, there has been no funding from the Government to support the activities of mangrove protection teams, as for upstream protective forest.

Protective forests: in the first period of Phase 4, the projects newly planted 25.6 hectares in the two new provinces of Hoa Binh, Vinh Phuc, achieving 25.6% against the plan of 100ha planting and over 80% of the area of newly planted protective forest are likely to survive. [4-5] Besides, native perennial plants grown interspersed with protective forest also bring economic benefits to households, such as acacia trees ready for harvest after 5 years with the average price of 50USD/ton.

The upstream protective forest plantation of the project also faces other challenges, such as the project ending two years before the six year timeframe needed for protecting the upstream protective forest is complete. The policy of the State in forest development is no longer a top priority at this stage; the current priority of Vietnam Government is given to sustainable protection and improvement of existing area of forest instead of newly planting.

DRR activities

The component of DRR and CCA has been considered as the core and priority in stage 4 of the project. The contents of the disaster preparedness project have been

112,737

Direct beneficiaries from project activities

3,566

Direct beneficiaries from forest planting and protection activities

56,509 USD

Total cost for forest planting activity of the project

109,171

Direct beneficiaries from DP activities

[6] Project progress report in period 1/1/2012 to 31/3/2013

made with a comprehensive series of activities aimed at strengthening the capacity of communities and building capacity to respond to disasters and climate change adaptation. Total expenses for DRR and CCA activities was $770,921[7] (63.8% of total funding disbursed). The number of people benefited directly from DRR and CCA activities is 109,171 people and hundreds of thousands of indirect beneficiaries. Specifically, the project has successfully organized DRR related activities as shown in the table below:

Table 3: DRR activities conducted

#	Content	# of courses	Communes	Beneficiaries	Male	Female	Other info
1	Training on DRR/CCA	101	101	2,458	1,777	680 (28%)	
2	VCA	80	80	30.505	16.633	13,872 (45%)	
3	Livelihood training	56	56	1.400	720	680 (49%)	
4	Small mitigation measures	35	35	14.220 households (61,519 people) directly benefited, 97,618 indirectly benefited			Mobilize counterpart funding of approximately 71,000 USD/66,000 funding
5	DRR/CCA training for teachers	14		31 schools, 387 teachers			
6	DP training for students	13		13 schools, 5,738 teachers			
7	Community DP team established and trained	32	32	602 members	505	94 (16%)	
8	Set of early warning devices equipped	34	34				
9	Commune drill	37	37	6,897 participants	4,001	2,896 (42%)	

[7] Exchange rate: 1CHF=1.1029USD

VCA: is an "open" risk and capacity assessment methodology, which has been applied comprehensively in the project to identify the level of risk, vulnerability and adaptation capacity of the community. The project has conducted 80 VCAs in 80 communes with the participation of 30,505 people. For new project commune, VCA was conducted before all other project activities and annually the project conducted review to update VCA in some communes. VCA results have been used to identify disaster risks, CBDRM planning and develop small mitigation sub-projects.

"Previously VCA was conducted but not professionally, and usually using the top-down approach. Now this project applies new VCA methods from community to government, enabling people to have an overview of local issues"- FGD with Thanh Hoa Red Cross

VCA activities take time, resources and require experience and highly skilled VCA facilitators, therefore it will be very challenging for the project to conduct VCA in all other project sites in the next period of Phase 4 as well as update results of VCA conducted initially.

Drill activity: The project has conducted 37 drills with topics covering storm response, dike breakage, house collapse, whirlwinds, landslides, reservoir dam breakage, forest fire prevention, etc. These are highly practical and effective activities due to their low cost while attracting the participation of people in community, contributing to the communication and raising awareness about DP.

CC response and the establishment and operation of quick response teams in the community has not been focused on in the first period of Phase 4; all activities were training on DP and CCA for local authority staff, not risk assessment activities, CC adaptation and communication planning. Thus, in the next period of Phase 4, the project should promote these activities and ensure the update of VCA includes components on CC impact assessment and CCA planning.

DRR/CBDRM communication activity: according to the project progress report, communication via mass media (TV, radio) has reached approximately 32 million people. In 2012, the project will communicate 77 television news broadcasts (length of 1 to 7 minutes), 147 articles and a number of periodic news broadcasts on loudspeakers at 91 project communes.

Mass media is convenient and easy to implement, but it is impossible to verify and quantify its effectiveness to people, while direct communication or small group communication have proved to be effective, but take considerable time and resources.

The mitigation sub-project: The project has implemented 35 mitigation sub-projects in 35 communes (Hung Dao ward, Ha Long city of Quang Ninh province has two sub-projects) with a total capital investment of about $ 66,000. The number of people benefiting from the sub-projects is 14,220 households, equivalent to 61,159 direct beneficiaries and 97,618 indirect beneficiaries. In particular, the project has mobilized local counterpart funds equivalent to approximately 1.4 billion VND (about $71,000) from man-day, materials and money from the local people and government.

71,000 USD

Counterpart fund (capital and labor) of local authorities and communities in mitigation sub-projects

The process of sub-project selection had considerable leeway to choose the mitigation sub-projects best suited to community needs, capacity of project and priority of the local government. In addition to this, localities also faced challenges in mobilizing counterpart capital (human and financial resources) to implement the mitigation sub-projects. The implementation of mitigation sub-projects from design

to construction, handing over and putting into use also consumed much of the project. Requirements on management and maintenance to take full use of mitigation sub-projects are also a challenge for the project and local government.

387

Teachers were trained on DP in schools

DP activities in schools: The project has implemented 14 DP trainings courses in 31 communes of 6 project provinces with 387 beneficiaries, in which 261 are female and 126 are male (48%). Beside teachers, students were also beneficiaries of these DP training in schools; the project conducted 13 training courses in 14 schools for approximately 5,738 students.

5.738

Students were trained on DP in schools

Capacity building activities

The project has trained 172 Red Cross staff from the central level to the district level with various contents about planning, capacity assessment, monitoring and evaluation[8]; 34 young Red Cross staff (13 female) received a four day training course on community-based disaster risk management (CBDRM) in which 25 staff were continually trained on VCA. Project Officers of IFRC gave instruction to project staff of 10 provincial RC teams in planning, monitoring and evaluation, use of project documentation and logical frameworks in annually planning. A 5-day training course on fundraising and a 5-day training course on the management of volunteers were organized for 25 central and local Red Cross staff. A study tour to Thailand about the image of Red Cross, volunteer management, Fundraising and disaster management was organized for 28 central and provincial Red Cross staff. A 4-day training course on planning and budgeting for year 2013 was organized for 40 central and provincial Red Cross staff. Training on updating VCA was conducted for 46 instructors of Red Cross staff in project provinces and some other provinces for the purpose of introducing a common approach to VCA.

[4-6] One of the difficulties in capacity building activities is that all activities of VNRC including salary and professional training, depend largely on the state budget. Therefore, VNRC is unlikely to appoint a full-time staff to work for the project or add one more part-time staff to implement project activities in the remaining time of the project at both central and provincial levels. Additionally, the limited budget of the project does not allow the Central and Provincial RC to recruit more staff to work full-time. As there is no full-time project staff, the majority of work in planning, monitoring and evaluation depends on IFRC project staff.

[4-7] Furthermore, in 2014 there will likely be a reduction in RC staff at all levels because of the state budget deficit, leading to greater difficulties for VNRC to ensure the progress and quality of activities as targeted. Moreover, in Phase 4 the position of project director at central level has been changed once in the first period and expects another change in the next period due to retirement age. Also, in a number of provincial RCs, some project staff who were trained changed their position, such as in the three provinces of Vinh Phuc, Nam Dinh and Ninh Binh, where the president of provincial RC and project director were changed; in Thai Binh there were also changes to project staff. Thus, changes in human resource of the project is a

[8] Project progress report period 1/1/2011 to 31/4/2012

necessity but also a challenge for efficiency of the management and operation of a project.

5 NECCESSITY AND APPROPRIATENESS

Consistency with the NS for mangrove reforestation/DRR

The project on mangrove reforestation/ DRR was designated in consistency with the National Strategy for mangrove reforestation, contributing to DRR and CCA. In addition to legal documents published by Hawkins and coworkers (2010), there are other important decisions related to the mission of plantation, care and protection of mangrove, such as:

1. Decision 667/QD-TTg (27/5/2009) of the Prime Minister states: "Planting coastal trees and protecting dykes: focus resources, especially mobilizing community participation in the protection and conservation of the area with forest in front of dykes, ensure forest has at least 500 m width ";
2. Resolution 24-NQ/TW (06/03/2013) of the Central Party about active response to climate change, strengthening the management of natural resources and environmental protection mentions: the task of protecting, restoring and regenerating natural forest, promoting afforestation, especially mangroves, coastal Protective forest and upstream forest;
3. Decision 1250/QD-TTg (31/07/2013) by the Prime Minister stipulates: areas of mangroves, sea grass beds and coral reefs must be maintained at current levels.

The project on mangrove reforestation/DRR is designed in line with the Government's objectives for disaster management according to Decision 1002/QD-TTg, approving the project for raising public awareness and CBDRM (referred to as Project 1002), to raise community awareness and effectively organize CBDRM models in disaster prone communes. To date, the Disaster Management Center (DMC) and Ministry of Agriculture and Rural Development (MARD) has signed a Minute of Understanding (MOU) with VNRC to support the implementation of Project 1002 in at least 1,000 communes, and provide technical support to implement Project 1002 in 6,000 communes nationwide. At the provincial level, many provinces have approved the Action Plan for implementing Project 1002 and have been initially involved in the capacity building activities, standardizing documentation, baseline assessment and receipt of state budget for implementation of Project 1002. This is a good opportunity for Red Cross staff at all levels to participate actively and effectively in DRR activities, contributing to improving the capacity of communities against disasters and climate change, utilizing the experience and expertise in DRM accumulated through years of implementation of DRM projects in general and the mangrove reforestation/DRR project specifically.

Despite these direct links and positive reviews from the Government, up to now VNRC has not received direct and official financial support as well as legal support (for the care and protection of mangroves) from the Government to expand the planting and protection of mangroves and DRR. Since 2010, many of the areas of mangrove planted by VNRC have not received support for forest protection.

Relevance to objectives selection and project design

Phase 4 of the project has seriously reviewed the assessment results of the period prior to the selection of objectives and project design. All the objectives of the program are assessed to be essential for communes at high risk, coastal and mountainous communes affected by storms, floods, flash floods, landslides and reservoir incidents, forest fires, etc. For beneficiaries, the project has met local demand on DP and CCA and at the same time created sustainable livelihood activities from benefit of mangrove and protective forest.

Stage 4 was fully focused on sustainable care and protection of mangroves rather than area expansion. Only 90.6 ha of mangroves were planted in seven communes out of 146 coastal provinces with mangroves; this is because the areas planted are so far out to sea, there is a low survival rate due to sea waves, sea level rise and there are no commitments to assign forest land over 20 years by VNRC. A small area of upstream protective forest (25.6 ha) was planted in three pilot provinces of Ha Tinh, Hoa Binh and Vinh Phuc, with the contribution of land for economic and protective forests by some households. Forest protection volunteer teams have been trained in forest management and protection skills and have been equipped with basic labor protection tools for the work of forest care and protection.

The DRR activities such as VCA, drills, mitigation sub-projects, etc. were considered key activities and priorities of Stage 4. The first period of this phase focused on building capacity for RC at all levels to strengthen the system of organization and management, improve professionalism and increase the operational efficiency of the project.

In the next period of Phase 4 however, the project should further strengthen communication activities to improve community awareness; enhancing direct communication forms besides indirect communication forms. The direct communication activities will promote communication campaigns, competitions and talks, combined with indirect communication forms such as leaflets, posters and newsletters on commune/village loudspeakers.

Livelihood activities in the next period of Phase 4 should be integrated and closely attached to activities of households and not only end at training.

CC activities only included training on DP and CCA for local authority staff without assessment activities and communication on CC. Forest planting activities should end at the first period of Phase 4 to focus resources into DRR and sustainable forest protection.

6 EFFICIENCY

There are three main results of the program: (1) forest plantation and sustainable forest protection; (2) improve the capacity of project communes to self-protect against disasters and impacts of CC; (3) strengthen the capacity of VNRC to develop and implement CBDRM projects sustainably and effectively. The cost efficiency of each result is calculated by taking the sum of the actual expenses to achieve the

result and the percentage of administrative cost for all activities, divided by the total cost of the whole project.

