

## CHAPTER 3

### **The Research Settings: People, Environment, and Its Relations**

This chapter provides a context of the research site, village 6, Quang Phong Commune, Quang Binh Province in the Central Coast of Vietnam, in which research site settings, local peoples, social relations, history and general information of mangrove forest and problems of the village will be addressed.

#### **3.1 Geography of the Central Coast of Vietnam and Quang Binh Province**

The Central Coast of Vietnam is located in the middle of Vietnam and includes twelve Provinces, namely Khanh Hoa, Phu Yen, Binh Dinh, Quang Nam, Quang Ngai, Da Nang, Thua Thien Hue, Quang Tri, Quang Binh, Ha Tinh, Thanh Hoa, and Nghe An. Among six main regions in Vietnam, this area occupies one of the largest forest areas, which plays an important role for not only ecological aspects but also economic aspects (Table 3.1). The weather is different between North Central Coast and South Central Coast because of territory and geography characteristics. However, the geography of this area is generally the same, with narrow fields and high mountains as well as high sand dunes and lagoons. There are several mountain ranges that go directly from the highland areas to the ocean, from the northwest to the southwest, which creates a unique geographical feature. These features make the Central Coast of Vietnam to be one of the most vulnerable areas for storms, floods, and soil erosion. The average temperature is about 25 °C, and the humidity around 82%. In the winter, the northeast wind brings warm air from the sea to this area, so that the weather here has more humidity and rain in comparison with the North, South, and Central Highlands of Vietnam. In addition, the rainy season in this area concentrated from September to December and causes tremendous floods. These floods affect not only the local people's livelihood but also

the mangrove forest in the area. This causes difficulties for mangrove restoration in the Central Coast of Vietnam.

Table 3.1 Forest area in six regions in Vietnam 31/12/2009

(Source: Vietnam general statistic department, 2011)

	Forest area in total (000 ha)	Natural forest area (000 ha)	Plantation area (000 ha)	Total forest area in compare with 2000 (%)
In total	13258.7	10338.9	2919.8	121.5
Red River Delta	428.9	207.6	221.3	129.1
North	4633.5	3565.8	1067.7	150.3
Central Coast	4592.0	3520.0	1072.0	120.9
Central Highland	2925.2	2715.7	209.5	97.8
Southeast	402.8	269.3	133.5	92.0
Mekong Delta	276.4	60.5	215.9	102.2

Quang Binh Province is a coastal Province located in Central Vietnam, bordering Ha Tinh to the north, Quang Tri to the south, the South China Sea to the east, and Laos to the west. This Province located in the narrowest area of Vietnam horizontally with the main topography of Truong Son Mountain in the west and the sea in the east. Because Quang Binh Province is one of the frontier areas during the Vietnam-America War, it was affected by serious bombing with most of the forest areas have been destroyed during that time. However, this Province still ranks among the ten Provinces that have large forest areas in Vietnam; the forest cover makes up 66.9 % of the land (Table 3.2). The five main rivers in the Province are the Gianh, Ron, Nhat Le, Ly Hoa, and Dinh rivers. Quang Binh's seasons are divided into the rainy and dry seasons. The rainy season last from September to March, and the dry season lasts April to August. Temperatures range from 17 degree Celsius to 34 degrees Celsius. Although the rainy season is from September to March, the main rainy period is concentrated from September to November with frequent floods and storms. The annual rainfall is 2976

mm. During the rainy season, water is over-supplied for aquaculture and agriculture as well as household demand, whereas there is lack of water during the dry season. The special topography and weather patterns along with fast flowing rivers cause extreme flooding in the area to be a common occurrence. Therefore, the mangrove forest plays a really important role in ecological, social, and historical aspects and there are several mangrove restoration projects that have been conducted in the coastal area of the Province.

