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**LỘC THỦY COMMUNE
PEOPLE'S COMMITTEE**

Lộc Thủy, 12 June 2018

Ref.No: /BC-UBND

**REPORT ON COMMUNITY BASED DISASTER RISK AND CLIMATE CHANGE
ASSESSMENT**

Lộc Thủy Commune, Phú Lộc district, Thừa Thiên Huế province

This report summarized the disaster risk and climate change assessment carried out by the community with an emphasis on vulnerable groups such as children, women, elderly, people with disabilities and poor people in high risk areas and in all aspects of lives and society. Risk analysis and recommendations of vulnerable groups in the report are important bases for the development of local plans such as disaster preparedness planning and socio-economic development plans and as inputs to the GCF project.

A. INTRODUCTION

1. Geographical locations

Loc Thuy commune is located in the Southeast of Phu Loc district and 12 km away from the center of Phu Loc district town Southeast bound. Geographic coordinates of the commune: 16°16'19.5"B 107°56'10.6"Đ (Commune People's Committee). The location is as follows:

- To the north: Loc Vinh commune.
- To the South: Truong Son mountain range (Da Nang city).
- To the East: Loc Tien commune.
- To the West: Loc Tri commune.

The commune is located on the main road (National Highway 1A, North - South railway).

2. Topography

Regional topography consists of following basic types:

- Mountains:

Mountains in the South of the N-S railway: Hon Voi mountain, Hai Van mountain at the elevation of > 400m, slope > 35%; Phuoc Tuong mountain and Vinh Phong mountain at elevation of 80m -300m and slope > 20%.

- Plain

The flat terrain is turtle back-shaped with a foundation slope ranging 0.5% to 3%; this is the plain of Bu Lu River (Thua Luu and Nước Ngọt Rivers) sloping toward Bu Lu River and towards the sea.

- Lowland terrain:

Areas along the Bu Lu River (Thua Luu and Nước Ngọt Rivers).

3. Climatic and weather characteristics

NO.	Climatic and weather parameters	Unit	Value	Month	Climate change forecast of Thừa Thiên Huế by 2050 per scenario RCP 8,5 (*)
1	Average temperature	^o C	24,4		An increase of 1.9 ^o C
2	Maximum temperature	^o C	38-39	5-7	An increase of 1.3-2.6 ^o C
3	Lowest temperature	^o C	19-20	11-12	An increase/decrease of 1.6-1.8 ^o C
4	Average rainfall	mm	3400	10-11	An increase of 25.1 mm

(*) Data are entered in the basic information package of disaster risk and climate change of provinces which were prepared by the VNDMA/ UNDP in advanced and sent to the Technical Working Group

4. Climate change and disaster trends

No.	Prevailing Disaster and climate change risks in the province	Reduced	Unchanged	Increased	Climate change forecast of Thừa Thiên Huế by 2050 per scenario RCP 8,5 (*)
1	<i>Drought</i>			X	
2	<i>Hurricane</i>			X	
3	<i>Flood</i>			X	
4	<i>Extreme cold days</i>		X		
5	<i>Sea level at marine stations</i>			X	
6	<i>Risk of flooding/ storm surges</i>			X	

(*) Data are entered in the basic information package of disaster risk and climate change of provinces which were prepared by the VNDMA/ UNDP in advanced and sent to the Technical Working Group

5. Population

No.	Village	Households			People		
		Total	Poor	Near-poor	Total	Male	Female
1	<i>Phước Hưng</i>	419	33	13	2007	1237	770
2	<i>Phủ Cờng</i>	499	31	13	2352	1187	1165
3	<i>Phú Xuyên</i>	111	17	4	481	240	241
4	<i>An Bằng</i>	314	22	2	1515	748	767
5	<i>Name Phuoc</i>	128	12	12	688	361	327
6	<i>Thủy Yên Village</i>	275	22	5	1283	676	607
7	<i>Upper T.Y</i>	396	35	9	2011	1040	971

8	<i>Lower T.Y</i>	341	27	7	1580	810	770
9	<i>Thuy Cam</i>	387	54	1	1900	938	962
Total		2.870	253	67	13.817	7.282	6.535

6. Land use¹

No.	Type of land (ha)	Area (ha)
I	Natural land	7,078.37
1	Agricultural lands	6,080.86
1.1	Agricultural production lands	2,499.38
1.1.1	<i>Paddy rice land</i>	630.99
1.1.2	<i>Annual crops (corn, sweet potato, cassava, sugarcane)</i>	925.61
1.1.3	<i>Other annual crops</i>	294.62
1.1.4	<i>Perennial crops</i>	648.16
1.2	Forest land	4,454.50
1.2.1	<i>Production forest</i>	2,701.97
1.2.2	<i>Protective forest</i>	1,752.52
1.2.3	<i>Special-use forest land</i>	
1.3	Aquaculture	47.59
1.3.1	Freshwater aquaculture	47.59
1.3.2	Saltwater/brackish aquaculture area	
1.4	Salt production lands	
1.5	Other agricultural lands <i>(Greenhouse for crop cultivation, barns for cattle and poultry, cultivation lands, livestock lands, aquaculture for experiment and research purposes, seedlings nursery flower and ornamental plants)</i>	
2	Non-agricultural land	862,60
3	Unused land	134,91

7. Economic characteristics and structure

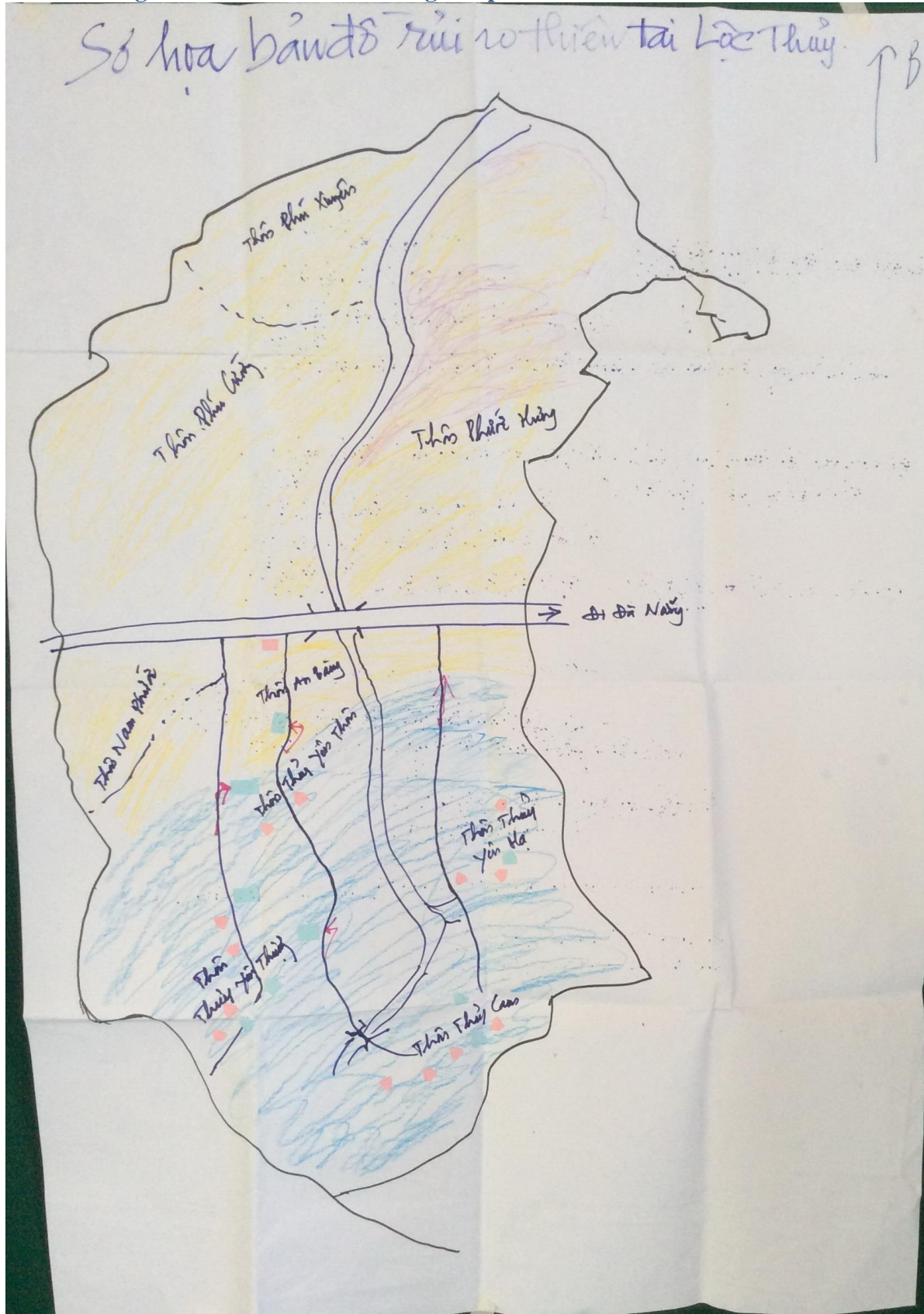
NO.	Productions	Portion of sector economy/ local GDP (%)	Number of households engaged in production and business activities	Average labor productivity per household
1	<i>Crops</i>	35	967	1 tons
2	<i>Livestock</i>	10	1300	6,000,000VND/year
3	<i>Aquaculture</i>	1	50	4 tons
4	<i>Fishing</i>	5	87	0.5 tons
5	<i>Handicrafts and semi-industry</i>	2	107	33,000,000 VND/year
6	<i>Trade</i>	10	375	50,000,000VND/year
7	<i>Tourism</i>	0	0	(VND million/year)