The first result of forest plantation, sustainable forest management and protection accounted for 6.8% (equivalent to $82,508) of the total cost of the entire project. This was to maintain 8,206 hectares of mangrove forest, plant 90.6 hectares of mangrove forest and 25.6 hectares of protective forest. Thus, the average cost for the care and protection of one hectare in general is 9.9 USD/ha/2.5 years (equivalent to 3.96 USD/ ha/ year). The average cost for protection of protective forest including mangroves according to the cost-norm of MARD is 5 USD/ ha/ year. The cost for planting 1 ha of mangrove is 500 USD/ ha (for example in Hai Phong, the cost for planting "*Kandelia obovata*" is 481USD/ha and planting "*Sonneratia caseolaris*" is 681USD/ha) compared to the cost of MARD which is 710 USD/ ha and planting 1 ha protective forest costs 11 mil USD for the first year.

The second result of capacity building for project communes to protect themselves against disaster risks and impacts of CC accounts for 93.2% (equivalent to $1,125,620) of the total project cost. This is to increase the capacity of 193 communes for 109,171 direct beneficiaries, including: VCA facilitators, commune authorities, people, students, teachers. Thus, the average cost per capita benefited is $10.31.

Administrative costs for the program, including the cost for the RC Association, PMU of central and provincial RC is $380,698, accounting for 31.5% of the total project cost. Compared to the cost of the previous period (2006-2010), the rate of administrative costs at this stage is almost 2% higher (for the "Breaking waves" report, administrative costs in 2006-2010 accounted for 29.6%). Thus, in the next period of Phase 4, project administrative costs should be limited in order to increase funding for direct activities of the project; however, compared to the total number of 112,737 direct beneficiaries of Phase 4, the administrative cost per capita is lower at $3.32 ($4.22 less than the period 2006-2010).

7 EFFECTIVENESS

The plantation and protection of mangrove and upstream protective forest

The first period of Phase 4 has been successful in the task of protecting the area of mangrove planted in Phase 3 (2005-2010). In the first period of this phase, the project conducted plantation of 90.6 ha of mangrove and 25.6 ha of upstream protective forest. The project is managing and protecting approximately 8,206 hectares of mangrove forest, which is less than that in phase 3, possibly due to differences in the two methods of measuring mangrove area. In the areas where mangrove forest was destroyed by storms, there was additional plantation (30ha planted additionally in Ninh Binh). Thus it can be concluded that the task of protecting mangrove area reached 100% of the plan.

Picture 4: Mangrove of Dai Hop commune, Kien Thuy-Hai Phong, 3 years old

Picture 5: Mangrove of Dai Hop commune, Kien Thuy-Hai Phong, at present

The total area of mangroves planted, cared for and protected in coastal communities is a remarkable result of the project due to its positive effects on the local communities. Particularly, mangroves have effectively assumed the role of coastal protection, minimizing damage caused by storms and they not only generate economic benefits but also create mental peace of mind for communities before many strong storms. For example, the storm Bebinca (2013) with high intensity hit Hai Phong and affected many coastal provinces of the project; however, mangrove forest effectively protected the dyke systems of project sites. Only 70 m of dykes were broken, and this was in communes without mangroves outside the project. In addition, hundreds of thousands of people have benefited indirectly from the protective effect of mangrove systems against the impacts of disasters in the past years (Source: 6-month report of 2013).

The local Red Cross Associations have been active in seeking funding outside the project to expand the area of mangroves. For example, Quang Ninh Red Cross has mobilized local private companies and a Japanese NGO – ACTMang, to plant 80 hectares; Ninh Binh Red Cross has also mobilized funds of local governments to plant

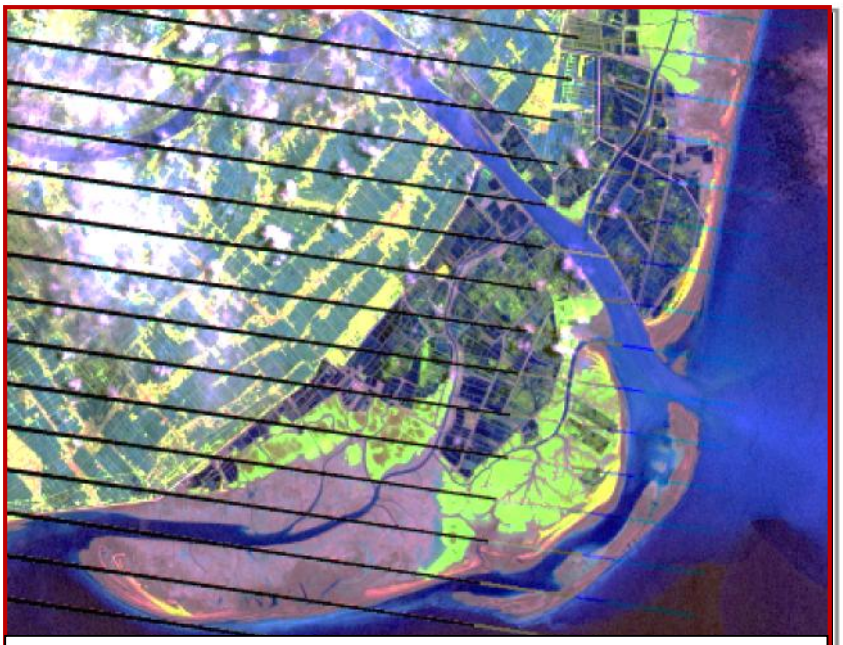
28 ha at a cost of $20,300; Nghe An Red Cross has planted 1 ha in An Hoa commune, and this information was broadcast on TV channels VTV1 in October 2011, etc.

It should also be said that these positive effects are not only the direct result of the activities in the first period of stage 4, but the cumulative effect of all 3 previous stages.

Mangrove forest is well protected not only by the community but it has also received much support from many localities in the direction of planning and forest protection. In particular, these localities have officially confirmed keeping mangroves, no conversion of land use in mangrove areas, or had support mechanisms for forest protection teams, which clearly oriented the model of community-based mangrove management. Typically in Thanh Hoa, 18.82 ha of mangrove planted since 1997 will be cut down in Nga Tan and Nga Thuy communes to upgrade sea dykes; however, thanks to the advocacy and technical support of VNRC, the local authorities have pledged financial support to the provincial Red Cross for additional planting of mangroves in the coming year. Another example is in Nghe An, where VNRC and IFRC has supported the Nghe An RC to persuade local government to make a firm commitment to preventing conversion of land use, in order to protect 40 ha of mangrove in Nghi Thiet commune, Nghi Loc district.

Focus on protection, scientific research and development of mangrove biodiversity in the project area is one of the recommendations of the final evaluation report in Phase 3 (2010). Many of the project areas planted one to two kinds of mangrove species (Sonneratia caseolaris or Kandellia and K. obovata obovata and Rhirophora stylosa), have a high density of mangroves over 15 years of age and also suffer from negative effects of extreme weather events (extended cold in winter, hot weather along with limited fresh water from upstream etc.), so the resistance and development of mangroves is limited. In fact, many mangrove areas have been degraded (Landsat satellite image, July 2013); therefore, when the project ends, the sustainable mangrove protection and development activity, especially in the most protected areas, will be challenging for the Red Cross, the government and local people.

Picture 6: Mangrove region of the Project (lansat satellite picture, July 2013)



Pests are serious in some planted mangroves of the project. Many areas of mangrove died as shown by brown line in the picture taken on 12/7/2013

Mangrove protection and development activities will be effective with collaboration between the community, local government, departments directly involved and the support of the State. Mangrove protection rules and regulations need to be issued by the Forestry sector and unity within the country, not only for the communities with mangroves, which will be a legal tool to support the protection of mangroves against invasion from neighboring communities. Responsibility to protect mangroves should be tied to the interests of the community. Through ownership of forests/ forest land, communities and local governments will have more opportunities in accessing funds for sustainable forest protection activities. A forest protection fee is an essential mechanism to ensure the operation of forest protection teams. In fact, protection and development of mangroves have contributed positively to the protection of many km of sea dykes in the project area. As such, benefits of dyke protection via mangroves have been shared; the access to the department in charge to share forest protection responsibility will be an incentive to access funds for mangrove protection and development.

For planting and protection of protective forest, by far, the project has grown 25.6 ha out of 100 ha of protective forest as planned, reaching 25.6%, in four communes in Ha Tinh, Hoa Binh and Vinh Phuc provinces. Protective forests are planted as native perennial plants (LAT tree) with protective effects, alternated with short-term industrial trees (acacia tree); after 5 years the industrial plants can be exploited at a cost of about $ 50/ ton, which proves the effectiveness in greening bare hills as well as generating immediate and long-term stable income for people in project sites. Currently, it is too early to assess the effectiveness of upstream protective forests

planted by the project. As of October 2013, the survival rate of protective forest is quite high, reaching 80-90% (Source: IDI with district forestry staff); the survival rate of plants to adulthood may have some fluctuations due to the impacts of flooding.

Livelihood activities

Focus on strengthening and enhancing the benefits of the project is one of the main objectives of Phase 4; however, the livelihood activities do not seem to be focus activities that just stop at training for 56 communes with 1,400 people participating. As analyzed above, the benefits of the project for the community and people, particularly in terms of livelihood, are not only a direct result of the first period of Phase 4. In fact surveys of local government leaders and analysis of household surveys and reports point out that coastal communities have stable income from the exploitation of fisheries in mangroves. With an average income of 7 to 10USD per day/ 20 working days/ 1 month, it can be inferred that the income from the products of the mangroves are not only stable but also somehow higher than income from other traditional jobs in project communes (agriculture, planting rush etc.). A model of aquaculture combined with forest planting has become relatively common in some localities. This result is achieved thanks to the long-term persistent propaganda from the previous periods to date; actual observation of the increase in seafood sources in mangroves, as well as the coastal protection role of mangroves. In addition to the regular livelihood activities, in the project area seasonal activities such as beekeeping during mangrove flowering season are also popular. Effectiveness in term of livelihood brought by mangrove has been recognized by people and local authorities. However, the role and value of mangrove forest, especially in livelihood, should be officially recognized by authorities of communes with mangroves through the indicator of income from mangrove exploitation in local SED reports.

It is too early to analyze the economic efficiency given by protective forest to communities in the region. However, it is also not feasible to expect a similar result as in mangrove areas in the future. Thus, the livelihood development direction and activities in two protective forest planting provinces is a challenge in the last period of this phase.

Picture 7: Livelihood of people in project sites

DRR activities

Disaster preparedness and climate change adaptation is considered to be the focus and priority in this phase of the project. The contents of disaster preparedness have been made with a comprehensive series of activities aimed at strengthening the capacity of communities and building capacity to respond to disasters and climate change adaptation. The number of people benefiting directly from the DRR and CCA activities is 109,171 alongside hundreds of thousands of indirect beneficiaries.

"Tan Trao commune, Kien Thuy district, Hai Phong city after conducting VCA identified a list of mitigation sub-projects for investment. Commune authorities actively mobilize grant from other organization to implement on sub-project"

DRR training and DP planning: The project has organized 101 training courses in 101 project communes, with a total of 2,458 people participating (28% female participants), aimed at raising awareness within the communities about DRR and CCA. The training activities have contributed to raising awareness of the people, improving DP planning by local authorities to be ready to respond to disasters. For example, the high intensity storm, Bebinca (2013), made landfall in Hai Phong and affected many coastal project provinces, but thanks to active preparedness and response in project communes, there was no loss of life. Typhoon Son Tinh (2012) with high intense and unusual path affected the provinces of Thanh Hoa, Ninh Binh, Nam Dinh, Thai Binh, Hai Phong and Quang Ninh; thanks to solid preparedness and response of the Red Cross, government and local people, there was no human loss and only a few people were injured, despite high levels of physical damage caused by the storm. In 2013, in the project communes within Hoa Binh and Vinh Phuc provinces, there were occurrences of whirlwinds and landslides, but once again, there was no loss of life.

VCA activity: The project implemented 80 VCAs in 80 communes, with a total of 30,505 participants (45% female participation). VCA activity was conducted in 22% of the total project sites. However VCA has not been really practical in life; specifically, evaluation results of VCA was not integrated in the local socio-economic plan or local disaster preparedness plan; only a small number of local authority staff directly involved in VCA activities could understand the evaluation content. Thus, the

following period of Phase 4 should promote more integration of VCA such as: developing a standard socio-economic development report form integrating VCA to popularize for implementation in the next years in project communes; strengthening and supplementing provincial VCA facilitators; organizing meetings to share VCA experience and integration of results into socio-economic development within project framework.

Mitigation sub-projects: The project has conducted 35 mitigation sub-projects with 61,159 direct beneficiaries and nearly one hundred thousand indirect beneficiaries from these sub-projects. These mitigation sub-projects are highly appreciated by the local people who directly benefit and local government agencies who implemented them as they met the demand of the community. The project also noted the involvement of local authorities and local people in mobilizing and providing counterpart funds for the implementation of mitigation sub-projects. Local counterpart funds provided over 100% compared to the capital support of the project ($71,000 local counterpart funds against $66,000 granted). One point of note is that the design of sub-projects should also consider the maintenance, management and use.