Table 3.2 Ten most forested Provinces in Vietnam

Source: Thuy et.al, 2012; Department of Forest Protection, 2010

Province	Area (000 ha)	Forest Cover (%)
Northeast		
1. Son La	583.5	41.2
2. Ha Giang	422.5	52.6
the Central Coast		
3. Nghe An	807.2	47.8
4. Thanh Hoa	527.1	46.1
5. Quang Binh	545.7	66.9
6. Quang Nam	457.1	43.1
Central Highlands		
7. Gia Lai	717.1	46.0
8. Kon Tum	655.9	67.3
9. Dak Lak	629.0	47.2
10. Lam dong	602.8	61.2
Total	5948.2	

### 3.2 The Local Setting in village 6, Quang Phong: People, Place and Culture

Quang Phong is a small ward located in Quang Binh Province. At first glance, Quang Phong Ward is organized with a residential area in the middle, surrounded by immense paddy rice fields in the north, east and west. The south is covered by shrimp farms,

followed by mangrove forests that border the Gianh River (Figure 3.1 and 3.2). It is a small coastal Ward belonging to Ba Don Town, which is located along the low downstream area of the Gianh watershed, about 10.2 km from the river mouth and 45km from Dong Hoi ity, Quang Binh Province. The total natural area of the Ward is 470.04 hectares with 240.00 ha agricultural land and 36.24 ha non-agricultural land. This Ward is dbordered on the north by Quang Long and Quang Phuong Commune, on the east by Ba Don Town, on the west by Quang Thanh Ward, and on the south by Quang Loc, Quang Hai and Gianh River (Quang Phong Ward, 2014). This area has an interesting landscape. Generally in rural home gardens in Vietnam, people plant a variety of perennial and short-term fruit trees and vegetables; however, in this area, only vegetables and banana trees are planted because of the level of salt in the soil. Every family has their own small vegetable garden for self-sufficient use. They plant vegetables even along the road edge. It seems local people know how to use their land or, because of over population, people try to use land effectively.

