

CHAPTER 4

Decentralization and Environmental Governance in Mangrove Restoration: A Political Ecology Analysis

This chapter provides information about mangrove restoration related policy in Vietnam and the way decentralization works. Regulations have changed many times since the Vietnam War, the Doi Moi policy as well as the impact of economic development and modernization. This chapter first reviews the evolution of land and forest policy and the institutional framework of that policy at different levels. It also examines the aspect of the participation level of local villagers, particularly in decision-making and implementation processes. In addition, the way power has been transferred through these kinds of project is also addressed. It demonstrates that the change in environmental governance over time has led to changes in the level of decentralization in natural resources management. In addition, mangrove restoration is a complicated process that needs a joint effort among stakeholders in which local people play a crucial role throughout the entire process, not only in the later implementation.

4.1 Land and Forestry Policy in Vietnam

In Vietnam, forests play an important role in biodiversity conservation, natural disaster risk reduction, as sources for forest products, and in climate change adaptation and mitigation. However, during the last fifty years, the forests have been decreasing dramatically; this is caused by both anthropogenic and natural disturbances. Forests cover has declined from 43 % in 1943 to 23 % in 1995 (MARD, 2001; Tuan, 2003). According to the Ministry of Agriculture and Rural Development, by the end of 1999 the total forest area in Vietnam was 10.9 million hectare, or about 33.2 % of the total natural area, consisting of 9.4 million hectares of natural forest and 1.5 million hectares of production forest (Sam and Trung, 2003 cited in M.Inoue and H.Isozaki, 2003).

Along with forests in upland areas, mangrove forests have also witnessed significant change during the past fifty years. Over that time, more than 80% of mangrove areas have been lost from 408,500 ha in 1943 to 156,608 ha in 1999. This draws a lot of concern from scientists in terms of environmental and social impacts (MARD, 2001). Before the Doi Moi policy in 1986, there were no specific laws or regulations referring to mangrove forests and mangrove restoration; however, after that time, several crucial laws have been enacted that relate to the management of mangrove forest and mangrove restoration, such as the Land Law, enacted in 1987 and then amended in 1993, 2003, and 2013, and the Forest Protection and Development Law in 1991 and 2004.

Over time, as a colony through wartime and even until now, Vietnam has evolved in terms of its historical, political and socio-economic aspects; the forestry sector is no exception. The decreasing or increasing of forests in the country is the result of complicated processes in which many factors were involved. Therefore, in this section, an over-view of forest and land policy as it relates to mangrove forest and mangrove restoration in Vietnam will be examined. The main periods of 1953 to 1985 and of 1986 onwards will be addressed based on their own respective historical, political, and socio-economic transformations that affect the policy of mangrove restoration.

4.1.1 From 1953 to 1985: Centralization in Natural Resources Management

In Vietnam, it is clear that forest and land policy has changed over time. During the colonial Vietnam era, forests were controlled by the French. Then during the Vietnam-America War, Vietnam was divided to two parts, the North and the South. The South belonged to a new government under the influence of the United State of America, and the North was under the control of the Vietnamese government. Therefore, forestry policy was totally different between these two regions. In addition, there was not much concern about forestry policy at that time because the majority of people's concern was on agricultural production and the war.

As pointed out above, the forest cover has changed dramatically since 1943. It is said that “between 1950 and 1983, mangrove forests were depleted, nationally, by around 37 per cent as a result of war damage and conversion to rice production and timber extraction” (Perrings, 1998: 121). This

change was not only caused by the war but also by economic development in the country after Doi Moi. The year 1953 was chosen to start this period because Vietnam had witnessed a tremendous agrarian change in 1953, the so-called ‘land devolution’ in which all of the land was collected by the government and distributed to the peasants. This is one of the most controversial policies in Vietnam’s history because of its consequences. The redistribution had affected not only the agriculture sector but also the forestry sector, as the use of tress and lands have always had a tight connection.