Drill activities: The project has conducted 37 drills with topics covering storm response, dyke breakage, house collapse, whirlwinds, landslides, reservoir dam breakage, forest fire prevention, etc. attracting direct participation of 6,897 people and indirect participation of tens of thousands of people in communes. The project supported only about 14 million VND (700 USD) per drill. This is also a practical need of localities and in line with activities of the Project 1002. From interviewing people and the local government, it is suggested that this activity should be held regularly with topics suitable with disaster risks identified by VCA in project communes.

"Drill activity is highly effective and has significant impact on local authorities: reputation of RC in the government and community has been enhanced; effective in DRR communication" – FGD with Hai Phong Red Cross

Community Disaster Response Team: The project has established 32 community disaster response teams in 32 communes with the participation of 602 people, including 16% women. These community disaster response team projects are also provided 34 sets of early warning devices and safety equipment for the search and rescue activities. In the storm Son Tinh (2012), the community disaster response teams were mobilized to take part and effectively use early warning devices and safety equipment in search and rescue, supporting the affected people.

Disaster preparedness activities in schools: The project has conducted disaster preparedness activities in 14 schools for 387 teachers and 5,738 students. The activity ended after one training course without any further action such as extra curriculum activities, integration into teaching activities, refresher training etc. Discussions with representatives of schools and teachers show that content of disaster preparedness needs more training and repeated training, especially for students as they will be key actors in communicating with friends, family and people in the community.

DRR/CBDRM awareness raising activities: Communication activities have widely taken place on a variety of mass media which is estimated to communicate to tens of millions of people. However, these activities are only indirect communication newsletters; thus, it is difficult to assess the effectiveness of communication activities. Therefore, in the next period of Phase 4, the project should organize more

direct communication activities such as communication campaigns, competitions, talks, combined with leaflets, posters and newsletters on commune/village loudspeakers.

"Through participation in the project, I found myself more experienced and my capacity has also been enhanced, especially when working with other donors. And I've been more confident in implementing many local projects. Now I have become an national VCA expert"- FGD with RC staff of Thanh Hoa

Project activities in a number of localities play a trigger role in significantly changing actual situations. For example, Nga Linh commune of Nga Son district - Thanh Hoa province was selected to implement the project in Phase 4. The mitigation sub-project investing in early warning systems contributed to the transformation of local warning methods, from simple techniques like using horns, gongs and drums, to commune loudspeaker systems with standby electric generators and hand-speakers for villages.

Program management activities

Capacity building activities: [7-1] The project has organized a number of capacity building activities for hundreds of Red Cross staff at all levels from the central to district levels on a variety of topics ranging from planning, project management, financial management, fundraising, volunteer management, disaster management etc. The component for capacity building at all levels has proved its effectiveness, ensuring the schedule and objectives of project activities. All provincial and central RC said the program had a positive impact on strengthening skills, ability of staff, improving relationships with government agencies and promoting the image of VRC. In most project communes, generally the number of members and volunteers has also increased. Specifically in Hoa Binh province since the project, all communes have one full-time staff working for Red Cross. Although the skills of the staff have improved, they still need to be enhanced and strengthened further, especially for new staff.

Program management structure: [7-2] With a long history of nearly 20 years, the project had a significant amount of personnel directly participating in and leading from central to local level. These trained and experienced staffs play as the core force to support improving the quality of human resources for project implementation. In the first period of this phase, the role and participation of the association has been increased to a higher level, in terms of both manpower and level of participation. Since the evaluation results of the previous phase, VNRC has had significant enhancement in human resources: four persons including one director, two officers and one project financial staff member who all work part-time. The management system in the provincial RC includes only three part-time officers (directors, officers and project accountant). Thus, only 34 Vietnam Red Cross officials at all levels working part-time, plus two IFRC staff responsible for implementing many activities in the area 356 project communes, make it difficult to ensure the regularity and quality of management, monitoring, evaluation and technical assistance for project communes.

Therefore, there remain a number of challenges for human resources, such as the pluralism, which seem to be popular from central to local level, from project leader to project staff. Another challenge is that some project managers are assigned by terms of office. Furthermore, the rotation of officials including leader and project staff at both central and local levels somewhat affects the performance of the

project due to the discontinuities in project management, time taken to get familiar with the project, incompletion of handing over of work between the old and new officers and the time taken to train new staff.

Reporting system of the project: through project document review, the consultant team found that the data are inconsistent in places between the main report and appendix. The statistical form is not consistent between years and data is not accumulated, causing difficulties in synthesis, analysis and assessment of the project progress against the targeted plan.

8 COVERAGE

[8-1] Among 356 project communes, 163 communes in Phase 4 only conducted communication activities on the mass media (46%). The number of communes performing at least one project activity except communication is 193 corresponding to 54%. Out of these 193 communes, 56 communes participated in activities of all three components (29%), 65 communes participated in two components (34%) and 72 communes participated in one component (37%). In terms of activities, there are four communes implementing all ten project activities (8%) and up to 61 communes performed only one activity (32%). As the number of communes in the whole project is expected to be able to do more work and have a wider coverage, the PMU should consider focusing on existing resources for the activities in the remaining periods of the project.

The total number of direct beneficiaries of the project by the end of June 2013 was 112,737 people, benefiting from forest plantation, DRR/ CCA and capacity building activities. Besides this, there are millions of people who indirectly benefit from the project activities such as communication, drills, exploitation of forest resources and disaster mitigation sub-projects.

The selection of new communes to participate in protective forest plantation activity was implemented in accordance with the procedure set forth in the project documents to ensure ownership of forests and forest land, the commitment of local authorities, people and forestry agencies to ensure the area of newly planted protective forest will be sustainably protected and developed, even after the project ends. Evaluation results show that the selection of communes; the project activities in communes, especially DRR related activities such as drills; and sub-projects, have met the essential needs of the community. However, the expansion of communes which have only been involved in communication activities may lead to the spread in limited resources, thus reducing the effectiveness of the project.

9 SUSTAINABILITY

Forest plantation

Mangroves: The role of mangroves in coastal protection and providing stable livelihoods for people in mangrove areas has been evident in recent years. This result has convinced many local authorities in protecting mangroves; government leaders of most project sites have committed to preventing land use conversion in these

areas. Mangrove destruction for aquaculture purposes has ended and in some provinces, such as Hai Phong and Ninh Binh, the authorities have confirmed their determination and effort in forest protection through funding forest protection activities. Survey results show that there is no longer invasion action of local people in mangrove areas, which was fairly common in the previous year. Community based protection has been increasingly apparent. Since 2010, although the mechanism and policy of government for mangrove protection in the project site has ended, mangroves continue to be protected. The above achievements are the result of the support from the local government and the active participation of the community.

Recognizing the positive effect of the mangrove reforestation project of the Red Cross, the Government and NGOs, especially in coastal protection against storm and climate change, the Vietnamese government has paid increasing attention and support to the sustainable mangrove development and protection strategies. Many coastal regions of Vietnam have attracted the attention of many organizations for mangrove development projects. From 2010 to date, the small project fund of the program 'Mangroves for the Future' has continuously supported local activities such as conservation and management of coastal ecosystems which play the role as a critical natural infrastructure bringing benefits and safety to local communities. In recent years, organizations such as MCD, CARE International in Vietnam and some other organizations have conducted many direct or indirect activities (communication, livelihood etc.) to sustainably protect and develop mangroves. In 2012, MARD implemented the Forest Conservation Programme, granted by the Japanese Government, to an area of 366.25 hectares of forest on the western sea (An Giang, Bac Lieu, Ca Mau, Kien Giang and Soc Trang) and the buffer zone of U Minh Ha National Park. In 2014, a project of planting and protecting mangroves of MARD with capital of about $100 million will be implemented in 11 provinces including eight coastal provinces (from Quang Ninh to Ha Tinh) in the project area.

[9-1] Despite the relative consistency from the central to local levels, from community to government, it is still challenging to protect mangrove forest in a sustainable manner. In order for mangroves to be sustainably protected and developed, the rights, obligations and responsibilities for forest protection should be specified and made explicit. Currently, mangroves are considered as coastal protective forest, so it is necessary to keep paying mangrove protecting fees and equipping personal with protective devices as well as minimal supplies (lights, batteries etc.) from the government for the forest protection team. In fact, Vietnam Administration of Forestry has determined the planting and protection of coastal protective forest will need a higher cost than the upstream forest. Therefore, the protection of mangrove area is in need of minimum cost norm like protection of upstream protective forest from the government. Mangroves have different characteristics, thus, it is necessary to have specific regulations for mangrove management unified nationwide. This would be a direct and comprehensive legal instrument for the task of protecting and developing mangroves.

Financial remuneration from developed countries for developing countries (REDD+) from payments for environmental services (PES), emissions (GHG) from deforestation and forest degradation (REDD) and REDD rate reducing actions (compared to a reference period) has been an oriented budget for sustainable

mangrove protection activities in the future. However, all these goals encounter difficulties in policy and management mechanisms. Firstly, it needs to mention the overlapping management mechanism; there are no clear rules on the management and ownership of forests and forest land between MARD, MONRE and PCs at all levels. This reduces the ability in computing and exploiting the value of mangroves in the policies mentioned above. Moreover, currently in Vietnam there is no national provision about a Clean Development Mechanism (CDM) in general as well as for mangroves. Finally, it should mention a number of national projects in the socio-economic development planning which will have a significant impact to the opportunity to reach the above-mentioned mechanisms. A highway project Ha Long to Hai Phong associated with industrial zones or sea dyke construction projects in Nga Son, Thanh Hoa are examples leading to the destruction of mangroves.

Despite entire consistence with the development direction of the country and also being one of the recommendations of a previous evaluation, research activities towards sustainable mangrove forest development has received little attention in the first period of Stage 4. An evaluation study to propose the optimal density for growth and creating favorable conditions for the development of the next generation through natural regeneration is essential; [9-2] Especially in the current situation where mangrove trees show negative signs of health problems such as: no sapling directly regenerating under the forest canopy and pests destroying many forest areas in some localities (image..). Research to propose mangrove species and advanced planting techniques as well as plant diversity in the region will help improve plant health. Along with this, it is necessary to study the effects of climate change on mangrove vegetation cover.

Picture 8: Pests are destroying some areas of planted mangrove of the project site

The project staffs have been trained and have practiced GPS mapping techniques. Information on the map will be updated regularly as an effective tool for protection as well as planning the management and development of the mangroves. It is necessary to share map information and continuously practice mapping techniques in the last period of this Phase.

Project information sharing and exchanging, technical consultations, forest development strategic direction with governmental organizations in forestry is essential. Typically, although the activities of the project were evaluated to be highly successful in investment efficiency for forest plantation, protection and survival rate, the Vietnam Administration of Forestry claim not to have detailed information of the project. This gap needs to be overcome in the last period of the project. Moreover, this relationship should also be pushed to a higher level, especially in negotiating mangrove protection strategies and regulations after the project ends.

Operational coordination between the forestry sector and the sectors directly involved in mangrove protection needs to mention the role of the Department of Dyke Management and Flood-Storm Control (DDMFSC) - MARD. Analysis results in the report "Breaking the waves" indicate the role of mangroves in protecting dykes to be completely obvious. Tripartite negotiations between IFRC-VNRC, Vietnam Administration of Forestry and DDMFSC to share the responsibility for mangrove protection are essential in later periods of Stage 4.

[9-3] Although awareness of the community and the local government has been improving over the early stages of the project, in order to prepare for a sustainable withdrawal strategy, the last period of Phase 4 needs to implement comprehensive and widespread communication activities in communities. Besides the basic content related to caring and protecting the value of mangroves, other difficulties and challenges of local mangroves, such as vulnerability due to climate change, forest density etc. and the role of the community in jointly addressing such issues also need to be communicated.

Protective forest: [9-4] regarding planting upstream protective forest, more time is required to perform follow-up activities such as assessing the impact of the project, documentation and sharing of project results with stakeholders. The next period of Phase 4 anticipates not to plant more protective forest, however there are still many challenges to protect planted forests. Specifically, provisions of the forestry sector about the policy for protective forest growers is 6 years (i.e. two years remaining), while the project will end in two years. In addition, the goal of planting protective forest aims at the benefit from the forest produce to protect forests effectively and sustainably in the future; however, the economic efficiency of upstream protective forest is not clear compared with mangroves, hence the sustainable forest protection orientation will be a challenge when the project ends. Moreover, the current priority of the Government of Vietnam is the sustainable protection and development of existing areas of forest, even upstream protective forest, instead of newly planting. As the program of planting 5 million ha of forest ended and protective forest land is scattered in remote areas, the expansion of protective forest seems to be unfeasible.