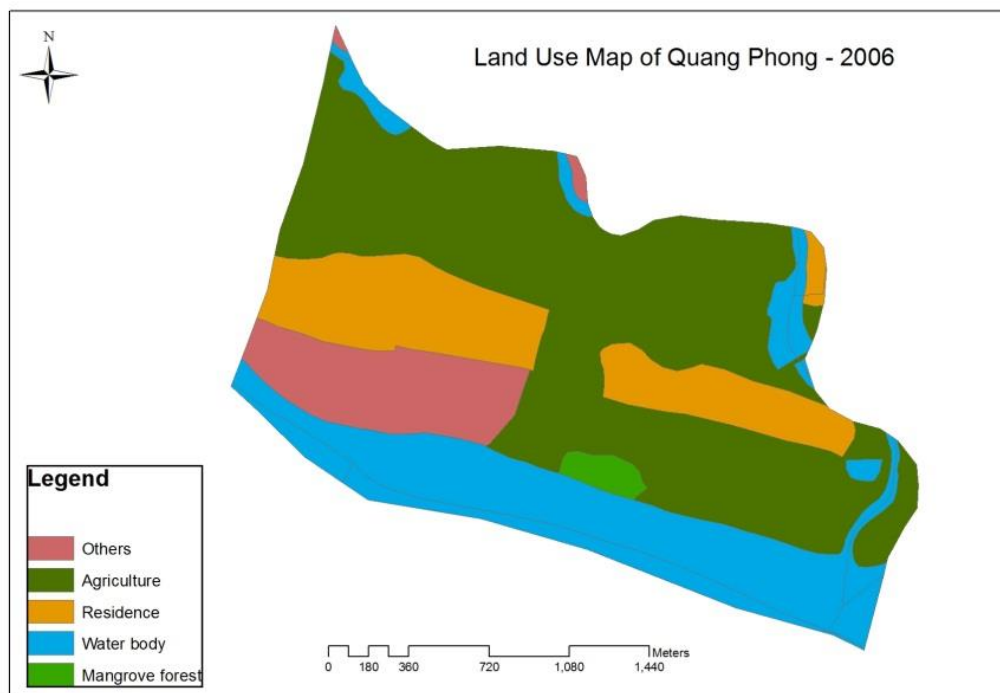


Figure 3.1 Land use map of Quang Phong -2006

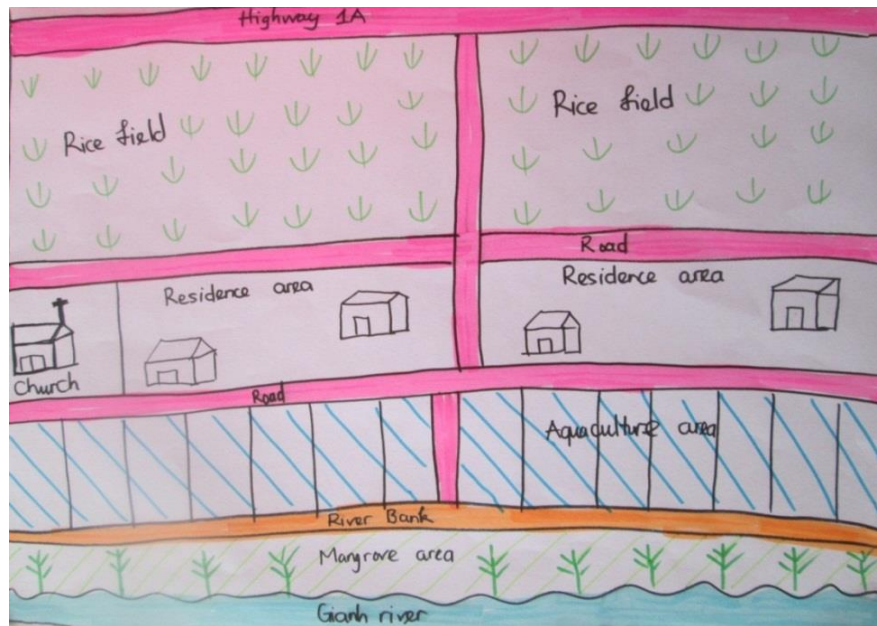


Figure 3.2 Land use map of village 6, Quang Phong Ward

This area is located between Ngang pass and Hai Van pass, two of the biggest passes in Vietnam which come directly from Truong Son Mountain Range, therefore, the weather here has some of the same characteristics as Quang Tri and Thua Thien Hue Provinces. As mentioned earlier, because of its location in a tropical climate, there are only two distinct seasons here: rainy and dry seasons. The dry season is usually from April to August and comes with the southwest monsoon wind that raises temperatures to 36-38 degrees Celsius. The rainy season is from September to March and comes with the northeast monsoon wind, which brings down the temperatures to 9-11 degrees Celsius. The average rainfall is from 1600-1800mm. April and May are the driest months of the year. The rain comes significantly from September to December, which makes up 70% of the annual rainfall and sometimes causes tremendous flooding. Although the rainfall is low during April and May, sometimes there are heavy rains in these months which cause floods, affecting the local people's livelihood.

Before 1956, Quang Phong farmers association consisted of eight small hamlets named Dong Phong, Minh Phong, Chinh Phong, Giap Phong, Phong Tan, Tan Hoa, Tan Hop, and Tan Phong. After agrarian changes by the Vietnam government, a combination of these hamlets formed an association named Phong Tan Farmer Association. In 2007, Phong Tan was changed to become Quang Phong Farmer Association and included ten

villages named from village 1 to village 8, Tan Phong village, and Cau village (Group discussion, December 2014). Quang Phong is inhabited by 5493 people, consisting of 1196 households, of which farmers and fishers make up 58%, followed by 12% industrial workers and 30% other services. 100% of the people are Kinh-the ethnic majority of Vietnamese. 60% of the people are Christian; the rest Buddhist and non-religious. They have lived peacefully for generations here. Every year, they celebrate Buddhist festivals in the middle of April and July according to the Vietnamese lunar calendar and, the Christians celebrate their Christmas as well as the other activities according to Western calendar. (Quang Phong Ward, 2014).

Village 6 is situated in the east side of Quang Phong Ward with a population of 690 people, consisting of 159 households. The residential area is 19.4718 ha, the rice field area is 16.5261 ha, the aquaculture area is 7.9491 ha, and the garden area is 3.8614 ha (village headman, December 2014). 100% of the people are Christian, and one of their annual biggest activities is Christmas, which is celebrated on December 24 according to the Western calendar. During the Christmas festivities, everyone seems to ignore their difficulties and enjoy gathering together as well as showing their respect to their religion. In preparation, a group of men decorate the village church and village gate, while a group of women make cakes, children play games, and groups of elders were gather and talk. Life seems more joyful and relaxed during those celebration days. Although life is still difficult, villagers maintain their main ceremonies, such as Vietnam Lunar New Year, Village Founder Ceremony, Christmas, and others. They celebrate the village ceremony to show their respect to the village founder on every August 11, according to Vietnamese Lunar calendar. During this activity, all of the villages participate. Women are responsible for cooking and cleaning, men are in charge of decorating and preparing, and elders play a spiritual role in the main ceremony. On Lunar New Year, they visit relatives and neighbors, play cards and traditional games, gather together, and especially organize one of the main activities called ‘Tết Trồng Cây’, or-‘Tree Planting Festival’ on the second day of the Lunar New Year to plant a tree following Uncle Ho’s statement in the past, “One tree makes nothing, but three trees can make a mountain”. This activity is basically a spiritual activity because it is not a mangrove restoration project with thousands of tree. Mostly, the participants of these activities are not only people in village 6 but also from the other villagers in the