¹ Categories according to Law on Land 2013

8	<i>Other occupations – e.g. working far away from home, bricklayers, transport services, etc.</i>	37	650	34,000,000 VND/year
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B. ASSESSMENT OF RISK AND VULNERABILITY TO NATURAL DISASTERS/CLIMATE CHANGE

1. Sketching disaster risk/climate change maps



2. Summary of disaster risk/climate change maps based on sketching maps

No.	Type of prevailing disasters ² /climate change ³ (Storm, Flood, Sea level rise, etc.)	Villages are at risk of disaster	The highest level of disaster has ever occurred (High, Low, Medium)	Disaster trends (increased, unchanged, decreased)
1	<i>Storm</i>	<i>Phước Hưng</i>	<i>Medium</i>	Increased
		<i>Phú Cường</i>	<i>Medium</i>	Increased
		<i>Phú Xuyên</i>	<i>Medium</i>	Increased
		<i>An Bàng</i>	<i>Medium</i>	Increased
		<i>Name Phuoc</i>	<i>Medium</i>	Increased
		<i>Thủy Yên Village</i>	<i>Medium</i>	Increased
		<i>Upper T.Y</i>	<i>Medium</i>	Increased
		<i>Lower T.Y</i>	<i>Medium</i>	Increased
		<i>Thủy Cam</i>	<i>Medium</i>	Increased
2	<i>Flood</i>	<i>Thủy Yên Village</i>	<i>High</i>	Increased
		<i>Upper T.Y</i>	<i>High</i>	Increased
		<i>Lower T.Y</i>	<i>High</i>	Increased
		<i>Thủy Cam</i>	<i>High</i>	Increased
3	<i>Drought</i>	<i>Thủy Yên Village</i>	<i>High</i>	<i>unchanged</i>
		<i>Upper T.Y</i>	<i>High</i>	<i>unchanged</i>
		<i>Lower T.Y</i>	<i>High</i>	<i>unchanged</i>
		<i>Thủy Cam</i>	<i>High</i>	<i>unchanged</i>

3. Disaster/climate change history

Time of incident	Types of climate change/disaster risk	Affected village	Main damages	Quantity
11/2006	Storm	Thủy Cam Upper T.Y Lower T.Y Thủy Yên Village	1. Number of dead/missing	0
			2. Number of injured:	3 Male
			3. Number of houses damaged:	8 houses collapsed Roof blown away : 50% - house in 4 villages
			4. Number of schools damaged:	

² Natural disaster categories according to the Law on Natural disaster prevention and control: storms, tropical low pressures, cyclones, heavy rain, floods, flash flooding, landslides due to rains and floods or runoff, land subsidence due to floods or runoff, storm surge, saline intrusion, heat, drought, extreme cold, hail, earthquake, tsunami and other natural disasters.

³ Climate change manifestations include increased mean temperatures, sea level rise, rainfall and natural disasters change in terms of frequency, severity, and duration over time.

Time of incident	Types of climate change/disaster risk	Affected village	Main damages	Quantity
			5. Health clinics damaged:	
			6. Kms of roads damaged:	
			7. Forest damaged:	90% of trees in forests collapsed
			8. Fields damaged:	
			9. Fruit trees:	90% fruit trees collapsed
			10. Aquaculture ponds damaged:	
			11. Business, production, processing establishments damaged (industrial, forestry, fisheries, agriculture):	
			12. Other damages ...:	
			13. Estimated economic loss:	
10/2017	Flooding	Thủy Cam Thủy Yên Thong Lower T.Y Thủy Yên Village	1. Number of dead/missing	0
			2. Number of injured:	0
			3. Number of houses damaged:	
			4. Number of schools damaged:	
			5. Health clinics damaged:	
			6. Kms of roads damaged:	
			7. Forest damaged:	60%
			8. Fields damaged:	
			9. Fruit trees:	
			10. Aquaculture ponds damaged:	
			11. Business, production, processing establishments damaged (industrial, forestry, fisheries, agriculture):	
			12. Other damages ...:	Rice get wet 7.5 tons Duck and chicken swept away: 60% Buffalo died: 3
			13. Estimated economic loss:	
11/1999	Flooding	Thủy Cam Upper T.Y	1. Number of dead/missing	1 male
			2. Number of injured:	male /female
			3. Number of houses damaged:	8 swept away
			4. Number of schools damaged:	
			5. Health clinics damaged:	

1	<i>Phước Hưng</i>	345	22	108	24		06
2	<i>Phú Cường</i>	360	24	132	31		07
3	<i>Phú Xuyên</i>	90	06	50	07		03
4	<i>An Bàng</i>	330	23	112	15		05
5	<i>Name Phuoc</i>	120	09	17	08		03
6	<i>Thủy Yên Village</i>	270	23	79	17		07
7	<i>Upper T.Y</i>	348	28	83	19		06
8	<i>Lower T.Y</i>	375	29	81	21		08
9	<i>Thủy Cam</i>	315	27	81	6		07
<i>Total</i>		2553	191	723	158		52