"The State requires to keep protective forest, no exploitation and needs to attach people's benefit to forest. If households only live on forestry, they need to produce annual crop (short-term plants); and in long-term, it's necessary to have policy on environment fee to protect forest"- FGD with representative of Vinh Phuc Forestry Department

The result of the report on the project planting 5 million hectares of forest in 2008 and the first quarter of 2009 is the mission and solution of 2009 by Vietnam Administration of Forestry: "The targets on planting protective and special-use forests from 2005 completed or exceeded targets set out (partly because forest land was near residential areas and concentrated). After reviewing three types of forest, the remaining area of bare land to plant forests was largely dispersed and located in remote areas with difficult access. Meanwhile, planting production forest brings direct effectiveness for growers, thus organizations, individuals and households focus more on planting this type of forest. As a result, the plantation of protective forest in many provinces

RESOLUTION No. 18/2011/QH13 of the National Assembly: regarding the completion of the implementation of Resolution 08/1997/QH10 and Resolution 73/2006/QH11 about the project on planting 5 million ha of forest, stated: Ending the implementation of Resolution No. 08/1997/QH10 and Resolution 73/2006/QH11 of the National Assembly about the project on planting 5 million hectares of forest. Assigning the Government to develop and implement forest protection and development plan period 2011-2020 according to the national target program and annually report to the National Assembly on the implementation progress.

DRR activity

DRR Component of Phase 4 is fully consistent with the objectives of the project on improving community awareness raising and community-based disaster risk management (referred to as Project 1002) of the Government. As a result at the end of the project, with the agreement that the VNRC has achieved with MARD and PPCs to implement CBDRM activities, the ability to sustain the results of the project are totally feasible; VNRC can provide trainers, VCA training, material development, initial evaluation and support for project communes. Apart from Project 1002 of the Government there are many CBDRM and CCA projects by NGOs such as the Winrock project, the American Red Cross, Mangrove for the Future etc. Thus, after the project has ended VNRC can absolutely implement the project with the Government's funding or change to technical support.

The project has trained groups of VCA facilitators with updated knowledge and skills, so once the project has ended, these facilitators can totally take part in other projects' activities under technical support roles and get paid.

DP activities in schools for students and teachers are likely to be maintained and expanded for the reason that in Project 1002, MOET and DOETs were assigned to urgently integrate DP education into formal education and extra-curricular activities. Currently MOET is standardizing materials and curricula to include in school curricula in the coming years. VNRC was the first organization to introduce DP in primary schools since 2000, thus they have a lot of material and expertise to cooperate with the education sector to implement this activity.

The mitigation sub-projects when designed also take into account the sustainable factor to maintain and operate after the completion of the project. For example, in the sub-project of safe water, the contribution of the people for water fees is taken into account; sanitation sub-projects also consider garbage collecting fees; the public communication sub-project takes into account maintenance fees contributed by commune authorities.

Community disaster response teams were selected from village staff, members of commune CFSC and community representatives; thus, these team members will continue to work in the area and take part in preparedness for, response to and recovery from disaster even after the completion of the project.

Case Study: Gravity water sub-project: project investment of 40 million VND, with counterpart contribution of approximately 40 million VND (manpower), providing clean water for a residential cluster of Bin village, with 42 households benefiting. Water from a canyon, running through an upstream storage tank of $3m^3$ containing gravel-filtering and a downstream tank of $4m^{3,}$ is supplied to households. Each year households contribute 4kg of rice/ two crops (about 20,000 VND) for maintenance staff. Previously, they have to use polluted water on the premises or lost time collecting unclean water from a distant well or stream.

Capacity building

Stage 4 continues to strengthen the capacity of ToT trainers of VNRC on DRR, VCA facilitator group, project management staff and leader of provincial RCs. With trained skills and knowledge, RC staff will ensure successful implementation of ongoing activities of the project and DP activities of the RC and have opportunities to participate in implementation activities of Project 1002, projects of INGOs on CBDRM and project on mangrove reforestation of MARD. However, the Central and local RC need to be active in approaching opportunities.

10 SATISFACTION OF BENEFICIARIES

Local authority (qualitative result)

1. 100% of local authorities interviewed said that the project has NO negative points and expect to participate in and implement the next period of Phase 4 and following Phases (if any).

2. 100% of communes confirmed that planting and protecting mangroves do not only bring physical benefits, but also mental benefits (feeling secure before storms) for coastal communities. All communes assure to continue mangrove development and protection, even after the completion of the project.

3. All commune authorities actively take over project activities (sub-projects, drills, VCA etc.) with counterpart funding of 30% or more; commune project staff have no financial benefit when implementing the project; in many localities, local authorities in project sites actively provide resources to support project activities, especially operations of forest protection teams.

4. Commune authorities within the project highly appreciated the role of the Red Cross in organizing project activities and in the coordination and advising of governments in local disaster preparedness.

5. The role and capacity of VCA facilitators is also recognized in many local areas, and this will be a key force in the implementation of local VCA in the future.

Local Red Cross (qualitative result)

6. All provincial Red Cross Associations highly appreciated the project activities and results; the position of local RC is enhanced in disaster preparedness activities.

7. Satisfaction with the support of the PMU, IFRC and the Donor: reports, disbursement, training quality, training materials, etc.

8. Expectation that the project will continue support and enhance resources of local RC: capacity building, fundraising, volunteer management, prevention and response to disasters, participating in implementation of project 1002, forest protection program, etc.

People in community (quantitative result)

9. 92% of 305 households surveyed (compared to 97% in 2010) committed to continuing forest protection and care after the project ended, even without support for forest protection fees.

10. 99% of households said that sustainable plantation and protection of forests will benefit the community.

11. 97% of households said that forests contribute to the protection of DRR works (contribute to disaster reduction and climate change, generating more income, increasing underground water).

12. 95% of households confirmed that the forest plantation, care, management and protection activities of the project have no negative impact (unexpected) to households and communities.

13. 31% of households said that the project has contributed to improving their livelihood and increasing their income.

11 KNOWLEDGE, ATTITUDE AND PRACTICE OF HOUSEHOLDS

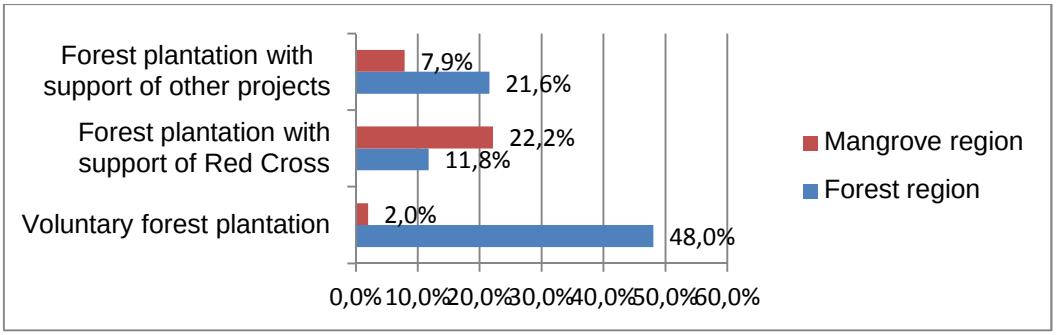
Knowledge about forest and mangrove reforestation and protection

About half of the total surveyed households reported that they had planted forest or mangrove either in recent time or long time ago (49.8%). [11.1-1] In mountainous provinces of Hoa Binh and Vinh Phuc, 80 out of 102 households surveyed said that they had planted forest for economic reasons (accounted for 78.4%). These households mostly planted short-term industrial plants such as acacia or eucalyptus for timber which can be sold after 5-7 year plantation. Thus the rate of voluntary forest plantation in these region was quite high with 48% (Figure 1).

In contrast, only 35.5% of the population surveyed in four coastal provinces said they had planted mangrove forest. Due to the nature of mangrove forest that can only be planted along coastal line, only small number of households in the population is assigned to plant mangrove. The number of 72 households surveyed planted mangrove are those who participated in mangrove reforestation activities organized by local authorities with support of Vietnam Red Cross, Japanese Red Cross and other projects (Oxfam, MCD...). Regarding types of support, it was hard for households surveyed to determine whether their mangrove forest was supported by Japanese Red Cross or other projects. Therefore when analyzing, the research team only classified types of planted mangrove into three types: voluntary mangrove

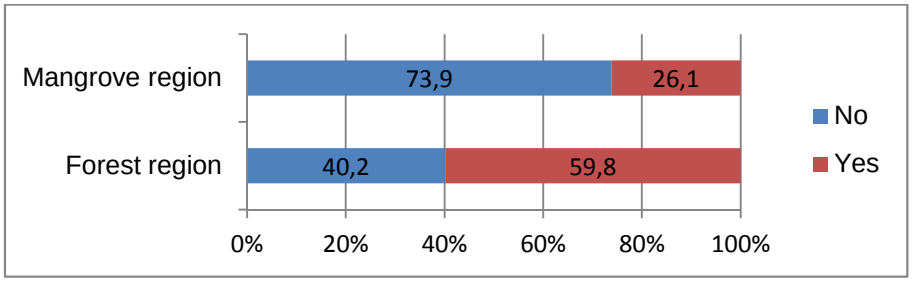
reforestation, plantation with support from Red Cross (in the past and present) and other projects.

Figure 1: Forest plantation in two project regions



Among the total 305 households interviewed, nearly two third said that they did not participate in the protection of forest/mangrove. Analysis according to two project regions shows that, similar to the plantation of mangrove forest in coastal provinces, most households interviewed did not take part in forest protection (73.9% sample size of coastal region). Some households in these regions explained that because they lived far away from mangrove forest and there was forest protection team in the area, they did not have to take part in this activity. However, in two provinces of forest plantation, almost 60% of respondents said that they had to protect their forest because it was one of their income sources.

Figure 2: Protection of forest and mangrove



Significantly, most of the households interviewed appreciated the great effectiveness of forest in protecting disaster prevention works such as dike, dam, reservoirs, etc. (97.4%). Only 8 out of 305 interviewees did not know about this benefit of forest. Similarly, the majority of respondents in all six provinces confirmed that sustainable plantation and protection of forest would bring great benefit to local people (98.7%).

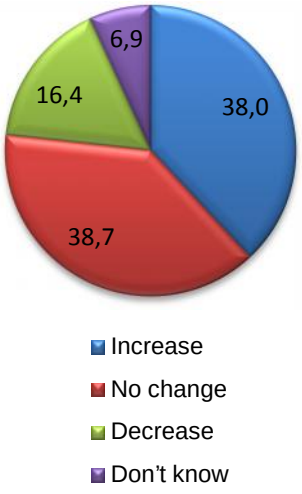
Among specific benefit of forest listed by households, the effect in disaster and climate change reduction was the most frequent answer given by up to 98% of households in coastal provinces and 71.6% of households in mountainous provinces. More income generation from forest exploitation was also one important benefit of forest to community (as said by nearly half of population surveyed in both regions). Due to the differences of planting forest and mangrove forest, households in two regions also named some different benefits. 61.8% of respondents in Hoa Binh and Vinh Phuc provinces knew about the function of forest in increasing underground water, 19.6% and 17.6% said that forest made the environment cleaner and fresher,

and it also helped prevent erosion and landslide. While in coastal region, 48.8% of households were sure that mangrove forest provided favorable environment for aquatic creature and 21.2% talked about beautiful scenery that mangrove forest created.

Table 4: Benefit of forest to community

Benefit	Coastal provinces	Mountainous provinces
Generate more income	49.8%	47.1%
Create beautiful scenery	21.2%	2.9%
Contribute to disaster and CC reduction	98%	71.6%
Increase underground water	1.5%	61.8%
Create environment for aquatic creature	48.8%	3.9%
Make the environment cleaner and fresher	3.4%	19.6%
Keep alluvial soil	2.5%	0%
Prevent erosion, landslide	0%	17.6%

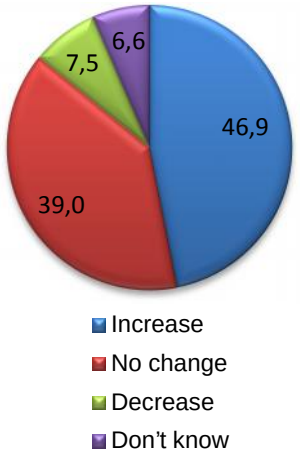
Figure 3: Assessment of forest's benefit



When required to subjectively assess the changes of forest's benefit in recent years, the number of respondents said that there was no change was relatively similar to those who thought it had been increasing (38%). Only 16.4% of the total population survey reported that benefit from forest had been decreasing in the past few years. There were some explanations for this given by these informants that due to over or improper exploitation, unfavorable weather conditions, etc.