whole Ward. The participants are mostly government officers with representatives of social organizations and some villagers. Although it is not a real mangrove restoration project, this activity plays an important role in raising awareness of the mangrove forest in the area among villagers.

### **3.3 Socio-Economic Conditions of the Village**

During interviews, local people said their life is better in the present than in the past; however, I still feel life there seemed more difficult than imagined. Visiting the area twice in both dry and rainy seasons allow me to experience on the extreme weather here. It is hot and dry in the dry season and cold in the rainy season, and it is windy all the time. During the pre-field trip in June, the temperature increased to 40<sup>0</sup> C on some days; whereas, it could decrease to 9-11<sup>0</sup> C in the winter. During outdoor interviews and observations on a shrimp farm or paddy rice field, the wind was really strong. In addition, the rainfall has been decreasing and the weather has been more extreme over the last several years. The summer has become extended, causing drought and sometimes, unpredictable enormous floods destroying everything from mangrove forest to rice and vegetable crops in a day, such as the flood in 2010. Under these conditions, local people's life has become unstable. Therefore, they found themselves alternative options of livelihood, such as additional jobs as petty traders, migrant workers, construction workers, wage labors, broom making, and so on.

Generally, the income per capita of the area is 12,700,000 VND (approximately \$605) which is very low compared with the national per capita income which is \$1,910 (Quang Phong Ward, 2014). This village is one of the medium-sized villages with a large number of middle income households in Quang Phong. It consists of 7 rich households, representing 4.4%; 137 medium households, making up 86.2%; 8 poor households, representing 5%; and 7 very poor households, comprise the remaining 5%. According to Vietnam national wealth ranking, the rich family's monthly income per capita is above 10,000,000 VND (approximately \$476). The medium family's monthly income are from 540,000 VND (approximately \$25.7) to 10,000,000 VND (approximately \$476), the poor family income are from 400,000 VND (approximately \$19) to 540,000 VND (approximately \$25.7) and the very poor family's monthly income are below 400,000 VND (approximately \$19). According to observations and

household surveys, the rich families have diverse livelihood strategies from agriculture to services and capitals, while the poor normally have only one source of income with limited capital. The rich are educated people who work in the government and who also cultivate their land as well as do the other services jobs. They mostly have a large area of rice fields, a home garden, and a shrimp farm, and they know how to use their land effectively. They raise many kinds of livestock, such as chickens, ducks, and buffalo. Some of them work in the Town, while family members work on the farm. They normally have big and fully furnished houses and modern motorbikes. The medium households have less livelihood strategies and capital than the rich. The poor households normally do not have a motorbike and have very limited capital. They are either a family with many children and little land, a family with a sick member, or a family with only elderly. Either rich or poor, all households here have from 200 to 250 square meters for their residential area, and all of them have land for cultivation. One more interesting thing is although the gap between the rich and the poor is very wide, their awareness about mangrove forests is the same. One hundred percent of my interviewees have a general awareness about the mangrove forest and its history with different levels of understanding. In comparison with Vietnamese standards wealth rankings, there is only one interesting point concerning the medium income household. This category has a very broad range of wealth. One household can have an income of \$25.70 per person per month and can be put in the same category with others that have an income of \$476 per person per month. However, as the household survey identified, the medium income household ranges from \$50 per person per month to \$200 per person per month, and there are only a few rich households who have income far beyond the others.

In addition, the traditional village landscape still remains (Figure 3.3). It is common to see a buffalo used in the field to prepare a paddy or a pile of rice straw in the home garden for cooking energy. These points make the rural landscape appear clearly and peacefully. It is also clear that the local people's traditional livelihood is still based on agriculture. They raise livestock all the year round and do fishing activities when it is not planting or harvesting season. However, due to the impact of development and modernization, the local villagers' livelihood has been changing to include new livelihood activities, such as aquaculture, service jobs or migrating to city.