(*) Pregnant women and who are raising babies of less 12 months

5. Assessment of public infrastructure and services

NO.	Item	Unit	Quantity	Resilience to climate change and disasters (High, Medium, Low)	Year of construction	Natural disasters/Climate change risks (High, Medium, Low)
	<i>Preschool</i>	<i>Room</i>	20	<i>Average</i>	2015	<i>Average</i>
	<i>Elementary school</i>	<i>Room</i>	50	<i>Average</i>	1995	<i>Average</i>
	<i>Secondary School</i>	<i>Room</i>	15	<i>High</i>	2001	<i>Low</i>
	<i>Health clinics</i>	<i>Room</i>	13	<i>High</i>	2015	<i>Low</i>
	<i>Electrical lines</i>	<i>Km</i>	38	<i>Average</i>	1996	<i>Average</i>
	<i>Traffic road</i>	<i>Km</i>	37	<i>Average</i>		<i>Average</i>
	<i>Headquarters of People's Committee</i>	<i>Room</i>	18	<i>Low</i>	1996	<i>High</i>
	<i>Commune/village culture house</i>	<i>House</i>	3	<i>Average</i>		<i>High</i>
	<i>Market</i>	<i>Market</i>	1	<i>Low</i>	2013	<i>High</i>

6. Housing

NO.	Village	Households	Permanent house	Semi-permanent house (non-permanent roof, pole, foundation, non-solid wall)	Non-permanent house	Temporary house	Houses in areas to be relocated (prone to landslides, flash floods, etc.)
1	<i>Phước Hưng</i>	419	136	212	55	16	
2	<i>Phú Cường</i>	499	30	264	115	90	

3	<i>Phú Xuyên</i>	111	4	89	18		
4	<i>An Bàng</i>	314	100	201	13		
5	<i>Name Phuoc</i>	128	7	80	40	1	
6	<i>Thủy Yên Village</i>	275	37	213	20	5	
7	<i>Upper T.Y</i>	396	126	160	72	38	
8	<i>Lower T.Y</i>	341	5	303	7	26	
9	<i>Thủy Cam</i>	387	80	247	40	20	
	Total	2.870	525	1.769	380	196	

7. The number of dwellings in the area prone to natural disasters and climate change 4

NO.	Type of houses	Number of houses in high risk areas to natural disasters and climate change (*)	Number of houses in medium risk areas to natural disasters and climate change (*)
	<i>Temporary house</i>	89	107
	<i>Less permanent house</i>	139	241
	<i>Semi-permanent home</i>	923	846
	<i>Permanent house</i>	248	277
	Total	1.399	1.471

(*)Refer to natural disaster risk and climate maps

8. Clean Water supply, sanitation and environmental conditions

Village	No. of HH	Clean water					Toilet			
		Well	Tank	Public water supply station/ tap water	No water storage facilities	Possible damages due to disaster risks/climate change (High, Medium, Low)	Septic tank	Temporary	none	Possible damages due to disaster risks/climate change (High, Medium, Low)
<i>Phước Hưng</i>	419	20	100	<i>Tap water</i>		<i>Low</i>	319	100		<i>Low</i>
<i>Phú Cường</i>	499	50		<i>Tap water</i>		<i>Low</i>	409	68	22	<i>Low</i>
<i>Phú Xuyên</i>	111	75	21	<i>Tap water</i>		<i>Low</i>	360	7		<i>Low</i>
<i>An Bàng</i>	314	90		<i>Tap water</i>		<i>Low</i>	214	60	40	<i>Low</i>
<i>Name Phuoc</i>	128	5		<i>Tap water</i>		<i>Low</i>	52	38	38	<i>Low</i>
<i>Thủy Yên Village</i>	275	35	12	<i>Tap water</i>		<i>Low</i>	222	23	30	<i>Low</i>
<i>Upper T.Y</i>	396	306		<i>Tap water</i>		<i>Low</i>	271	106	19	<i>Low</i>
<i>Lower T.Y</i>	341	38		<i>Tap water</i>		<i>Low</i>	250	80	11	<i>Low</i>

⁴ For GCF project only

<i>Thủy Cam</i>	387	8		<i>Tap water</i>		<i>Low</i>	351	26	10	<i>Low</i>
Total	2.870	627					2.448	508	170	

9. Health - Disease risks associated with natural disasters and climate change

NO.	Type of prevailing diseases	Children	Women	Male	Elderly	Disabled
	<i>Fever</i>			01%		
	<i>Dengue</i>		01%	01%		
	<i>Respiratory tract infections</i>	10%	0,5%	0,5%	0,1%	
	<i>Hand, foot and mouth</i>	05%				01%
					
					
					

10. Preventive health care- capacity to prevent diseases in the context of natural disaster and climate change.

NO.	Village	Diseases prevention skills and knowledge	Disease occurrence (High, Medium, Low)
1	<i>Phước Hưng</i>	High	Low
2	<i>Phú Cường</i>	High	Low
3	<i>Phú Xuyên</i>	High	Low
4	<i>An Bằng</i>	High	Low
5	<i>Name Phuoc</i>	High	Low
6	<i>Thủy Yên Village</i>	High	Low
7	<i>Upper T.Y</i>	High	Low
8	<i>Lower T.Y</i>	High	Low
9	<i>Thủy Cam</i>	High	Low

11. Forest and natural disasters and climate change risks 5

Type of Forest	Total area (ha)	Forest area in high risk area to natural disaster and climate change (*)	Forest area in medium risk area to natural disaster and climate change (*)
1	2	3	4
<i>Mangroves</i>			
<i>Forest on the sand</i>			
<i>Production forest land</i>	2,701.97	2,701.97	
<i>Protective forest land</i>	1,752.52		1,752.52
<i>Planted area for planting mangroves but not yet planted</i>			

⁵ For GCF project only

<i>Area planned for planting on sand but not yet planted</i>			
Total			

(*) Area where forests can be easily apt to damages (by flood, storm, drought, forest fire due to drought, etc.). Refer disaster risk and climate maps

12. Livelihood around the forest⁶

Type of forest (1)	List new indigenous plant species or plants proposed by the community (if needed). (2)	List 3 livelihoods in the mangrove forest proposed by the community in communes (prioritizing successfully piloted models) (3)	Number of households can participate in each type of livelihoods (4)
<i>Mangroves</i>			
<i>Forest on sand</i>			
<i>Plantation forest</i>	<i>Eucalyptus, acacia</i>		<i>230 forest households</i>
<i>Protection Forest</i>	<i>Forest trees</i>		
<i>Area planned for mangroves but not yet planted</i>			
<i>Area planned for forests on sand but not yet planted</i>			
Total			

13. Risk of damages to business and production during natural disaster and climate change

No.	Business/production	HHs	Estimated average annual household based productivity/ production	Resilience to Disasters & Climate Change (High, Medium, Low)	The extent of damages caused by disasters and climate change (High, Medium, Low)

⁶ For GCF project only

					Low)
1	Cultivation (ha)	967	1 tons	Low	High
2	Livestock	1300	6.000.000VND/year	Low	High
3	Aquaculture (ha)	50	4 tons	AVERAGE	AVERAGE
4	Fishing (tons)	87	0.5 tons	Low	High
5	Semi-industry and handicraft (average income)	107	33.000.000 VND/year	AVERAGE	AVERAGE
6	Trade (average income)	375	50.000.000VND/year	AVERAGE	AVERAGE
7	Tourism	0	(million VND/year)		
8	Other occupations - eg. Work far away from home, bricklayers, transportation services, etc. (average income)	650	34.000.000 VND/year	AVERAGE	AVERAGE

14. Communication and early warning systems

No.	Type	Unit	Quantity
1	Households have TV and access to central/provincial television	%	90
2	Households have access to central/provincial radio	%	90
3	Number of speakers (wireless, network)	Loa	43
4	Households have access to loudspeaker systems or other early warning/ emergency forms (horn, gongs, etc.) in at village level.	%	90
5	Number of hydro-meteorological stations		
6	Villages are informed/receive periodic updated reports on flood regulation and discharge upstream areas (upstream reservoirs)	Village/total number of villages	3
7			