Regarding the area of forest, 46.9% of households surveyed said that it had been increasing in the past few years as local authorities had put more concern on forest plantation and protection. The number of informants subjectively confirmed the local area of forest had been decreasing was not high, only 7.5% (Figure 6). The most common explanation given by these households was due to changes in land use (16 out of 23 respondents). Interviews with these households reveal that in mangrove growing region, some area of mangrove has been reduced due to the expansion of aquaculture that only a few households get benefit from.

Figure 4: Assessment of forest area



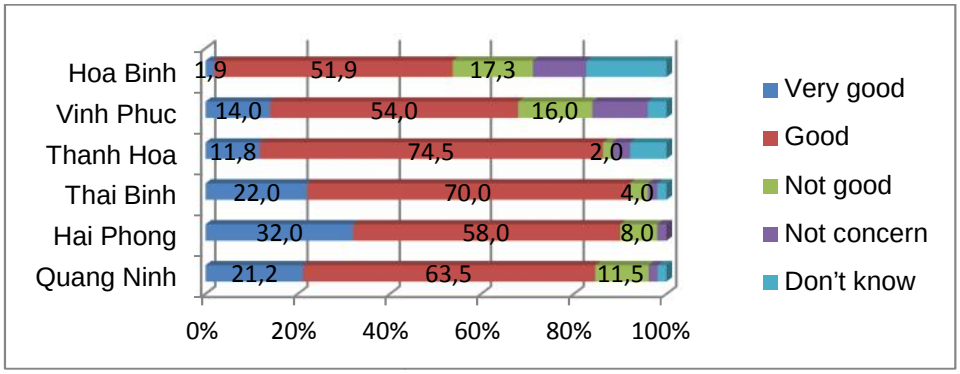
In term of the sustainability in forest exploitation, the majority of households surveyed assessed it to be good with 88.3%. Among 11.7% of respondents who thought local forest exploitation was unsustainable, most claimed that some households in the area were still exploiting aquatic products from mangrove forest in exterminatory methods such as using electricity, catching small fishes in reproductive season... In the two mountainous provinces, there were some ideas that in order to sustain forest and its benefit in disaster prevention, forest planting households needed to plant long-term trees and exploited alternatively, not to cut down the whole forest at the same time.

Local management and protection of forest

On being asked about subjective assessment of interviewed households about the level of concern of local authorities about forest management and protection, the majority of households assessed the local care about forest to be either very good or good (79% in total). Very few people did not appreciate local effort, 9.8% said local

authorities' management was not good and 5.6% thought they did not care about this issue (Figure 5). It should be noted that, through further analysis according to provinces, the rate of households assessing local concern to be good or excellent was significantly high in five coastal provinces with the highest rate in Thai Binh (92%) and the lowest in Quang Ninh (84%), while this rate in two mountainous provinces was lower with 52.8% and 68% in Hoa Binh and Vinh Phuc respectively (Figure 6).

Figure 7: Assessment of local concern according to provinces



Beside local authorities' concern, local voluntary forest protection team is also an important factor in the management and protection of forest. More than half of households surveyed confirmed there was a forest protection team in their area. Thai Binh and Hai Phong had the highest rate of respondents who knew about this team (80% and 70% of sample size in each province respectively), while only 24% of respondents in Vinh Phuc mentioned this team. Among those who confirmed about the availability of forest protection team in local area, the majority assessed its effectiveness to be good or very good (65% and 25%)

Knowledge about natural disasters in local areas

Impacts on local people

Among damages that natural disaster caused to households and local people, crop loss/ production reduce was of the greatest concern of respondents with 83.9%. The fact is that most households in surveyed areas have their livelihood mainly relying on agricultural crop (rice, maize, vegetable...) which are extremely vulnerable to all types of natural disaster. Natural disasters (storm, flood) also caused polluted environment (mentioned by 45.6% of respondents) and damage to their houses and facilities (41%). Other impacts that households interviewed also mentioned were unemployment/income reduce (29.2%), more diseases (28.5%) and damage to aquaculture (28.2%).

Vulnerable people in community

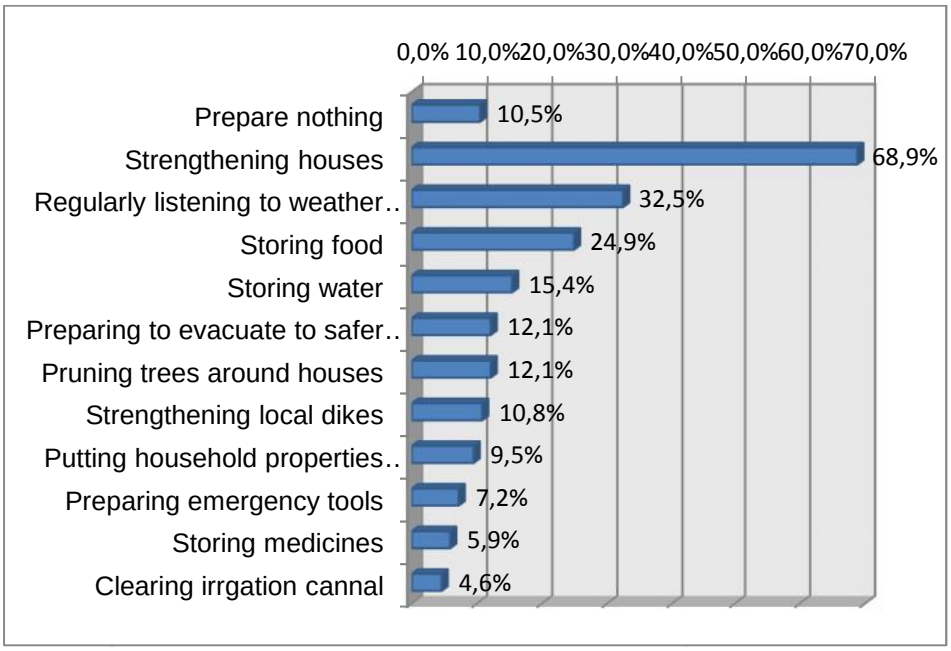
An important indicator to assess the awareness of local people about natural disaster is their understanding about the most vulnerable groups in community. Among 305 households surveyed, 46.2% and 45.9% considered the elderly and children as the most vulnerable groups in community. Some households explained that as the elderly and children were weaker than other members in the community

in both health and capability to cope with disaster, they were easy to get sick of injured when disaster occurred. Significantly, 92% of respondents did not regard women as one of the most vulnerable group in community because they were said to be equal to men in both health and capability. Some people also thought that women were even safer than men as they often stayed inside while men had to go out and cope with disaster. Fishermen were also regarded as a vulnerable group in the community with 22.6% of respondents. Fishermen always have to work at sea, thus they are the first to be affected when storm occurs, not only to their lives but also to their livelihood and income, not to mention damage to ships/boats which are their main means of subsistence.

Disaster preparedness and prevention

When asked about what households should do before disaster came or what to prepare when they heard about disaster, 68.9% said that they had to strengthen their houses to cope with storm, the most common disaster. In fact, even though crop loss/reduction was of greatest concern of households interviewed, no method was identified by affected households to reduce or limit damages as "*crop was on the field and it was impossible to do anything with it when disaster came*". Regularly listening to weather information and preparing food and water were also important things that households had to do to prepare for disaster (32.5%, 24.9% and 25.4% respectively). Other preparation activities were also done by some households interviewed such as evacuating to safer places, pruning trees around house to prevent injury, or even taking part in strengthening local dike... As reported by households in project areas, before storm season, each household had to prepare material such as sacks, bamboo trees to response to flood and storm.

Figure 8: Disaster preparedness and prevention



It can be seen from figure 16 that only 10.5% of respondents said they did not prepare anything before disasters and the reasons given was either they felt it was

not necessary to prepare or they did not know what to prepare (5.6% and 4.9%). And this number is higher in the mountainous provinces (23 out of 32 respondents). This shows subjectivism of some households in disaster preparedness and prevention as they thought that natural disaster occurred annually and they had nothing to do to prevent it.

Effectiveness of forest in disaster reduction

Due to the differences in the nature of forest and mangrove forest, its effectiveness in disaster prevention and reduction was somehow different in coastal and mountainous areas. Household survey showed that the majority of households in coastal provinces were aware of the benefits that mangrove forest brought to local community in reducing impacts of disasters. Specifically, 82.8% of interviewees highly appreciated the effectiveness of mangrove in breaking wave and preventing strong wind, and similarly 83.3% mentioned dike protection and coastal line. Only 20.7% of population in these coastal provinces mentioned the benefit of aquaculture protection.

In mountainous provinces, however, benefit of forest indicated by households were to prevent landslide and erosion (34.3%), prevent and ease down storm and wind (29.4%) and slow down flood flow (19.6%). In addition to the limited knowledge on forest benefit (low return rate compared to that of coastal provinces), 9.8% of interviewed households in Hoa Binh and Vinh Phuc could not name any benefit of forest to their life and community.

Table 5: Effectiveness of forest/ mangrove forest in disaster reduction

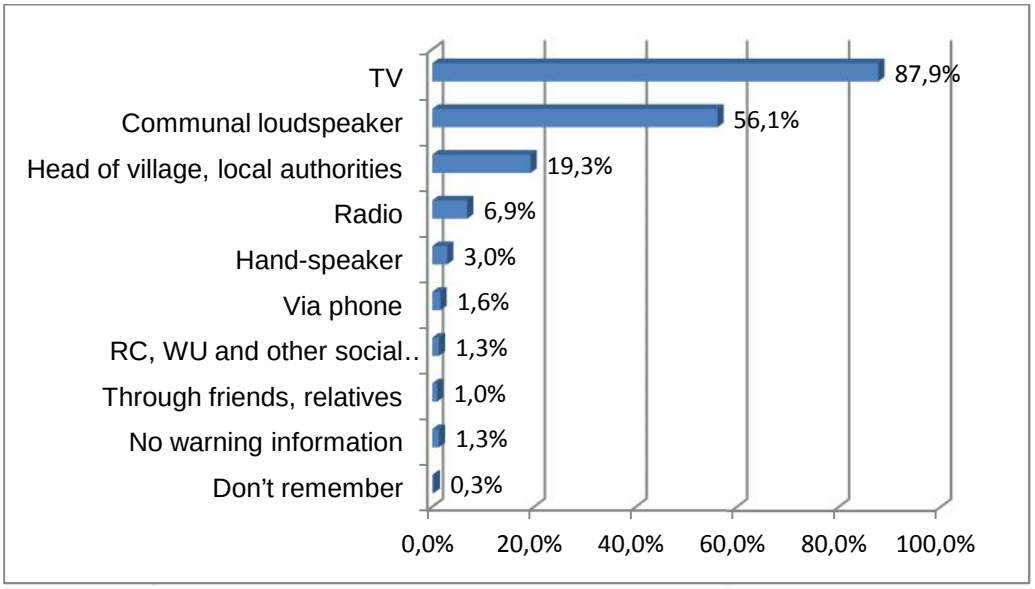
Benefit of forest/mangrove forest	Coastal regions	Mountainous regions
Don't know	4.4%	9.8%
Protect aquaculture	20.7%	0.0%
Prevent wave/ wind	82.8%	29.4%
Protect dike	83.3%	0.0%
Prevent landslide/erosion	0.0%	34.3%
Slow down flood flow	0.0%	19.6%

Local warning system and response to natural disaster

Local warning before disaster

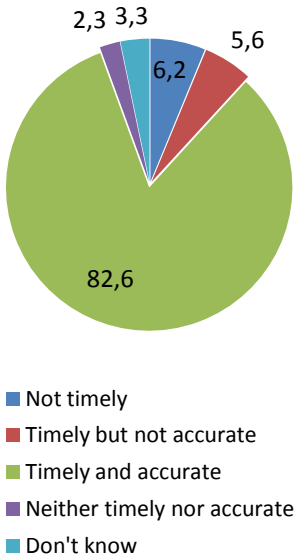
As the most frequent natural disasters in project areas identified by households were storm (as the first) and flood (the second), most weather information provided to community was about storm and flood. Regarding local immediate disaster warning, 62.6% of households surveyed reported that they heard from communal loudspeaker while up to 36% did not receive any information from this information channel. Only a few households got direct warning from local authorities such as head of village or communal staff through hand-speaker (3%). However, when asking about sources of information about weather and disaster in general, the majority of households said they often heard from TV (87.9%) and also from communal loudspeaker (56.1%). Nearly 20% of respondents received weather information directly from head of village or local authorities. Radio was no longer a favorite information channel of community as not many households had it in their family nowadays.

Figure 9: Sources of disaster information



Quality of disaster warning information in term of timeliness and accuracy was also asked by data collectors. 82.6% of respondents assessed warning information they received to be timely and accurate. Only 6.2% said that information was not timely and the other 5.6% said even though the information was timely, it was not quite accuracy. In many circumstances they were warned about a storm hitting their area and they had to prepare or even evacuate which upset their normal life, but finally the storm was not coming.