Buffalo in the rice field

Rice straw stack in home garden

Figure 3.3 Traditional landscape in rural area of Vietnam

Livelihood strategies are mainly based on natural resource-based activities (on-farm and off-farm activities), such as traditional paddy rice cultivation, home gardens, crop plants and livestock raising as well as onshore fishery activities. However, their livelihood strategies have changed in accordance with changes in the environment over time and place. Nowadays, besides the traditional livelihood activities, villagers also work in other services for additional income, such as construction work, working abroad, and industrial services. There are 309 working people out of 365 people in the village, consisting of 11 carpenters, 9 businessman, 68 overseas workers, 41 construction workers, 103 farmers, and 31 mixed farmer and aquaculture work. Although the livelihood has changed, agriculture activities are still a main source of local villagers' income. Their activities are different from season to season with different kinds of planting. They work mostly eleven months and have almost an entire month off. In January of the Vietnam Lunar calendar, they celebrate the Lunar New Year and take a rest. The on-farm activities of the villagers here concentrate on rice field cultivation, shrimp farming, home gardening, and animal husbandry. This farming system has been determined by the human-ecology interaction of the villagers over a long time. All year round, local people plant vegetables for their daily use, livestock, and selling from their home garden. Every family has a plot for vegetables, and some families have bigger plots for business. Pumpkin is planted beginning in October and harvested in March, normally after the Lunar New Year. Villagers also plant banana trees for fruit and

leaves for selling. Corn is cultivated in two seasons. The main season is from January to April, and the low season is from July to October. This type of corn is a traditional type which local people use for eating and selling in the market. The most important plant is rice which is divided into two seasons. The main season called 'Vụ Hè Thu', or 'Summer Autumn Season' and the low season called 'Vụ Đông Xuân', or 'Winter Spring Season'. Villagers normally start 'Vụ Hè Thu' from May to September and 'Vụ Đông Xuân' from December to April. According to the interviews, the yield of rice in 'Vụ Hè Thu' is double that of 'Vụ Đông Xuân'. Besides agricultural activities, every villager raises some livestock for their own usage and some families are even doing animal husbandry as a business in which they raise animals for selling. They raise chickens, ducks, pigs, and buffalo. Chickens eat rice and anything that they can find in the garden. Ducks normally freely swim in the rice field after harvesting. Pigs are fed vegetables from the garden plus outside special food bought in the market. Buffalo are fed in small pastures along the rice field and even eat grass on the rice field bank and river bank near the mangrove forest. Sometimes villagers let the buffalo eat by themselves in those banks and other times they collect grass and feed their animals at home. In terms of shrimp farming, most shrimp farmers were basically rice farmers in the past. Because of the land concession in 2002 in Quang Phong, 7.9491 hectare of rice field was converted to aquaculture. An interesting point here is that the shrimp farm owner is somehow not the one who owned the land in the past. At the time of the concession preparation, shrimp farming was a new economic tool with high benefits, so every villager wanted to convert their land to be a shrimp farm. Thus, at the village meeting, they organized a lottery to select who would have the right to own the concession land. If a villager already had land in the concession area, this had nothing to do with them. However, if another villager did not have land in the concession area but got the right lottery number in the meeting, they could take the land of the one who did not get the number. In this case, they have to pay an annual tax to the owner. Although all of the villagers agreed to participate in the activity, there were some who were not willing to give their land to another. After two years of operating the shrimp farm, this conflict has disappeared because of the reducing shrimp yield.

Table 3.3 Crop calendar (according to Western calendar)

	1	2	3	4	5	6	7	8	9	10	11	12
Summer Autumn Season												
Winter Spring Season												
Vegetables												
Pumpkin												
Corn high season												
Corn low season												
Banana												

Fishing in the river or collecting non-timber forest products is also a source of local villagers' income. However, these kinds of livelihood activities are just additional income. Some villagers use a small boat to catch shrimp and fish in the Gianh River. Their activity depends on the weather and their traditional knowledge, which will be clarified more in chapter 5. They can earn 150,000 VND (USD 7.5) each time on average, and they normally catch ten times in one month. Additionally, local villagers also collect crabs, fish, oysters and hunt birds in the mangrove forest. Villagers can enter into the forest to collect such natural resources, however it is illegal to cut down the forest. One more thing is that local villagers cannot currently collect fire wood from the forest as they did before in the primary forest because of the protection of the live trees. When people come in and collect a dead tree, it will also affect the young trees. There was only one time in 2010 after the tremendous storm and flood that, because of the high number of dead trees and in order to prepare land for new restoration projects, the local government started to sell dead trees to local villagers at a very low price of 200,000 VND cubic meter wood. All of the money was put into the Farmer Association fund for protecting the forest.