15. Natural disaster prevention and control and adaptation to climate change

NO.	Types	Unit	Quantity
1	Number of villages having plans/plans for natural disaster prevention and/or annual adaptation plan	Village	9
2	Number of schools with annual plans for natural disaster prevention and control	School	5
3	The number of natural disaster prevention and control maneuvers in the past 10 years	Times	1
4	Number of members of the Commune Steering Committee for natural disaster prevention and control and search and rescue	People	32
	- Of which the number of women	People	06
	- Number of trained CBDRM or similar	People	0

	training on natural disaster prevention and control		
5	The number of task forces red, red cross,, search and rescue in the commune	People	20
	- In which the number of women:	People	
6	Number of community-based CBDRM/CBDRA	People	
	- In which the number of women:	People	
7	Number of disaster management means at commune level:		
	- Boat, boat:	Nos.	5
	-	Nos.	50
	- Speakers	Nos.	43
	-	Nos.	20
	- Back-up generator	Nos.	1
	-	Nos.	
	-	Nos.	10
8	Number of supplies and spare parts		
	- The number of packages/units of chemical disinfection in place	Unit	
9	Number of on-site preventive medicine	Unit	
10	Other....		

C. RESULTS OF DISASTER /CLIMATE CHANGE RISKS ASSESSMENT BY SECTORS

1. Assessment of public utilities (Electricity, Road, School, Station, Irrigation Works)

Type of Disaster/ Climate change (e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)	Village/num ber of households	Trend of damages (increased, unchanged, decreased)	Trend of damages (increased, unchanged, decreased) (Number of works likely to be affected by natural disasters/climate change)	Skills, technology applied to natural disaster prevention and control & adaptation to climate change (High, Medium, Low)	Natural disaster/climate change risks (high, medium, low)
(1)	(2)	(3)	(4)	(5)	(6)
	Phước Hưng	Increased	- 4 classrooms of primary school, semi-permanent, built long time ago - 2 classrooms of Mai Khoi kindergarten semi-permanent, degraded	AVERAGE AVERAGE	High High

Storm	Lower T.Y	Increased	3 classrooms of primary school, semi-permanent, built for a long time	AVERAGE	High
	Name Phuoc	Increased	3 classrooms of primary school, semi-permanent, built for a long time	AVERAGE	High
	Phú Cường	Increased	2 classrooms of primary school, semi-permanent, built for a long time 18 offices rooms of the CPC are one storey buildings, built long time ago, degraded	AVERAGE AVERAGE	High High
	An Bàng	Increased	10 classrooms of Mai Khoi kindergarten semi-permanent, house level 4 (one storey building) degraded.	AVERAGE	High
Flood	Upper T.Y	Increased	7km of road, degraded	AVERAGE	AVERAGE
	Lower T.Y	Increased	8km of road, degraded	AVERAGE	AVERAGE
	Thủy Yên Village	Increased	2km of road, degraded	AVERAGE	AVERAGE
	Thủy Cam	Increased	6km of road, degraded	AVERAGE	AVERAGE

2. Assessment of houses

Types of Disaster/Climate change	Village/number of households	Damage trends (increased, unchanged, decreased)	Disaster risk/disaster risk (Number of houses at risk)	Skills and techniques for natural disaster prevention and control and adaptation to climate change (High, Medium, Low)	Disaster/Climate change risks (High, Medium, Low)
(1)	(2)	(3)	(4)	(5)	(6)
Storm	Phước Hưng	Increased	71	AVERAGE	High
	Phú Cường	Increased	205	AVERAGE	High
	Phú Xuyên	Increased	18	AVERAGE	AVERAGE
	An Bàng	Increased	13	AVERAGE	AVERAGE
	Name Phuoc	Increased	41	AVERAGE	High
	Thủy Yên Village	Increased	25	AVERAGE	High
	Upper T.Y	Increased	111	AVERAGE	High
	Lower T.Y	Increased	33	AVERAGE	High
	Thủy Cam	Increased	60	AVERAGE	High

3. Assessment of clean water supply, sanitation and environment

Types of disaster/climate change (e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)	Village/number of households	Trend of damages (increased, unchanged, decreased)	Vulnerability/damage risks before disaster/climate change (Households are at risk of lacking clean water and insanitation when disaster strikes)	Skills and techniques for natural disaster prevention and control and adaptation to climate change (High, Medium, Low)	Disaster/climate change risks (High, Medium, Low)
(1)	(2)	(3)	(4)	(5)	(6)
Storm	9 village	Decreased		High	Low
Flood	9 village	Decreased	59 HHs	High	Low

4. Assessment of healthcare services

Types of disaster/climate change (e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)	Village/number of households	Trend of damages (increased, unchanged, decreased)	Vulnerability	Skills and techniques for natural disaster prevention and control and adaptation to climate change (High, Medium, Low)	Disaster/climate change risks (High, Medium, Low)
(1)	(2)	(3)	(4)	(5)	(6)
Storm	9 village	Decreased		High	Low
Flood	4 village	Decreased	Houses in low lands and flooded lands	AVERAGE	AVERAGE

5. Assessment of education activities

Type of Disaster/Climate change (e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea	Village/number of households	Trend of damages (increased, unchanged, decreased)	Vulnerability	Skills, technology applied to natural disaster prevention and control & adaptation to	Disaster/climate change risks (High, Medium, Low)
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<i>Level Rise, more extreme disaster Trends etc.)</i>				climate change (High, Medium, Low)	
(1)	(2)	(3)	(4)	(5)	(6)
Storm	Phước Hưng	Increased	- 4 classrooms of semi-permanent primary schools, built long time ago. - 2 classrooms of Mai Khôi pre-school, semi-permanent and built long time ago.	AVERAGE AVERAGE	High High
	Lower T.Y	Increased	3 classrooms of semi-permanent primary schools, built long time ago.	AVERAGE	High
	Name Phuoc	Increased	3 classrooms of semi-permanent primary schools, built long time ago.	AVERAGE	High
	Phú Cường	Increased	2 classrooms of semi-permanent primary schools, built long time ago.	AVERAGE	High
	An Bàng	Increased	10 of Mai Khôi pre-school, non-permanent and built long time ago.	AVERAGE	High

6. Assessment of forests

Type of Disaster/ Climate change (e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)	Village/number of households	Trend of damages (increased, unchanged, decreased)	Vulnerability (Areas at risks - ha)	Skills, technology applied to natural disaster prevention and control & adaptation to climate change (High, Medium,	Natural disaster/climate change risks (high, medium, low)
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				Low)	
(1)	(2)	(3)	(4)	(5)	(6)
Storm	9 village	Increased	2.701,97	AVERAGE	High

7. Assessment of planting activities

Type of Disaster/ Climate change	Village/num of households	Trend of damages (increased, unchanged, decreased)	Vulnerability (Areas at risks - ha)	Skills, technology applied to natural disaster prevention and control & adaptation to climate change (High, Medium, Low)	Natural disaster/climate change risks (high, medium, low)
(1)	(2)	(3)	(4)	(5)	(6)
Flood	Thủy Yên village	Unchanged	68 ha of rice and subsidiary crop lands	AVERAGE	High
	Upper T.Y	Unchanged	67 ha of rice and subsidiary crop lands	AVERAGE	High
	Lower T.Y	Unchanged	26 ha of rice and subsidiary crop lands	AVERAGE	High
	Thủy Cam	Unchanged	64 ha of rice and subsidiary crop lands	AVERAGE	High
Drought	Thủy Yên village	Unchanged	70 ha of rice and subsidiary crop lands	AVERAGE	High
	Upper T.Y	Unchanged	60 ha of rice and subsidiary crop lands	AVERAGE	High
	Lower T.Y	Unchanged	40 ha of rice and subsidiary crop lands	AVERAGE	High
	Thủy Cam	Unchanged	47 ha of rice and subsidiary crop lands	AVERAGE	High