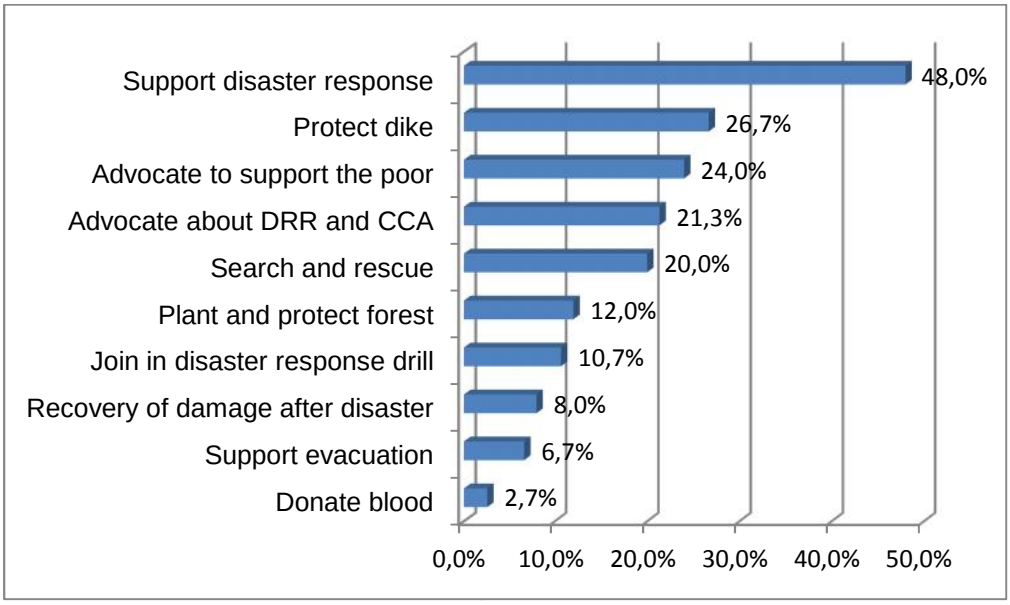
Figure 10: Quality of disaster information



Participation of community in disaster preparedness and response

The number of interviewees who had taken part in preparedness, response and recovery activities for natural disaster was not high with 24.6% of the total population and the majority of whom said they took part in response to disaster in general. Specifically, 26.7% of those who participate in disaster preparedness and response supported in protecting dike during disaster, 24% appealed for help for the poor and 21.3% communicated about DRR and CCA.

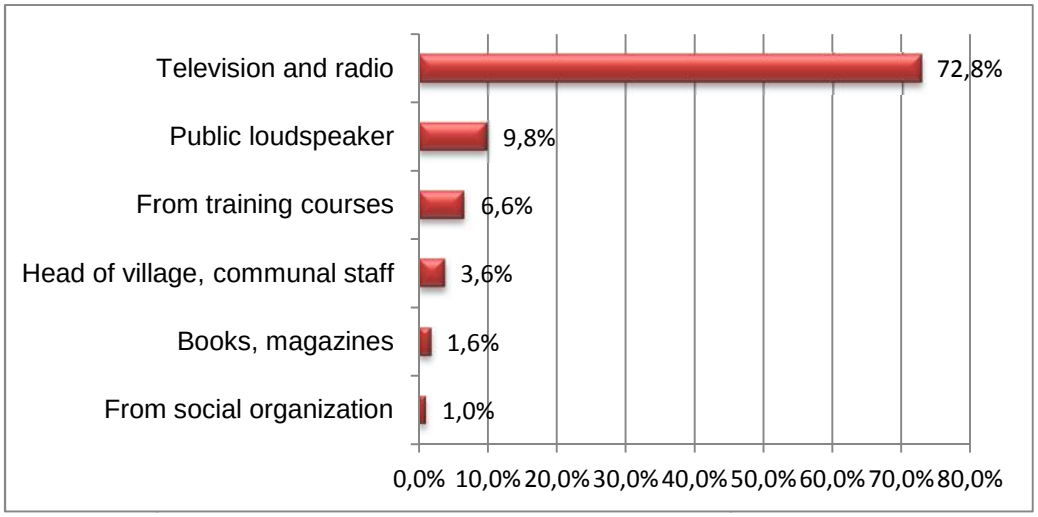
Figure 11: Participation in DRR



Knowledge of climate change

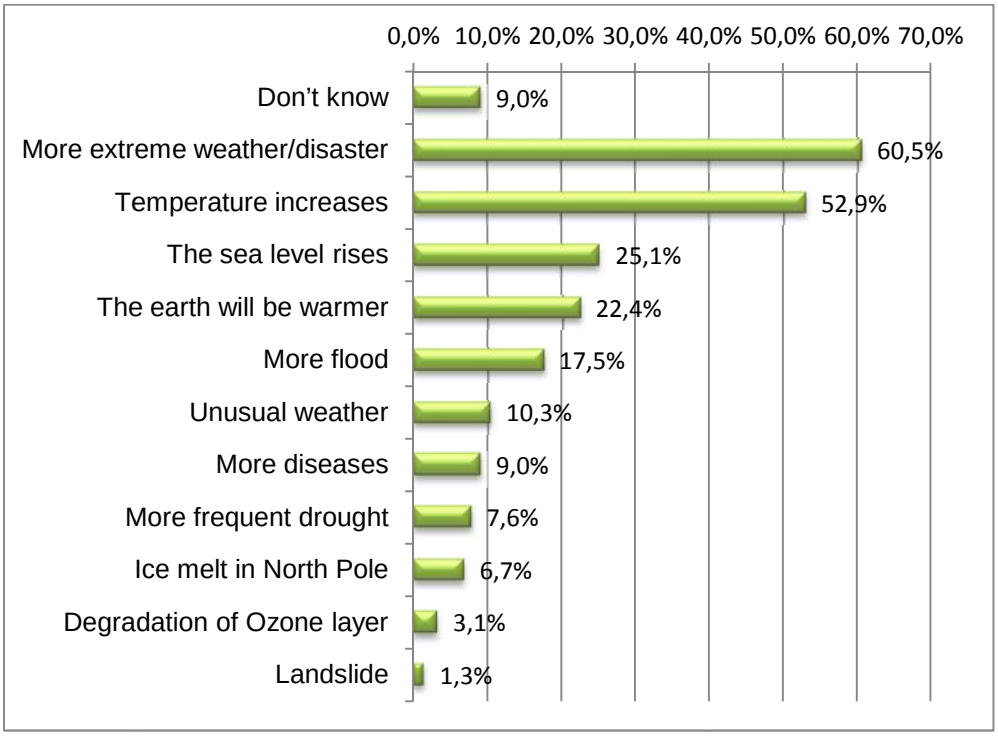
Out of 305 interviewed households over six provinces, the number of interviewees who had heard about climate change accounted for 73.1% of the total population. The most common information source of climate change that people in community heard was television with 72.8% of the total sample size, or 99.6% of population who had heard about this issue. A small number of respondents listened about climate change information through public loudspeaker (9.8%), local training courses (6.6%) or head of village in meetings (3.6%). This shows the fact that television has proved its great effectiveness in conveying information to people in rural community as it has been a necessary device in a family with most households survey owning at least one television in their home (97.7%).

Figure 12: Sources of information on climate change



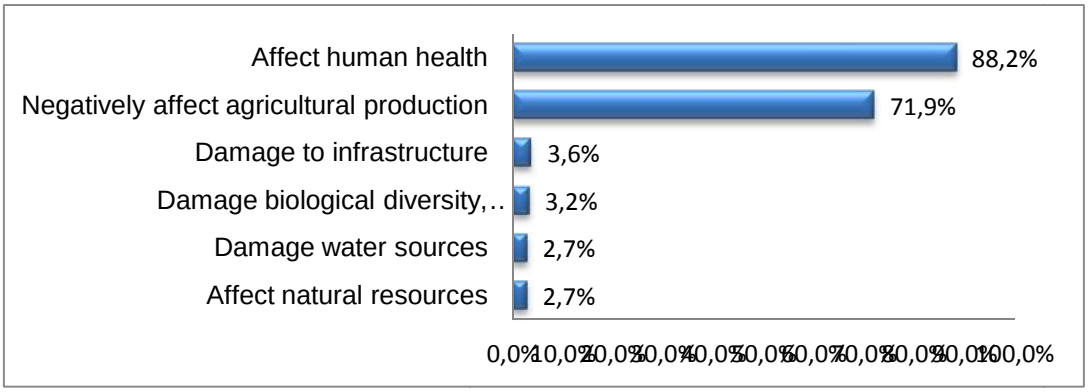
On asking about the impacts of climate change or how the respondents understand about climate change, more than half of those who heard about CC thought that there would be more disaster/extreme weather happening in their local area (60.5%), or the temperature would increase highly which had been already felt by some households (52.9%). Approximately a quarter of respondents also knew that the sea level would rise and the Earth would be warmer than now (25.1% and 22.4% respectively). Some other specific impacts of climate change were also listed such as more flood (17.5%), unusual weather (10.3%) or more diseases (9%). There was only 9% of respondents who could not name any of climate change impacts.

Figure 13: Impacts of climate change



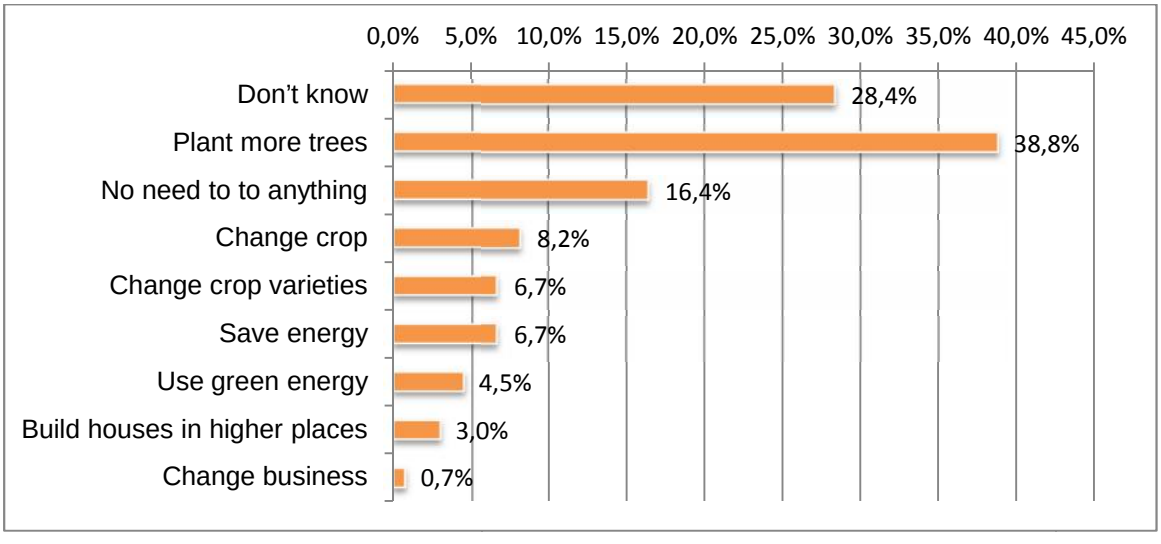
Regarding 73.1% of respondents aware of climate change and only 91% of whom were able to name at list one impact of it, nearly all of the respondents regarded climate change as an important issue (221 out of 223 interviewees knowing about climate change). The two most frequent reasons given by households for the importance of this issue was that it would seriously affect human health (88.2%) and negatively influence agricultural production (71.9%). Explaining why human health was the first issue to think of, many households complained that due to climate change, the weather had been so different these days with higher temperature and longer summer, which badly affect their health, especially children and the elderly. In addition, their livelihood mainly depended on agricultural production which was vulnerable to disasters, the increase in extreme weather/disaster meant that their livelihood was more likely to be seriously impacted. Some other reasons were also given by a few households but with minor number.

Figure 14: Reasons why climate change is an important issue



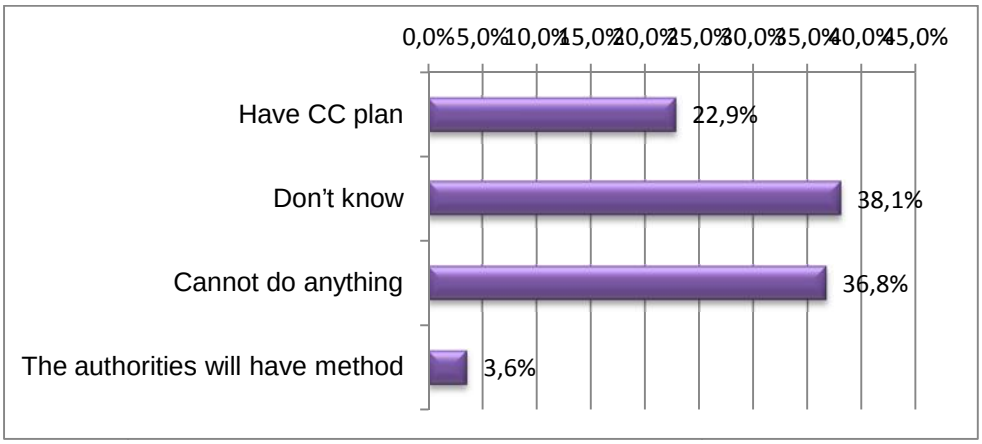
Even though nearly two third of informants said that human being was able to adapt to climate change, the number of households who could not name any method accounted for 28.4% while 16.4% said they did not need to do anything to adapt to climate change. Among methods to adapt to climate change proposed by households, planting more trees was mentioned the most with 38.8%.