Because of the difficulties associated with the degradation of environmental conditions and the limit of available land, some households cannot devote all of their labor force

and productive time for farming. Therefore, in addition to on-farm and off-farm activities, local villagers' livelihood is also based on non-farm activities. These activities are really diverse and include small businesses, industrial work, construction work, oversea work, carpentry, sewer, and government officer. Outside employment is becoming a popular option among villagers because of its sustainable income without having to worry about weather conditions and it is also because a good source of income for local villagers all year round.

Because there are many activities in everyday life, culture needs to be managed. Some groups were established to manage specific activities a long time ago, and they have been adapted to the current situation. In Vietnam, the village is the grassroots administrative unit. The village has a board who are elected from among the villagers. The board includes the village headman, village representative of the Communist Party, village representative of elderly people, village representative of Vietnam Youth Union, representative of Farmer's Association, and representative of Women's Association. All of them belong to the respective higher level group at the Ward/ level. In addition, in this area there is one more group called the Veterans Association. In these groups, both men and women can become the representatives if they have enough ability. The exception is the Women Union where only women can participate. The village headman is the one who has experience, village knowledge, and the respect of the villagers. The village headman is in charge of implementing the policy from the government and is the one who solves basic village problems before forwarding to the Commune level. The Farmer's Association and Women Union play an active and important role in the village's economic development. They help the local farmers in gaining access to systems and extension activities as well as manage funds for poor and vulnerable members. All of their activities are reported to the respective group in QPPC. Actually, the role of the representative in the village is not really active because most of the activities are implemented directly by QPPC.

### **3.4 Condition of mangrove forest and its restoration**

At first glance, this village may seem just like other rural areas in Vietnam with immense paddy rice fields and several buffalos eating grass on the field's bank. However, there is one additional characteristic which makes this Ward famous in Quang

Binh Province. It is the mangrove forest along the side of the Gianh River. The mangrove forest here is one of the remaining mangrove forest areas in the Central Coast of Vietnam and extends along the adjoining land between Quang Phong and the Gianh River. It has a long history to go along with the historical situation of Vietnam in general and the village specifically. In 2009, the mangrove forest grew its best before being destroyed by a storm in 2010. Nowadays, the mangrove forest maintains a 6 ha stretch along the Gianh river side located on the south of the village, which plays a really important role in environmental protection, disaster risk reduction, and cultural belief.

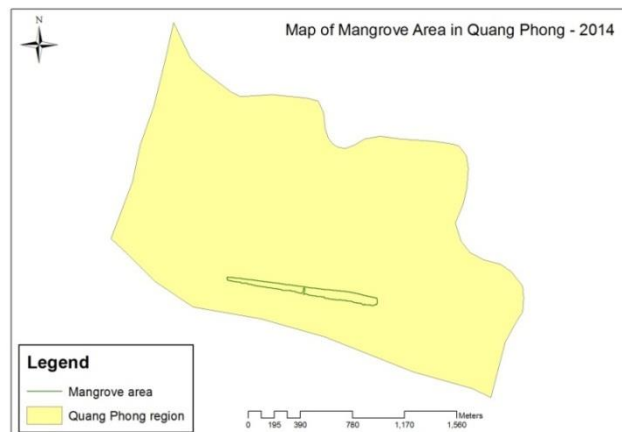
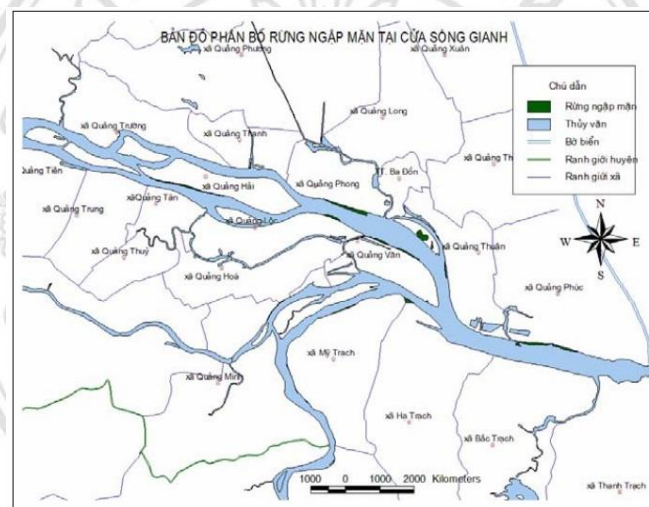