8. Assessment of livestock

Type of Disaster/ Climate change (e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)	Village/number of households	Trend of damages (increased, unchanged, decreased)	Vulnerability (Number of cattle, poultry and damage risks)	Skills, technology applied to natural disaster prevention and control & adaptation to climate change (High, Medium, Low)	Natural disaster/climate change risks (high, medium, low)
(1)	(2)	(3)	(4)	(5)	(6)
Flood	4 villages: Thủy Yên Lower T.Y and Upper T.,.Y and Thủy Cam	Unchanged	70% of livestock in the flooded area	Low	High
		Unchanged	30% of pig raised in low barns and depressed areas	Low	AVERAGE

9. Assessment of aquaculture production

Type of Disaster/ Climate change (e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)	Village/number of households	Trend of damages (increased, unchanged, decreased)	Vulnerability (Aquaculture areas at risk of disasters and climate change)	Skills, technology applied to natural disaster prevention and control & adaptation to climate change (High, Medium, Low)	Disaster/climate change risks (High, Medium, Low)
(1)	(2)	(3)	(4)	(5)	(6)
Salinity intrusion	Phước Hưng	Increased	21	AVERAGE	AVERAGE

10. Assessment of tourism

Type of Disaster/ Climate change <i>(e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)</i>	Village/number of households	Trend of damages <i>(increased, unchanged, decreased)</i>	TTDBTT <i>(HHs running tourism services at risk of disasters and climate change)</i>	Skills, technology applied to natural disaster prevention and control & adaptation to climate change	Disaster/climate change risks <i>(High, Medium, Low)</i>
(1)	(2)	(3)	(4)	(5)	(6)

11. Assessment of small trades and other service sectors

Type of Disaster/ Climate change	Village/number of households	Trend of damages <i>(increased, unchanged, decreased)</i>	TTDBTT <i>(HHs running services at risk of disasters and climate change)</i>	Skills, technology applied to natural disaster prevention and control & adaptation to climate change	Disaster/climate change risks <i>(High, Medium, Low)</i>
(1)	(2)	(3)	(4)	(5)	(6)
Storm	9 village	Increased	500 HHs as trading and service in storm prone areas with non-permanent infrastructure	AVERAGE	AVERAGE
	27 HHs producing malaleuca oil	Unchanged	Temporary malaleuca oil producing houses	AVERAGE	AVERAGE
	Phước Hưng	Unchanged	1 industrial garment establishment	AVERAGE	High
	Phú Cường	Unchanged	1 industrial garment establishment	AVERAGE	High
Flood	Upper T.Y	Unchanged	20	AVERAGE	AVERAGE
	Lower T.Y	Unchanged	27	AVERAGE	AVERAGE
	Thủy Yên Village	Unchanged	26	AVERAGE	AVERAGE
	Thủy Cam	Unchanged	28	AVERAGE	AVERAGE

12. Assessment of disaster communication and early warnings

Type of Disaster/ Climate change (e.g. Flood, Storm, Landslide, typhoon, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)	Village/numb of households	Trend of damages (increased, unchanged, decreased)	Vulnerability (No. HHs have access to appropriate media and early warning services of disasters)	Skills, technology applied to natural disaster prevention and control & adaptation to climate change	Disaster/climate change risks (High, Medium, Low)
(1)	(2)	(3)	(4)	(5)	(6)
Storm	9	Increased	100% HHs due to electricity cut, cannot receive any information through mass media	Low	High

13. Results of natural disaster prevention and control/adaptation to climate change

Type of Disaster/ Climate change (e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)	Village/numb of households	Trend of damages (increased, unchanged, decreased)	TTDBTT (Number of full-time staff and 4 on-the-spot staffs with at least 5 years working in the field of natural disaster prevention and control and climate change	Skills, technology applied to natural disaster prevention and control & adaptation to climate change	Disaster/climate change risks (High, Medium, Low)
(1)	(2)	(3)	(4)	(5)	(6)
Storm	9 village	Increased	0	AVERAGE	AVERAGE
Flood	4 village		0		High

		Increased		AVERAGE	

14. Assessment of other key sectors/fields of the commune

Type of Disaster/ Climate change (e.g. Flood, Storm, Landslide, Hurricane, Cyclones, Sea Level Rise, more extreme disaster Trends etc.)	Village/numb of households	Trend of damages (increased, unchanged, decreased)	TTDBTT (Number of HHs/labor force/assets at risk of disasters and climate change)	Skills, technology applied to natural disaster prevention and control & adaptation to climate change	Disaster/ Climate change risks (High, Medium, Low)
(1)	(2)	(3)	(4)	(5)	(6)

D. INTER-SECTORAL EVALUATION & SOLUTIONSS

1. Summary of disaster risk/climate change analysis

Priority issues (*)	Disaster/ Climate change risks	Vulnerability	Reasons	Solutions
1.	Rice crop loss	Rice in flooded area, Rice in prolonged drought area	Lack of drainage system, irrigation canals. Lack of pumps	Build pump stations Build and upgrade canal system Build a salinity prevention system Equip farmers with technical and scientific knowledge
2.	Subsidiary crops damages	in flooded area, in prolonged drought area	Lack of drainage system, irrigation canals. Lack of pumps	Build pump stations and canal systems Apply technical and scientific knowledge in planting and caring trees
3	Houses collapsed/ Roof blown	Simple houses, temporary houses. Located in the area	Houses are not braced carefully before storm;	Reinforce houses Support human

	off	frequently hit by storms, floods, houses near rivers and streams	subjective, contemptuous Not equipped with knowledge and skills in disaster prevention	resources Improve awareness
4	Poultry died for swept away	Farms and barns in flooded and low-lying areas. close to mountain slope where water is flowing rapidly	Poultry farming in open air other than in barns; Lack of knowledge on animal husbandry	Change livestock styles Build permanent barns Provide livestock knowledge
5	Pig died	Farms and barns in flooded and low-lying areas, easily to be inundated and cannot be moved	Barns located in low lying area. Floods come during night suddenly and animals cannot be moved; lack of manpower; local people are negligent.	Heighten barns Support human resources Raising awareness of local people
6	Cattle died	Temporary barns, located in low lying area, 53 temporary buffalo barns. Lack of food for cattle during dry season	Lack of food for cattle during dry season as grass is dying. Temporary barns, located in low lying area .	Build permanent barns Store feeds for cattle

2. Summary of natural disaster prevention and control solutions and adaptation to climate change

Sector/fields (*)	Proposed solutions (**)	Locations and beneficiary	Activities to implement solutions	Tentative time		Tentative budget
				Short-term (under 2 years)	Long term (over 2 years)	
Public Infrastructure (Electricity, Road, School, Station,	Build a pump stations Build, upgrade and renovate canal systems	Village and people living on agriculture	Call for investments in more drainage pump station and canal lining		X	GoV