Figure 15: How can people adapt to climate change



Since the rate of households who knew how to adapt to climate change was not significant, most of respondents did not have any specific plan to adapt to climate change (77.1%). The reason provided by households was either they did not know to do anything or they could not do anything with it (38.1% and 36.8% respectively). Regarding those who had climate change plan, more than half of them also said that they would plan more trees (58.8%). Other plans to cope with climate change were also mentioned such as finding more information about climate change, or building solid houses to cope with disaster, etc.

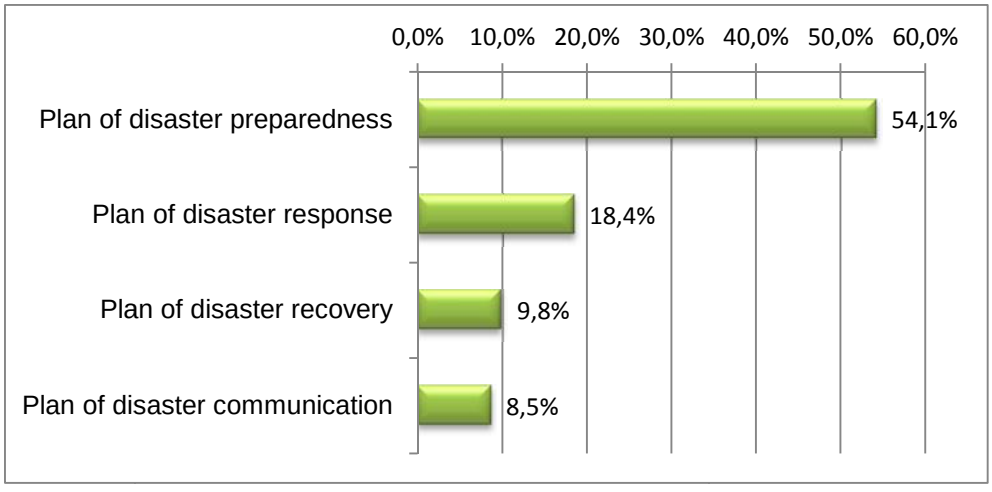
Figure 16: Plan to adapt to climate change



Understanding of local DRR plan

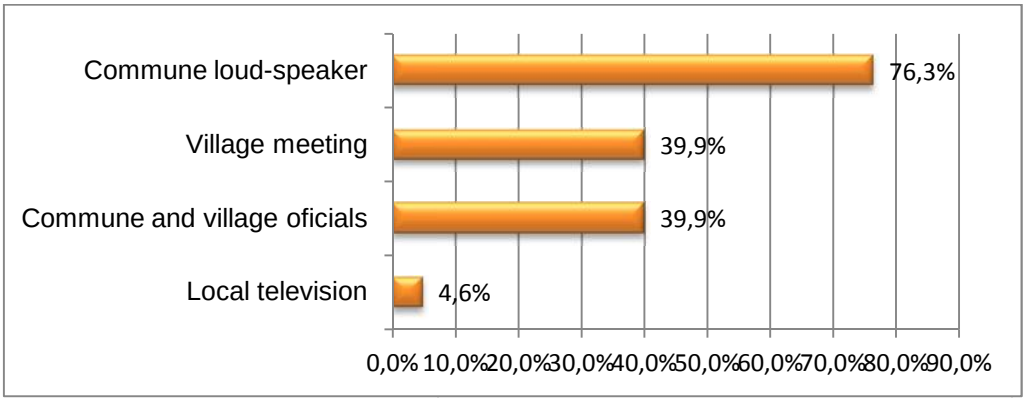
More than half of 305 households interviewed in six provinces said that they had heard about the DRR plan of commune and the main content disseminated to community was preparation before flood and storm (54.1% of the total population). As reported by households, before flood and storm season, head of village and local authorities informed all households to prepare material such as sand sack, bamboo, rope... to support local authorities in protecting dike or other flood and storm control activities. The plan of disaster response, recovery and communication was only heard by minor number of households.

Figure 17: Understanding of local DRR plan



The majority of informants who knew about local DRR plan said they heard from commune loudspeaker (76.3%). This channel of information has proved its effectiveness in conveying not only knowledge about disaster and raising awareness in disaster preparedness and response but quickly popularizing local plans to the whole community. Local authorities such as head of village or communal staff and village meeting were the two second most common sources of information for local DRR plan (approximately 40%).

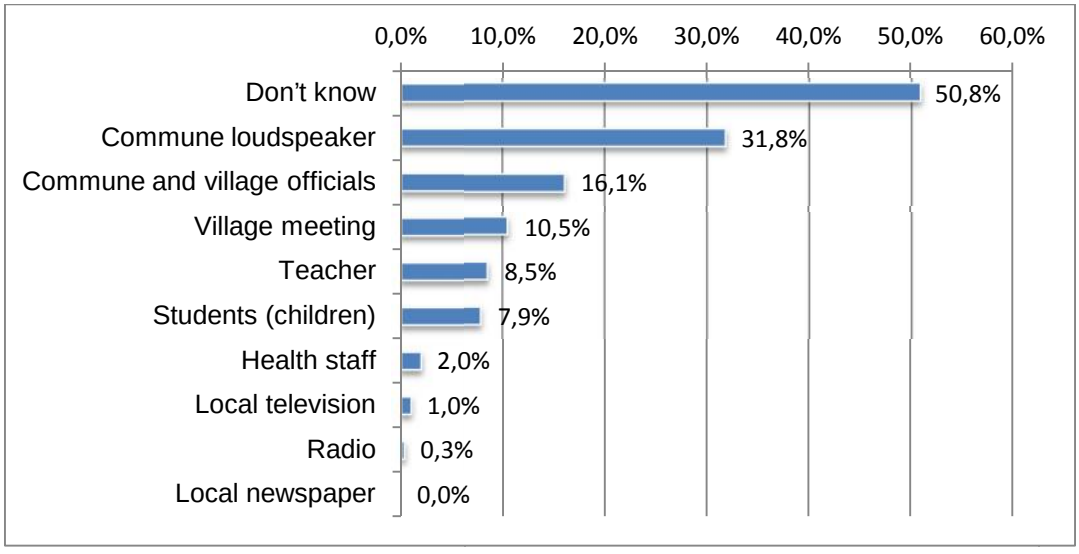
Figure 18: Sources of information about local DRR plan



When asking about whether the information of DRR plan was useful for households or not, most of them confirmed that it was useful for them in disaster preparedness and response (97.6% of those who heard about DRR plan). Only a few people used information heard to arrange suitable crop or make production plan...

Similar to commune's DRR plan, 48.5% of the total sample size reported that they had heard about DRR plan of schools and communal health care stations and the most common information channel was also commune loudspeaker (33.1% of the total population). Information from village and commune officials and from village meetings was lower with only 16.1% and 10.5%. However, there was 8.5% of interviewees that received information from teachers and 7.9% heard from their own children.

Figure 19: Information sources of DRR plan of school and commune health station



PART 3 - RECOMMENDATION

12 RECOMMENDATION ON PROGRAM MANAGEMENT

Progress

Since the progress of the first 6 month phase each year is usually slower than scheduled, the PMU should promote progress in this period. It is worth noting the differences in the fiscal gap and New Year holidays between two countries, as well as the planning and summarization of Red Cross Associations at all levels etc. Thus, the PMU must have a specific plan, otherwise all activities will be pushed in the last 6 months (at the same time of flood season), leading to uncertain quality and progress. [Finding 4-1]

Finance

Due to slow progress of the project plus the small number of communes implementing all activities of Component 3, the next phase the project should focus its resources on core activities and avoid spreading them. The PMU should also consider increasing the capital for sub-projects because the cost of this activity is low but highly effective thanks to the local counterpart of resources and capital. Moreover, to ensure the progress of the project, VNRC will also need support in advance payment for the first quarter of the fiscal year of Vietnam. The project should also review and adjust the settlement process, forms and guidelines for project accounting staff of provincial RC to shorten the settlement process. [Findings 4-2, 8-1]

Human resources

Although the Central Association has strengthened human resources and streamlined staff to ensure better quality and more efficient management, the PMU should also take into consideration the profession factor of staff, as staff holding more than one project remains common at all levels. Furthermore, the rotation of officials in term of office should be noted to strengthen personnel without any disruption, ensuring progress of the project activities. In addition, training, additional training and repeated training, especially for new staff, are essential. [Finding 4-6, 4-7, 7-2]

Project scope

In the next period of Phase 4, project activities should be focused to avoid spreading; in particular, disaster preparedness activities in each commune need to be implemented in a proper and comprehensive manner, including all activities such as capacity building, evaluation, activity implementation etc. [Findings 7-1]

13 SUSTAINABLE DEVELOPMENT STRATEGY

The withdrawing strategy after 2015

Internal factor

The project on mangrove reforestation/DRR has prepared an operation strategy after the project ends in 2015, especially the internal factors based on available resources. Specifically:

DRR/DP/CBDRM policies of VNRC: VNRC has had a development strategy to 2020 to ensure all activities are thoroughly implemented as strategic orientation. Additionally, consolidating and strengthening resources are also being promoted through fundraising activities to ensure financial resources and strengthening of Red Cross volunteers. This will guarantee human resource for the implementation of activities when the project ends.

Forest planting and protection: the project has built a model of community-based forest protection associated with local government. This is a linking model which is expected to bring sustainable effectiveness when the project ends. In this model, the communities establish and develop forest protection teams while local authorities will provide counterpart policies, human resources and finances, indirectly. Moreover, people in the project areas have also had increased awareness about the roles of mangroves, especially for the livelihood activities of households.

DRR activities of the project: In addition to local counterpart sources, localities should proactively approach other funding sources to implement activities identified through VCA. Local counterpart sources: no funding for commune and district PMU, drills; VCA; sub-project implementation.

External Factors

In addition to internal factors, the project also has the backing of external factors to ensure the effective operation of the project after completion. Specifically:

DRR/DP/CBDRM policy: At the Central level, the Government of Vietnam has had Project 1002 implemented nationwide. The central VNRC and MOU, with DMC/ MARD, have implemented the following activities within Project 1002: training of trainers, VCA participation and performance of CBDRM activities in 1000 communes. Provincial Red Cross Associations have started to use the provincial Action Plan for the implementation of Project 1002; some localities have been assigned specific tasks in the implementation of Project 1002 within their province (for example Nghe An, Thanh Hoa, Hoa Binh).

Mangrove reforestation activity: The mangrove reforestation and protection project of Vietnam Administration of Forestry - MARD will be deployed in 2014 with capital of $100 million to plant and protect mangrove forest in 11 provinces, including eight coastal provinces of the project. This is a good opportunity for Vietnam Red Cross to advocate policy and join in the implementation of the project, provide technical assistance, communication and mobilization of volunteers' participation in project provinces and new provinces. Besides this, there are also policies on dyke management and protection, such as the requirement of 500m of coastal protective

forest (mangrove, casuarina, other plants), which facilitates the expansion of mangrove area.

Other CBDRM/CCA projects of international organizations: The current practice shows that CBDRM and CCA have received much attention and support from other international organizations. For example, the project of Winrock International with the participation of the American Red Cross is an opportunity for Vietnam to participate and provide technical support for mangrove reforestation and DRR. Many other NGOs have been implementing CBDRM and CCA activities such as MCD, CARE, Mangrove for the Future etc. Therefore, this is an opportunity for the project to withdraw after 2015 by developing an appropriate policy advocacy strategy, which includes a handing-over activity and switching roles to technical support, implementing the project with funding from the Government (Project 1002) or international funding (Winrock).