Figure 3.4 Map of mangrove area in Quang Phong 2009 and 2014

Source: Thanh, 2010 and data collection, 2014

It is believed that the land and the other natural resources are tightly linked to the local livelihood strategies. Living and making a living based on land use makes a tightly held relationship between villagers and natural resources. In addition, land not only has material value but also spiritual value for local villagers. They inherited land from their ancestors from generation to generation, and they have deeply-held belief to protect and nurture their land. Besides land, the forest is the common property within the village. In the past, they used it equally and regenerated the forest using their local knowledge; however, nowadays there are limitations for mangrove usages because all of the forests are under the control of the government, so no one can access the mangrove forests legally.

According to the information gained from the interviews and group discussions, the primary mangrove forest occurred before 1968, and it has been one of the livelihood sources of local people for a long time. People came to the forest to catch fish and crabs as well as collect non-timber forest products in order to make a living. They could also hunt animals and birds in the forest. The forest area is calculated to be 20 ha, which goes from the river side to the village through the mouth of the canal. During the Vietnam-America war, the mangrove forest was the shelter for Vietnamese military and local people's cargo boats. These boats carried goods for the Vietnamese military and, thanks to the density of the forest, it became a good shelter for both soldiers and boats. However, this forest was destroyed by American bombs during the beginning of the 1970s. After that war, the first mangrove restoration project was conducted under a government-funded project for planting protection forests from 1978 to 1982. In this project, local people participated actively. They got points from that activity as the same as their participation in agriculture cultivation as a part of their earning food vouchers according to the Vietnam government's regulations at that time. In Quang Phong, this activity was organized by the Veterans Association of Quang Phong and Quang Phong Association of the Elderly under the management of QTFAE. Under this activity, 8 ha of mangrove were planted along the side of the Gianh River, and this mangrove area was expanded in 1982. In this activity, the majority of participants were veterans and elderly people. Restoration and scientific knowledge was combined with local knowledge in the project. Even so, under the impact of unsustainable development and natural disasters (storms and floods), the mangrove area here has been decreasing significantly.

Therefore, new activity was conducted in 1992 by local veterans and the elderly again to recover some spare area in the forest. After that, several government restoration projects have operated in Quang Phong from 2009-2012, with a small area of this project (14.89%) to generate new forest (Forest Protection Department Report, 2014). These new projects are under the government policy, such as Program 661 (1998-2010) and the Program of Forest Protection Restoration projects, which has been affected by innovations from the regional and global levels like REDD and PES. According to Vietnam law, all of the forest belongs to the government, so that this forest is under the management of two ministries, namely the Ministry of Natural Resources and Environment and the Ministry of Agriculture and Rural Development.

Table 3.4 Historical conditions of Quang Phong mangrove forest

Source: Data collection, 2014

Period of time	Activities
Before 1968	Primary mangrove forest
1968-1972	Shelter for Vietnamese soldiers and cargo boat. Being destroyed by American bombing.
1974	99% of mangrove forest was destroyed
1978-1982	First mangrove restoration organized by Elderly's Association, Veterans' Association and QTFAE
1992	Mangrove restoration 2 <sup>nd</sup> time
2007	Flood and cold weather caused mangrove tree's death
2008	Almost all of mangrove trees died
2009	DDFP in cooperation with Farmers' Association for mangrove restoration project 1 <sup>st</sup> under 661 program with 4,2 ha
2010	Flood cause mangrove tree's death, remain 0,7 ha
2011	2 <sup>nd</sup> mangrove restoration by DDFP with 4,7 ha
2012	3 <sup>rd</sup> mangrove restoration by DDFP with 4,2 ha
2013	Tending process and stop mangrove restoration