In 1953, the Vietnamese government implemented agrarian reform, bringing the transformation of the agricultural economy landscape across the whole country. The main purpose of this reform was to collectivize all means of production, and it is also the original reason for the establishment of agricultural cooperatives (*hợp tác xã nông nghiệp-HTX*). During this period, all farmers worked in HTX and received points for monthly food vouchers (*tem phiếu*) and essential supplies. Additionally, there were no land use rights for local people. According to this reform, land should be distributed to the peasant who is landless. The reason for this was clarified by the fact that “the landlord class accounted for only four percent of the whole population, but occupied more than half of the total land area, while 62 percent of farm households were landless tenants of the landlord class” (Cuc and Tiem, 1996; Le, 2009: 64). This reform was aimed to bring equality and security to the country. It was considered as a first step in establishing socialism in Vietnam. Therefore, these kinds of collective farms produced everything together and shared the point they received based work point which the people attained in harvest seasons. Each person received points based on the type of work they were assigned. In a HTX, people were divided into several small groups which specialize in different fields, such as agriculture, forestry, fisheries and so on. Each group had a leader who is responsible for production and distribution, and each member was assigned a task relevant to their age, skill, gender and education background (Le, 2009). This collectivist structure lasted for almost three decades until it was

changed by Doi Moi in 1986. Also during this period, there is the first mangrove restoration project in Quang Phong was conducted in 1978. In this project, local people received points based on mangrove restoration activities. It is clear to see that by implementing this reform, the Vietnamese government had the rights to control all kinds of resources in rural areas that played a really important role in Vietnam during that period.

During the collective period, Vietnam's agriculture system witnessed one of its first evolutions called '*Khoán 100*' in 1981. Under this policy, land was owned by the government and managed by agricultural cooperatives. Agricultural land was assigned to farming groups and individuals for planting, caring, harvesting, and selling products. This reform led to the increase of agricultural production in Northern Vietnam until 1986.

Remarkably, before 1975 and before the independence of the country, forestry was a source of national economic growth in which it only concentrated on production of timber. Therefore, in the same situation with forests in mountainous areas, mangrove forest areas decreased dramatically because of the timber industry and shrimp farm concessions. After the reunification of Vietnam, forests were still considered a source of wood, and the ecological importance was considered as less important than the economic aspects. Until Doi Moi in 1986 and the agrarian reform in Vietnam, the role of forests had remained the same, however after 1986, forests were viewed differently, with aspects of environmental conservation included. In addition, most forestry production was under state control. As a result, the forest was over-exploited, due to production quotas that were based on state demand rather than the productive capacity of the forest (MOF, 1991). Under the central management system, the state paid no attention to local people's participation in forest management and tended to neglect the role of the forest in local people's livelihoods.

4.1.2 From 1986 onwards: Decentralization in Natural Resources

Management

Vietnam had undergone socialist construction until 1986. After that Doi Moi promoted varying forms and degrees of market-oriented land policies. As pointed out above, after the “*Khoan 100*” in 1981, the agricultural production was increasing until it leveled out in 1988, which caused a serious food crisis in Northern Vietnam (Cuc, 1995; Le, 2009). Additionally, in the early 1980s, under the central planning economic system, Vietnam faced its most severe economic crisis. Thus, in December of 1986, the Vietnamese Communist Party decided to adopt an economic reform policy which gradually shifted the economy from a centrally-planned economy towards a market-oriented economic system. Such a policy also applied to the field of land and forest tenure (Tuan, 2003). One of the most important policies at the beginning of this period in order to deal with the food crisis was ‘*Khoan 10*’ in April 1988 in which agricultural land was distributed to people for a period of ten to fifteen years (Dung, 2013). This is the first time that private ownership of a type and production from the land was recognized; however, there was still no land use rights for households. During this time, households received land according to the number of members in their family, in which 550 m² was assigned for each person. Therefore, some would have a large amount of land while others would not. This kind of policy also caused specific problems in terms of fragmented land ownership, including agricultural land, after the Land Law of 1993, firstly, because the land distribution was based on population per household and secondly because of the tradition of land inheritance based on the number of children, no matter what their social status was (Quynh, 1983; Dung, 2013).

During the period after Doi Moi, there were varieties of laws related to forest management and land which were amended. These include the Land Law of 1987 and Forest Protection and Development Law of 1991. The Land Law was amended later three times, in 1993, 2003, and 2013, and the Forest Protection and Development Law was been amended once in 2004.