14 SUSTAINABLE FOREST CARE AND PROTECTION

To advocate relevant departments and sectors to develop a legal basis for guiding the protection and development of mangroves, an integrated tool specifying the rights and responsibilities of forest protectors will be used. These rights should include the approval of nationwide forest protection regulation, forest ownership/ commitment to assign forest in a given time, guidelines/ regulations community-based mangrove protection and management, support funding and basic equipment for mangrove protection. Detailed responsibilities of mangrove protection specified for the mangrove protecting community, as well as for Departments and Sectors sharing benefits from mangroves (DDMFSC) will be the legal basis for successful implementation of these activities. [Findings 4-4, 9-1]

Restart research activities: After a long absence of mangrove research activities, mangroves face many difficulties and challenges (density, pests, vulnerability, climate change etc.). Research organizations specializing in mangroves need to conduct studies to propose technical solutions as well as biological solutions. [Finding 9-2]

Optimizing the role of local government in supporting mechanisms, human resources and direction in the community-based mangrove protection and management, it is necessary to encourage local initiatives and actively implement appropriate models for each specific region [Finding 4-3]. Organizing workshops to learn and share practical experiences from community-based mangrove management models within and outside the project area is also a recommended activity in the next period.

It is important to continue to monitor and evaluate the impacts of the project and document and share the results with stakeholders. Work must continue in finding solutions to protect upstream protective forest in the next period and sustainable protection solutions when the project ends [Finding 9-4].

Conducting an extensive communication campaign in community and local authorities about the role and value, as well as the difficulties and challenges for mangroves will help promote forest care and protection [Finding 9-3].

The economic value of mangroves has been confirmed by many local authorities as stable or even higher than agricultural production. This is a basis to advocate the official recognition of mangroves by local authorities through periodic socio-economic reports. [Finding 4-5, 11.1-1].

15 DRR ACTIVITY

DRR activities should be implemented comprehensively, frequently and continuously. The Project should focus on communication activities to promote community participation in which DRR activities should be integrated with CCA.

Integrating VCA results into local socio-economic development plan

VCA has not really come to life, especially at the local authority level. This is reflected in the fact that the content of VCA has not been integrated in local socio-economic development plans or DRR plans and only a small number of direct participants understand basic content. Therefore, in the next period of Phase 4, the project should strengthen VCA and it is essential to develop a socio-economic report form integrated with VCA to popularize for the project communes. In addition, the project should organize workshops to share experiences in VCA implementation and at the same time enhance provincial VCA facilitators.

[Finding 1.2-1]

Disaster prevention drills

This is one of those activities that generate high efficiency. Local authorities expect to conduct drills in the following years with relevant topics. Furthermore, drills are also a priority in CBDRM, consistent with the mission and needs of the community and government as well as objectives of the project. Thus, in the next period of Phase 4, the project should promote this activity to increase participants as well as practice for disaster response.

DRR and CCA communication

Among DRR/CCA communication activities, it is necessary to conduct more direct communication activities in the next period of Phase 4 such as campaigns, competition and talks, combined with indirect communication forms such as leaflets, posters and news broadcasts via commune/village loudspeakers. Alongside this, it is also important to combine communication with other activities, such as drills, evaluation and planning. On the other hand, the project should focus on promoting communication in schools because children are among the most vulnerable groups.

The mitigation sub- projects

When designing sub-projects, the PMU should keep in mind the maintenance and management of work and the sub-projects should also evaluate the effectiveness of the works in the final evaluation. In addition, as the investment cost for each work of sub-project is only 40 million VND, it is difficult to have considerable impacts on

disaster reduction. In contrast, if the project invested large amounts of capital, it would also be hard for local authorities to find counterpart funding. Thus, in the next period of Phase 4, it is necessary to review guidelines and regulations on investment capital and counterpart to make it more suitable. The project should also review the selection and implementation of sub-projects to shorten and create favorable conditions for local authorities in the implementation process.

16 RECOMMENDATIONS TO RED CROSS

Vietnam Red Cross

Fundraising capacity building activities and development of a volunteer network remains slow; hence, in the last period of Phase 4, it is important to promote fundraising capacity building activities by taking any available advantages to participate in projects for other organizations, and capitalize on opportunities to implement Project 1002. Simultaneously, it is important to advocate inclusion of livelihood results for forest planted by the project in local annual socio-economic reports. Capacity building should be expanded in the volunteer network with quality and stability.

Japanese Red Cross

The Japanese Red Cross should make an early commitment on capital so that the VNRC can take active movement in annual planning and budgeting. With the position and experience in fundraising activities, the Japanese Red Cross can assist Vietnam Red Cross to access Clean Development Fund and Carbon market in order to generate fund for sustainable development and protection of mangrove, increasing DRR and CCA capacity.

IFRC

Through review and analysis of related documents, the consultant team concluded that the IFRC need to standardize reporting indicators for each activity. Annual and accumulative data reports and statistical reports should be standardized and unified.

The IFRC should provide technical support to the VNRC and provincial Red Cross in strengthening training and fundraising activities.

PART 4 – APPENDIX

REFERENCES

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- Socio-economic development report of project communes
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- Financial reports of the project mangrove reforestation/disaster risk reduction
- Project progress report period 1/1/2011 to 31/4/2012
- Project progress report period 1/1/2012 to 31/3/2013
- Project progress report period 1/1/2013 to 30/6/2013

COMPOSITION OF ASSESSMENT TEAM AND TASKS

No	Name	Position	Assigned tasks
1	Mr. Ngo Cong Chinh, Master of Public Policy and Administration	Team Leader	Manage whole consultancy team and contractual matter with IFRC Provide technical inputs on quantitative research methodology Consolidate reports written by each expert and edit report in English and Vietnamese Write the report Present the research findings to IFRC, VNRC and other stakeholders Ensure timeliness and quality of the consultancy
2	Ms. Nguyen Thi Kim Cuc, Doctor of Philosophy in Ecology	Mangrove expert	Provide technical inputs on survey tools Be in charge of qualitative survey Analyse qualitative data Write part of the report Contribute to preparation of presentation for MTR meeting
3	Mr. Pham Duc Cuong, Bachelor of Transport Economic	Data Analyst and Methodology Expert	Design tools Train data collectors Supervise data collection Conduct in-depth interviews Process and analyze data Prepare presentation for MRT meeting Write part of report
Data collectors			
5	Ms Nguyen Thanh Ly	Lead data collector	In charge of logistics for field survey Participate in data collection and monitor data collectors Support data clean-up and

			analysis Translate report
6	4 data collectors	Collect data	Interview with questionnaire

LIST OF IDI AND FGD PARTICIPANTS

Dai Hop commune- Hai Phong		
NO.	**Full name**	**Organization/agency**
1	Phạm Thị Thúy	Chairman of Commune PC
2	Nguyễn Hồng Ban	Vice Chairman of Commune PC
3	Hoàng Văn Mạnh	Vice Chairman of Commune PC
4	Vũ Văn Hằng	Chairman of RC
5	Nguyễn Văn Hiền	Vice Chairman of RC
6	Hoàng Văn Hòe	Commune Health station
7	Bùi Thị Út	Commune Women's Union
Tan Thanh ward, Hai Phong		
NO.	**Full name**	**Organization/agency**
1	Đỗ Trọng Toản	Chairman of Ward's PC
2	Vũ Kim Quang	VICE Chairman of Ward's PC
3	Ngô Thị Nga	VICE Chairman of Ward's PC
4	Nguyễn Thị Thùy Trang	District RC
5	Cao Thị Huế	Chairman of ward RC
6	Bùi Văn Thân	Forest protection team
7	Vũ Trọng Khá	Head of residential group
8	Đoàn Thị Trang	Tan Tien Youth Union
9	Phạm Đình Hùng	Tan Tien Youth Union
10	Trần Văn Khang	Tan Thanh Farther Front
11	Lưu Văn Tuyến	Tan Thanh Farmer's Union
12	Bùi Thị Cắt	Tan Thanh Women's Union
13	Phạm Văn Thành	Tan Tien ward's RC
Hai Phong Red Cross		
NO.	**Full name**	**Organization/agency**
1	Bùi Mạnh Phúc	Vice Chairman of Hai Phong RC
2	Hoàng Lương	Project staff
3	Trần Kim Phượng	Project accountant
4	Nguyễn Thái Hải	Hai Phong DARD
Nam Hung commune, Thai Binh		
NO.	**Full name**	**Organization/agency**
1	Bùi Văn Xuân	Chairman of Commune PC
2	Trần Thanh Giang	Vice Chairman of Commune PC
3	Trần Công Đoan	Chairman of commune RC
4	Trần Văn Pho	Leader of Nam Hung military
5	Phạm Ngọc Nam	Secretary of commune union

6	Trần Văn Đô	Commune staff
7	Phạm Ngọc Sơn	Head of commune radio
8	Phạm Văn Hưng	Irrigation and transportation staff
9	Trần Văn Kim	Land registry and environment staff
10	Trần Minh Phùng	Irregular policeman-Mangrove protection team leader
11	Trần Văn Quyết	Aquaculture staff
12	Đặng Hữu Đình	Head of commune culture
13	Ngô Thị Diêm	Commune Women's Union
14	Trần Minh Tựu	Deputy Secretary of commune Party committee
15	Trần Xuân Trường	Commune security
16	Trần Minh Pha	Chairman of the Veteran
17	Nguyễn Văn Tú	Commune security
18	Đặng Văn Thuật	Secretary of commune Party committee
19	Nguyễn Văn Phiên	Vice Chairman of the People's Council
20	Đặng Vũ Khôi	Chairman of the People's Council
21	Nguyễn văn Hiến	Chairman of the Agricultural Cooperative Service
22	Trần Minh Đương	Chairman of the commune Fatherland Front Committee
Thai Binh Red Cross		
NO.	**Full name**	**Organization/agency**
1	Nguyễn Kim Sang	Thai Binh Red Cross
2	Vũ Hữu Quang	Thai Binh Red Cross
3	Đinh Hải Lục	Thai Binh Forest Protection Department
4	Phí Thị Hoa	Thai Binh Red Cross
5	Đặng Thị Thủy	Thai Binh Red Cross
Thinh Hung commune, Thai Binh		
NO.	**Full name**	**Organization/agency**
1	Trần Thị Thủy	Chairman of Commune PC
2	Bùi Kiên Quyết	VICE Chairman of Commune PC
3	Trần Văn Hưng	Chairman of the Agricultural Cooperative Service
4	Trần Văn Xương	Chairman of commune Farmer Union
5	Trần Thị Duyên	Chairwoman of commune Women's Union
6	Phạm Ngọc Thạch	Secretary of commune HCM Communist Youth Union
7	Trần Tiến Chinh	Chairman of the Veteran
8	Mai Xuân Trắc	Chairman of RC
9	Phạm Văn Chế	Commune staff
10	Nguyễn Quang Tạo	Mangrove protection team leader
Nga Tan Commune, Thanh Hoa		
NO.	**Full name**	**Organization/agency**
1	Mai Tuấn Anh	Nga Son Red Cross
2	Phạm Hồng Quân	Chairman of Commune PC

3	Nguyễn Hữu Trung	Nga Son security team
4	Nguyễn Đăng Dũng	Da Loc Border station
5	Mai Văn Phương	Vice Chairman of RC
6	Nguyễn Văn Vụ	Village security team
7	Phạm Hùng Mạnh	Thanh Hoa Red Cross
8	Mai Bá Vận	Nga Tan Health Station
9	Mai Văn Lực	Mangrove protection team
10	Phạm Văn Hải	Mangrove protection team
11	Mã Văn Tiến	Chairman of RC
12	Đào Trọng Tuyên	Vice Chairman of Commune PC
13	Mã Duy Tài	Commune security team
14	Mai Bá Dương	Head of village
15	Mai Văn Hùng	Village security team
16	Trịnh Xuân Nam	Head of village
17	Nguyễn Thị Nhung	Commune Women's Union
18	Phạm Văn Dũng	Head of village
19	Nguyễn Văn Dũng	Commune PC
20	Trương Văn Quyền	Secretary of commune
21	Mai Văn Tùng	Head of village
22	Trịnh Văn Thủy	Land registry staff
23	Hoàng Văn Kiều	Land registry staff
24	Lê Văn Vịnh	Commune security team
Thanh Hoa Red Cross		
NO.	**Full name**	**Organization/agency**
1	Mai Thị Nhung	Vice Chairwoman of Thanh Hoa RC
2	Phạm Hùng Mạnh	Office of Thanh Hoa RC
Xã Nga Lĩnh - Thanh Hóa		
NO.	**Full name**	**Organization/agency**
1	Mai Tuấn Anh	Nga Son Red Cross
2	Ngô Trường Sơn	Chairman of Commune PC
3	Mai Xuân Tỉnh	Chairman of commune RC
4	Nguyễn Thị Trì	Commune Women's Union
5	Ngô Thị Hòa	Commune Farmer's Union
6	Ngô Thanh Hà	Quick response team
7	Nguyễn Ngọc Tuân	Quick response team
8	Nguyễn Thành Vinh	Quick response team
9	Nguyễn Văn Thêm	Quick response team
10	Mai Công Thành	Secretary of commune party committee