Irrigation Works)						
Houses	Reinforcing houses Provide more human resources to help local people brace their houses Raising awareness	Local people	- Mobilize people to build safe houses - Mobilize resources to clear temporary housing for poor HHs - Support human resources to help HHs anchor houses against storms - Raise awareness for local people on safe houses and protecting houses.	X X X	X X	Local people Organization Local people Social unions GoV
Planting	Equip technical and scientific knowledge for local people	Planting HHs	Training on technical and scientific knowledge for local people	X		
Livestock	Equip technical and scientific knowledge for local people Change forms of livestock Upgrade barns	Husbandry HHs	Training on technical and scientific knowledge for local people Advocate local people to raise livestock in barns Advocate local people to build elevated barns to avoid floods Store feeds for cattle	X X X		GoV Local people Local people
Communication and early warnings	Upgrading radio system Raising	Villages	- Fix radio system of the villages and communes - Equip the generator/batteries for wireless	X		GoV GoV

	awareness of local people through local radio and speaker systems		speakers - Make plans for natural disaster prevention and control bulletins and dissemination of knowledge on cultivation and husbandry	X		
Natural disaster prevention and control and adaptation to climate change	Capacity building for commune and village Steering committee for natural disaster prevention and control and local task forces	Natural disaster prevention and control staff	- Capacity building training for commune and village officials - Training on improved search and rescue skills for search and rescue forces	X X		GoV Organizations

**ON BEHALF OF CPC
FOR CHAIRMAN
VICE – CHAIRMAN**

Nguyễn Văn Hoàng

E. ANNEXES

Annex 1: LIST OF PARTICIPANTS IN THE ASSESSMENT

No.	Name	Organization	tel
1	Trần Quang Huy	Vice – chairman Lộc Thủy PPC	0913136457
2	Đình Bán	Chairman - Commune Fatherland frontier	0905444006
3	Phan Hùng Phi	Commune statistics office	0949857584
4	Phan Thị Thanh Hằng	PPC office	0985669976
5	Phan Tâm Thuận	Land and housing staff- CPC	0905263789
6	Trần Thị Hiền	Commune women union	01262691345
7	Nguyễn Thị Kim Chi	Family planning staff	0905655842
8	Hồ Thị Kiều Oanh	CPC	0912555750
9	Nguyễn Văn Sáu	CPC	0905423218
10	Nguyễn Văn Tám	Commune Red Cross	01214988037

Annex 2: Templates for data collection during the guided assessment

History of disasters

Year/month	Disaster	Characteristics	Affected areas	Damages	Reasons to damages	How to respond
11/1999	Flood	Historic flood occurred during night suddenly	Upper T.Y, Thủy Cam	12 people of Thuy Cam village died Crop damaged: 100% Buffaloes died in Upper T.Y village: 3, Thuy Cam: 7 Pigs died: 30%. Duck and chicken: 80% dead. 4 houses in Upper T.Y village and 4 houses in Thuy Cam village collapsed. 120 tons of rice get wet (Upper T.Y: 70 tons, Thuy Cam: 50 tons)	Lack of information, Flood came suddenly and cannot be prepared timely. Not able to relocate cattle before flood.	Elevate farm and evacuate animals to higher lands
10/2017	Flood	Large flood, rising quickly	Upper TY, Thủy Cam, Lower T.Y, TY village	Two fence walls collapsed in Thuy Cam village Crop damaged: 100% 70% of houses inundated under less than 1m of water Duck and chicken died: 60% Cows died in Thuy Cam village Rice seed get wet; 2.5 tons Landslide: 3,000 m3 Canals damaged: 400 in Upper T.Y 15 ha of cassava, sweet potato and other crops in Ty Ha village	Due to flood discharge and large flood for many days, high water level, people are not prepared, crops not yet harvested, garden based livestock are much affected during floods	Put properties on high locations; ensuring safety of humans and properties. Evacuated to high areas
6/2006	Storm	Strong wind, storm level 11 and 12	Upper T.Y, Thủy Cam, Lower T.Y, TY village	3 people injured (Thuy Cam: 2, Upper T.Y 1) 8 houses collapsed : TC 2 houses, Upper T.Y 3, Ty Ha village 2 houses 50% of the house: roof blown off Crop damaged: 100%	Storm landed during night; people are not cautious and they could respond	Bracing houses sing sand bags, threads, woods. Evacuated to high areas

			Damaged forests: 93% Fruit trees damaged: 70% 1 Buffalo died in Upper T.Y village	properly. Many temporary houses	
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SUMMARY OF DISASTER RISKS OF LỘC THỦY COMMUNE
(Villages: Thủy Cam, Upper T.Y, Lower T.Y, Thủy Yên)

Disaster	Trends	Vulnerability	Natural disaster prevention and control	Risks
Flood	More floods recently	<p>Community safety</p> <ul style="list-style-type: none"> - 1805 houses in the inundated areas (T. Cam 387 HHs, Upper T.Y 396 HHs, Upper T.Y 341 HHs, Lower T.Y 275 HHs) Including: + 89 simple houses easily to be damaged due to floods(T. Cam 20, Upper T.Y: 38, Lower T.Y: 15, TY: 16) * 409 persons (male: 224, female 175) living in simple houses in flood prone area (T. Cam 92 , Upper T.Y 174, Lower T.Y 20, TY village 123) + 139 non-permanent houses can be easily collapsed and swept away (T. Cam 40, Upper T.Y 72, Lower T.Y 7, TY village: 20) * 639 people (male 351, female 288) in non-permanent houses in flooded areas (T. Cam 138, Upper T.Y 377, Lower T.Y 32, TY village 30 HHs) + 80 semi-permanent houses near river and are deeply inundated (T. Cam 50 , Upper T.Y 30) * 368 people (male 202, female 166) are living in semi-permanent houses in flooded area and riverine areas (T. Cam 230, Upper T.Y 138) - 288 HHs with 1,416 people need evacuated from flooding (T. Cam 125 HHs 575 people , Upper T.Y 105 HHs 474 people, Lower T.Y 28 HHs 129 people, TY village 30 HHs 138 people) - 95% HHs in flooded area without boat (T. Cam 	<p>Community safety</p> <ul style="list-style-type: none"> - 12 high story houses can be havens during disasters (T. Cam 1, Upper T.Y 5, TY village 6) - 3 havens during' disasters for village people (T. Cam 01, Upper T.Y 01, T.Y village: 01) - 60 HHs houses with boats for travelling during floods (Lower T.Y) <p>45 % village roads are concrete roads (T. Cam 30%, Upper T.Y 30%, Lower T.Y 50%, TY village</p>	<p>Collapsed house/roof blown away/damaged</p> <p>People died</p>