This forest not only plays an important role in the local history but also, from an environmental aspect, it acts as a natural barrier and provides a diverse ecosystem. There are five main species belonging to two families in this forest, which include Đước (*Rhizophora stylosa*), Vẹt dù (*Bruguiera gymnorhiza*), Bần ổi (*Sonneratia ovate*), Mắm ổi (*Avicenia marina*), and Sú (*Aegiceras corniculatum*). Besides these, there are varieties of participation species such as Cỏ gà (*Cynodon dactylon* L.), Sậy (*Phragmites vallisneria* (L.) Veldk), Cóc kèn (*Derris trifoliata* Lour.). This mangrove forest occurred both outside and inside the river bank in the past; however, nowadays, it only occurs outside the bank with a total 6 ha.

Table 3.5 Main mangrove species in Quang Phong

No.	Family name		Species name	
	Vietnamese	Scientific name	Vietnamese	Scientific name
1	Họ Mắm	Avicenniaceae	Mắm ổi	<i>Avicenia marina</i> (Forsk.) Vierh
			Mắm Trắng	<i>Avicenia alba</i> Blume.
2	Họ Đước	Rhizophoraceae	Đước vôi	<i>Rhizophora stylosa</i> Griff.
			Vẹt dù	<i>Bruguiera gymnorhiza</i> Lam.
3	Họ Bần	Sonneratiaceae	Bần ổi	<i>Sonneratia ovate</i> Backer
4	Họ Đon Nem	Mysinaceae	Sú	<i>Aegiceras corniculatum</i> (L.) Blanco

### 3.5 Problems the village has faced in the past and at the present

From a social science perspective, the village has some internal problems that need to be solved. Firstly, under the era of development, more and more of the young generation migrate to the city to work for a better quality of life or go overseas to work in order to earn as much money as possible. They almost forget their ancestral customs and traditional livelihood. Secondly, although the village structure is still maintained, the operation of the structure is not as tight as in the past. The sharing activity has almost disappeared, which causes a loss of villager integration and local knowledge,



especially in the area of mangrove restoration. Thirdly, the problem of water needs to be considered by the local people committee. Although it is a Ward belonging to Ba Don Town, there is no tapped water supply for daily life. Water supply for daily usage comes from local people's self-constructed water tanks. One hundred percent of the local people's water usage relies on rain fall and they have to buy water from outside in the dry season. There are three main sources of water in the village. Water from river is used for livelihood activities, such as irrigation for agriculture and aquaculture as well as drinking water for livestock. Water from wells and rain are used for daily life. Because of the bad quality of the water in the wells, people can only use it for washing. Therefore, the main drinking water is dependent on rainfall in the area, which causes serious problems in the village. Water is the root of life. Lacking access to fresh water is lacking a basic human right. According to the villagers, there was a water supply project that operated in 2012, however they still have no fresh water to use. These problems need to be taken into account by the policy makers.



Figure 3.5 Water tank for rain accumulation

### 3.6 Summary

As a typical rural coastal area in the Central Coast of Vietnam, village 6 has its own characteristics with rainy and dry seasons, frequent floods and storms, and traditional landscape of rice fields, buffalo, and rice straw stacks. A peaceful picture of rural life

appears throughout this village. The village's traditional culture is seen in its festivals and ceremonies when local people show their respect to their beliefs and religion. In this community, everyone has their own responsibility in the family, interest groups, and in the whole community. The community is not homogenous, and there are gaps between the rich and poor, genders, ages and social statuses. In order to survive well in a society, recognizing the differences and putting the best efforts based on capital and strategies for a better outcome is required. Local people's livelihood strategies have changed and adapted to the era of development under the changing political, social, and environmental aspects.

With a long history of nature-based livelihood strategies, the mangrove forest plays an important role in the cultural and economic sides of local life. A long history involving the Vietnam-America war caused the degradation of the mangrove forests, followed by a variety of restoration projects by the local government, NGOs, and national government. With the new era of sustainable development and the problems of social structure, economic changes, political transformation, and water quality, mangrove restoration has changed since its first inception. All stakeholders perceive this restoration by their own understanding and participation. Local knowledge and scientific knowledge have their own position in these projects. Therefore, in order to make it clearer, the next chapter will address the issues of how stakeholders understand mangrove restoration, how decentralization really works among people, and what kind of knowledge is used in these projects.

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