The Land Law 1993 and Land Law amendments in 2003 contributed to the change of land ownership in Vietnam by which people had the rights to transfer, exchange, inherit, lease, and mortgage their land. These changes contributed to a big impact in economic development in Vietnam (Dung, 2013). According to the Land Law of 1993, land belonged to the people and managed by the state. With this law, land could be allocated and leased to organizations, households, and individuals for long-term use. The duration of land allocation differed from each kind of land use, such as crops or forest land. In addition, the Land Law of 2003 added more land-use rights: the rights to use, lease, inherit, transfer use rights, and collect. Under this policy, farmers were more autonomous and they had more rights with their land. The land-use rights, however, did not include formal ownership of the land at all. Additionally when the policy was operated at local administrative level, it turned into a different direction because of differences in understanding and implementation.

One remarkable point in Vietnamese law and regulations is that there is no clear classification of mangrove forests and forests in the mountainous area. For example, the Forest Protection and Development Law classified forests in three categories: special use forests, production forests, and protection forests (MARD, 2001). Mangrove forests were one of the protected forests. In addition, according to article 13 of the Land Law of 2003, there are two types of land, which are agricultural land and non-agricultural land. Both forest lands and aquaculture lands are classified as agricultural land, with forests being classified in three types, as mentioned above. These laws consider forests, including mangrove forests, as state property. The official forest classification focus only the function of the forest, so the role of the forest is summarized as a tool to protect the environment, provide economic products, conserve biodiversity, function as a water supply, provide a barrier against natural disasters, such as floods and storms.

After the Doi Moi policy, with the change in law and policy for economic development, policy makers also considered the degradation of forests with efforts protecting the forest cover in Vietnam. Thus, Vietnam promulgated

several policies to develop the forestry sector, such as the Forest Land Allocation Program, Program 327 (1993-1998), and Program 661 (5 million hectare of forest) (1998-2010). These programs aimed to restore the forest cover of the country back to 43% of the total land. Additionally, a variety of laws were amended during this period. In 1999, Decree No. 02/CP, dated January 15, 1994, was replaced by Decree No. 163/1999/ND-CP, which stipulated forestland allocation and leases to organizations, households and individuals for long-use for forestry purposes. Also, Program 327 and Program 661 concentrated on how to regenerate forest areas to improve the forest cover of the entire country. It is this type of policy in which forests were beginning to be allocated to local households for management under the consultation of local government. This was a new step in decentralization in Vietnam in which power was transferred to different stakeholders.

In terms of reforestation policy, Decision No 202/TTg of the Prime Minister, issued May 02, 1994, provides guidance on contracts for forest protection, natural forest regeneration and reforestation. Government Decree 01/CP dated, November 04, 1995, regarded contract land which was allocated to state organizations for agricultural, forestry and fishery production. With these regulations, the state organizations had rights to use the land for agricultural, forestry, or fishery purposes; however, they still did not have full land-use rights. Therefore, the land holder had very limited land use rights in comparison to the rights granted to land users with allocated land. Prime Minister Decision 661/QĐ-TTg, dated July 29, 1998, on 'objectives, tasks, policy and implementation mechanisms on the new five million ha of afforestation project' brought a new flow of reforestation in general and mangrove restoration in specifically. In addition, under the era of climate change, the role of mangroves were considered more central to the state with Prime Minister Decision 158/2008/ QĐ-TTg about the National Program on Climate Change Adaptation and Mitigation. The MARD Decree 85/2007/CT-BNN was about 'Promotion of Reforestation in

the Protected Forest' in which both of these regulation areas concentrated on mangrove restoration.

4.2 Decentralization in Mangrove Restoration: A Critical Analysis

Decentralization in natural resources management has been discussed widely since the mid-1980s and it has become a dominant theme in the discussion of natural resources policies in terms of the relationship between development and conservation (Larson and Fernanda, 2008). Decentralization itself is not a simple process because it can be varied in different contexts and scales. In one context it can work well, whereas, in another, it can have overlapping areas of responsibility among stakeholders. Decentralization is not simply the transferring of power in decision-making processes, but it is also how actors use that power and how it affects access to the resource (Chusak and Vandergeest, 2010). Thus, it links to the way some actors behave with their power to control the resources in a specific context. Here, in mangrove restoration, it can be the control over who has access to mangrove forests. This is a kind of 'green grabbing' that will be explained more in the next paragraph. However, mangrove restoration goes along with a so-called 'sustainable development', which has been a topic of discussion since the 1980s, widespread in the reports of international consultants and the agencies that employed them. It has been approached in a variety of ways by different agencies.