Disaster	Trends	Vulnerability	Natural disaster prevention and control	Risks
		<p>100, Upper T.Y 100, Lower T.Y 100, TY village 100)</p> <ul style="list-style-type: none"> - 100% HHs without life jackets for flood cases (T. Cam 100%, Upper T.Y 100%, Lower T.Y 100%, TY village 100%) - 50 % of roads in villages are earth roads difficult to travel (T. Cam 70%, Upper T.Y 70%, Lower T.Y 50%, TY village 30%) - 20 % of HHs are not active in the protection of houses and properties (T. Cam 20%, Upper T.Y 20%, TY village 20%, Lower T.Y 20%) - 13% HHs do not store foods (T. Cam 07%, Upper T.Y 07%, Lower T.Y 20%, TY village 20%) <p>Production/business/trade</p> <p>142 ha of rice lands in frequently and deeply inundated area (T. Cam 50 ha, Upper T.Y 55 ha, Lower T.Y 30 ha, TY village 7 ha)</p> <p>51 ha of cassava/potato in frequently and deeply inundated area (T. Cam 14 ha, Upper T.Y 12 ha, Lower T.Y 15 ha, TY village 10 ha)</p> <p>3 ha of bean in in frequently and deeply inundated area in Lower T.Y</p> <p>116 ha of sugarcane in frequently and deeply inundated area (T. Cam 61 ha, Upper T.Y 55 ha)</p> <p>101 HHs raising livestock with 291 buffalos in low lands and become deeply flooded during floods (T. Cam 15 HHs, 49 buffalos; Upper T.Y 51 HHs, 152 buffalos, Lower T.Y 50 buffalos, TY village 40 buffalos)</p>	<p>70%)</p> <ul style="list-style-type: none"> - 80 % of households brace and protect their houses before disasters (T. Cam 80%, Upper T.Y 80%, Lower T.Y 80%, TY village 80%) - 87% store floods for storms and floods (T. Cam 93%, Upper T.Y 93%, Lower T.Y 80%, TY village 80%) <p>Production/business/trade</p> <ul style="list-style-type: none"> - Having abundant labor force with experience in production 1134 people (male 600, female 534) - Dyke system: 11.9 km - 10 ploughing machines - 3 pump stations - 4 pumps - 65 % HHs raising pigs built 	<p>Damaged roads</p> <p>Rice lost</p> <p>Buffalo died</p> <p>Pigs swept away</p> <p>Duck and</p>

Disaster	Trends	Vulnerability	Natural disaster prevention and control	Risks
		<ul style="list-style-type: none"> - 35 % HHs raising pigs in flooded areas in low barns (T. Cam 40 %, Upper T.Y 35 %, Lower T.Y 40%, TY village 25%) - 85 % HHs raising chicken and ducks in open air, no permanent barns (T. Cam 95%, Upper T.Y 95%, Lower T.Y 80%, TY village 80%) - 33 fish ponds 21 households in the deeply flooded areas (T. Cam 9 HHs 17 ponds, Upper T.Y 14 HHs, 16 ponds) - 50% people (female 60 %) are not equipped with livestock skills (T. Cam 40, Upper T.Y 40, Lower T.Y 60, TY village 60) - 20 HHs do carpentry in frequently and deeply inundated area. (T. Cam 6 HHs, Upper T.Y 7 HHs, Lower T.Y 3 HHs, TY village 4 HHs) - 1 HHs making colonial hats in frequently and deeply inundated area in Lower T.Y - 7 HHs producing Melaleuca oil in frequently and deeply inundated area (Lower T.Y 4 HHs, TY village 3 HHs) <p>Healthcare, sanitation and environment</p> <ul style="list-style-type: none"> - 97% HHs do have family medicine cabinets (T. Cam 99%, Upper T.Y 99%, Lower T.Y 95%, TY village 95%) - 235 HHs using temporary toilet (T. Cam 26, Upper T.Y 106, Lower T.Y 80, TY village 23) which are exposed to environmental pollution ; 70 HHs do not have latrine (T. Cam 10, Upper T.Y 19) 	<p>higher their pig bars to ensure safety for pigs in storm and floods (T. Cam 55 %, Upper T.Y 65%, Lower T.Y 60%, TY village 75%)</p> <ul style="list-style-type: none"> - 15% HHs raising chickens and poultry (T. Cam 5% , Upper T.Y 5%, Lower T.Y 2-%, TY village 20%) - 66 people raising fish (male 33, female 33) 50 % people have and apply technical and scientific knowledge of planting and livestock (T. Cam 60, Upper T.Y 60, Lower T.Y 40, TY village 40 HHs) - 15 people producing Melaleuca oil (female 11) - 5 people making colonial hats (female 5) (T.Cam 2; Upper T.Y 2, Lower T.Y 1) 	<p>chicken died and swept away</p>

Disaster	Trends	Vulnerability	Natural disaster prevention and control	Risks
			<p>Healthcare, sanitation and environment</p> <ul style="list-style-type: none"> -3% HHs have family medicine cabinet - HHs using clean water: 95%. (T. Cam 95%, Upper T.Y 95%, TY ha 95%, TY village 95%) - 1,094 HHs using septic toilet (T. Cam 351, Upper T.Y 271, Lower T.Y 250, TY village 222) 	Polluted environment
Storm	<p>In recent years, there have been many storms offshore yet little impact on communes</p>	<p>Community safety</p> <ul style="list-style-type: none"> - Kindergartens with 05 rooms degraded and are one floor houses. - Primary schools have 3 rooms degraded and are one floor houses. - 100% of HHs directly affected by storms, 1,399 HHs (6,729 people (T. Cam 387, Upper T.Y 396 HHs,) - Temporary house : 89 houses (T. Cam 20, Upper T.Y 38, Lower T.Y 5 houses, TY village 26 houses) * 409 people (male 224 , female 185) are living in simple/temporary houses (T. Cam 92 , Upper T.Y 174, Lower T.Y 23, TY village 120) - Non-permanent houses: 112 houses (T. Cam 40, Upper T.Y 72) 	<p>Community safety</p> <ul style="list-style-type: none"> - Primary school: 4 permanent classrooms of two story buildings (Upper T.Y) There is one school in TY village can be a haven during disasters - 3 permanent houses can be havens during disasters (Upper T.Y 3) - National grid covers all villages including 11 substations in 4 villages, HHs using electricity is 100%. - 45 % of village roads are concrete (T. Cam 50%, Upper T.Y 60%, Lower T.Y 50%, TY village 	<p>Collapsed and drifted houses</p> <p>People died</p>

Disaster	Trends	Vulnerability	Natural disaster prevention and control	Risks
		<p>* 639 people (male 315, female 324) are living in non-permanent houses (T. Cam 138, Upper T.Y 377, Lower T.Y 32, TY village 92)</p> <p>- Semi-permanent: 923 houses (T. Cam 247, Upper T.Y 160, Lower T.Y 203, TY village 313)</p> <p>* 4246 people (male 2336, female 1910) are living in semi-permanent houses (T. Cam 1.136, Upper T.Y 763, Lower T.Y 934, TY village 1440)</p> <p>- 228 HHs, 1048 people (male 585, female 473) are subject to evacuation in strong storms (T. Cam 60 HHs 230 people., Upper T.Y 120 HHs 551 people, Lower T.Y 28 HHs 129 people, TY village 30 HHs 138 people)</p> <p>- 95 % people do not have natural disaster prevention and control knowledge (T. Cam 90%, Upper T.Y 95%)</p> <p>- 30% HHs are neglected and do not brace their houses before storm season (T. Cam 40%, Upper T.Y 40%, Lower T.Y 20%, TY village 20%)</p> <p>- 35 % HHs do not reserve their foodstuff in preparation of storms and flood season (T. Cam 35%, Upper T.Y 35%) ,</p> <p>- 270 HHs do not have communication/media equipment to receive disaster warning information (T. Cam 150, Upper T.Y 120)</p> <p>- 20% people do not receive disaster warning information as village speakers have been degraded (T. Cam 20%, Upper T.Y 20%)</p> <p>Production/business/trade</p> <p>- 149 ha of forest lands in area directly affected by</p>	<p>30%)</p> <p>- 2 village cultural houses</p> <p>- 46 permanent houses; these house can be haven for community in disasters (T. Cam 01, Upper T.Y 03, Lower T.Y 5 houses, TY village 37 houses)</p> <p>- 90% HHs having communication/media equipment for tracking disaster information (T. Cam 80%, Upper T.Y 80%, Lower T.Y 90%, TY village 90%)</p> <p>- 97% HHs with motorbikes (T. Cam 95%, Upper T.Y 95%, Lower T.Y 99%, TY village 99%)</p> <p>- As located in the disaster prone area, they have better awareness of disaster: 75% (T. Cam 70%, Upper T.Y 70%, Lower T.Y 80%, TY village 80%)</p> <p>- 70% find it is necessary to brace their houses before storm (T. Cam 60%, Upper T.Y 60%, Lower T.Y 80%, TY village 80%)</p> <p>- 65 % HHs have food reserve during storm season.</p> <p>(T. Cam 65%, Upper T.Y 65%)</p>	

Disaster	Trends	Vulnerability	Natural disaster prevention and control	Risks
		<p>storm and strong wind (T. Cam 110 ha, Upper T.Y 20 ha, Lower T.Y 37 ha, TY village 12 ha)</p> <ul style="list-style-type: none"> - 53 ha of fruit tree lands in area directly affected by storm and strong wind (T. Cam 17 ha, Upper T.Y 27 ha, Lower T.Y 8ha, TY village 1 ha) - 60ha of sugarcane lands in area directly affected by storm and strong wind (T. Cam 17 ha, Upper T.Y 43 ha) <p>3 HHs producing Melaleuca oil in area directly affected by storm and strong wind (Lower T.Y 2, TY village 1)</p> <p>2 HHs making colonial hats in area directly affected by storm and strong wind (Lower T.Y 1, TY village 1)</p> <p>1 HH as run carpentry in area directly affected by storm and strong wind (Lower T.Y 1)</p> <p>Healthcare, sanitation and environment</p> <ul style="list-style-type: none"> - 235 HHs are using temporary toilet (T. Cam 26, Upper T.Y 106, Lower T.Y 80, TY village 23) which is exposed to environmental pollution. 70 HHs have not any latrine (T. Cam 10, Upper T.Y 19, 41 HHs in Lower T.Y and TY village) 	<p>Production/business/trade</p> <ul style="list-style-type: none"> - 64 people plant forests (male 44 female 20) (T. Cam 16, Upper T.Y 18, Lower T.Y 16, TY village 14) 1 HHs produces oils with permanent establishment (Lower T.Y) <p>Healthcare, sanitation and environment</p> <ul style="list-style-type: none"> - HHs having access to clean water: 95% (T. Cam 95%, Upper T.Y 95%, Lower T.Y 95%, TY village 95%) - 1,094 HHs having access to septic toilet (T. Cam 351, Upper T.Y 271, Lower T.Y 250, TY village 222) 	<p>Trees collapsed Fruit trees damages</p> <p>Polluted environment</p>
	More droughts recently	<p>Production/business/trade</p> <ul style="list-style-type: none"> - 165 ha of rice land in area frequently lack of water (T. Cam 30 ha, Upper T.Y 45 ha, Lower T.Y 30 ha, TY village 60 ha) 52 ha of flower land in area frequently lack of water 	<p>Production/business/trade</p> <ul style="list-style-type: none"> 5 pumps (T. Cam 2, Lower T.Y 1, TY village 2) 7.64km irrigation canals (T. Cam 3,2, Upper T.Y 4,1, Lower T.Y 40m, TY village 300m) 	Rice crop lost

Disaster	Trends	Vulnerability	Natural disaster prevention and control	Risks
Drought		<p>(T. Cam 17 ha, Upper T.Y 15 ha, Lower T.Y 10 ha, TY village 10 ha)</p> <p>5 ha of fruit land in area frequently lack of water (Lower T.Y 4 ha, TY village 1 ha)</p> <p>15 livestock households in area frequently lack of water, with 38 buffalo, 16 cows (T. Cam 7 HHs, Upper T.Y 8 HHs)</p> <p>Healthcare, sanitation and environment</p> <p>127 HHs in in area frequently lack of water (T. Cam 30, Upper T.Y 25,)</p> <p>210 HHs lack water storage tanks (T. Cam 100, Upper T.Y 110)</p>	<p>Healthcare, sanitation and environment</p> <p>875 HHs have water storage tanks (T. Cam 100, Upper T.Y 120, Lower T.Y 340, TY village 315)</p>	

Rating in Lộc Thủy Commune

Disaster risk	Location		Total score	Priority
	Village group 1	Village group 2		
People died	44	16	60	11
Rice crop lost	145	97	242	1
Cattle died	83	72	159	6
Pigs died	105	63	168	4
Duck and chicken died	116	47	163	5
Crops lost	129	80	209	3
Fish damaged	78		78	9
House collapsed and roof blown off	99	102	211	2
Forest tree fell	90	51	141	7
Environmental pollution	89	43	132	8
Fruits trees lost		63	63	10
Roads damaged		43		12

Annex 3: Photos of CBDRA activities





LỊCH SỬ THIÊN TẠI						
CUM 2 - THUY YÊN HÀ - THUY YÊN THỜI						
tháng/năm	Thiên tai	Đặc điểm	Khu vực bị ảnh hưởng	Thiệt hại	Tại sao	Đã làm gì để phòng chống
1/2006	Đông	Đông bắc	Cả 2 thôn bị ngập lụt.	Thiệt hại: - Nhà cửa: 716. 2 - Đường: 19. 2 - Nhà vệ sinh: 100. 2 - Nhà kho: 100. 2 - Nhà bếp: 100. 2 - Nhà tắm: 100. 2 - Nhà cầu: 100. 2 - Nhà bếp: 100. 2 - Nhà tắm: 100. 2 - Nhà cầu: 100. 2 - Nhà bếp: 100. 2 - Nhà tắm: 100. 2 - Nhà cầu: 100. 2	Trước đó bị bão đồm, mất mát tài sản lớn.	Chỉ đạo công nhân làm đất đắp bờ, lấp, lấp, lấp.
1/2011	Lũ	Lũ lụt	Thủy văn hạ thấp, lũ lụt.	Thiệt hại: - Nhà cửa: 3.200 cm. - Đường: 100 cm. - Nhà vệ sinh: 100 cm. - Nhà kho: 100 cm. - Nhà bếp: 100 cm. - Nhà tắm: 100 cm. - Nhà cầu: 100 cm. - Nhà bếp: 100 cm. - Nhà tắm: 100 cm. - Nhà cầu: 100 cm.	Đã bị bão, mất mát lớn.	Chỉ đạo công nhân làm đất đắp bờ, lấp, lấp, lấp.
1/2012	Hạn	Khô hạn	Thủy văn giảm, hạn hán.	Thiệt hại: - Nhà cửa: 100 cm. - Đường: 100 cm. - Nhà vệ sinh: 100 cm. - Nhà kho: 100 cm. - Nhà bếp: 100 cm. - Nhà tắm: 100 cm. - Nhà cầu: 100 cm. - Nhà bếp: 100 cm. - Nhà tắm: 100 cm. - Nhà cầu: 100 cm.	Thiếu nước sinh hoạt, mất mát lớn.	Tổ chức công nhân làm đất đắp bờ, lấp, lấp, lấp.

LỊCH THIỂM DUA CỤM 2

Tháng	1	2	3	4	5	6	7	8	9	10	11	12
Luật												
Học												
Tháng 01/02												
Tháng 03/04												
Tháng 05/06												
Tháng 07/08												
Tháng 09/10												
Tháng 11/12												

(Note: The table contains various handwritten notes and symbols, including names like 'Luật', 'Học', and dates. Some cells contain horizontal lines or small marks.)