In recent years, the term 'land grabbing' has been addressed broadly by both academic and civil society perspectives. 'Land grabbing' refers to the "transfer of ownership, user rights and control over resources that were once publicly or private owned-or not even the subject of ownership-from the poor into the hand of the powerful" (Fairhead, Leach, and Scoones, 2012: 238; Holmes, 2014: 549). In Holmes's point of view, "land grab is defined as the transfers of control over property and resources over large areas of territory from local control to more powerful outsiders" (Holmes, 2014: 550). The outsiders here can be a big company with plantation projects or it can be the government with reforestation or land allocation projects. It links to power exclusion and power relationships when the powerful can exclude the powerless from their rights to use their own land and resources. 'Green grabbing' is one type of 'land grabbing'. 'Green grabbing' here means property rights and rights of access has been seized under the name of environmental purposes. In this case, mangrove restoration has been

conducted under conservation policy and concentrates on ecological services while socio-economic and cultural aspects are almost left out. Local people's livelihood and customary areas are affected by this policy when the policy makers do not realize or choose to ignore the effects of policy.

Mangrove restoration had been conducted in Vietnam before and after political transformation, so it witnessed the changes in the way policy makers perceive the mangroves and the way power is transferred through different scales. Through this kind of transfer, power normally goes in a different direction than its original because of the new context, differences in understanding, or simply uncertainty within the local government. Good governance can change into bad, or vice versa. In the case of Quang Phong, before and during the Vietnam-America War, primary mangrove forest was used as a source of local villagers' livelihood and shelter and a part of their culture and spirit. It acted as a natural barrier for not only natural disasters but also the bombing by the American military. "Mangrove forests, with their dense root systems, made it difficult for big patrol ships or boats to pass by, and so were very useful as shelters for anti-American troops. During the Vietnam War, mangroves in the south were used to receive and store weapons brought from the north, and were, therefore heavily targeted for destruction by the American army" (Hong, 2004: 178). An interviewee also pointed out that the forest supported Vietnamese soldiers and local people to protect their nation and that nothing can replace its original meaning. The forest also provided aquatic species, plants, and birds for their daily food during the difficult times in the past when food was insufficient. But then, a large area of mangrove forest was destroyed by bombing during the Vietnam-America War and later agriculture transformation.

Then, the first mangrove restoration project was conducted from 1978 to 1982 for the purpose of increasing the area of protection forest and for protecting the dike. After the war, the Vietnamese government tried to improve conditions of life and facilities with all of their efforts including this mangrove restoration project. In Quang Phong, the river dike played a crucial role in reducing soil erosion and protecting the area. It was built with normal soil in 1956, however, because of the local climate and geographical characteristics, the dike had been seriously affected by wind and waves. Until the Vietnam-American War, this dike had been well-protected by the mangrove forest until the mangroves were destroyed in 1968. After that, realizing the importance of the

mangrove in terms of dyke protection, the government issued a mangrove restoration order but with a very limited budget. At the time, the project was under the management of the District agricultural department. Under the management of the forestry officer of that department, during the collective period, a group of villagers conducted a mangrove restoration project. After that, no one could have access to the mangrove as they had previously used it because the mangrove forest was now state property. Many years later, in the era of industrial economic development, a large area of mangrove was destroyed due to economic development projects, such as shrimp farms. As a result, local villagers were facing more and more serious natural disasters than ever before. Realizing again the importance of the mangrove forest, the government determined that the mangrove restoration was a must-do in the era of climate change and sustainable development, with new projects being conducted under the name of climate change adaptation and mitigation. This time, people from diverse groups participated in the projects; however, they have no rights to access the mangrove. It is obvious that in both periods of centralization and decentralization powerful actors excluded the powerless from their natural resources and what they used for their livelihood in the past. All in all, it can be said that the policy integration and coordination among the different actors was lacking.

In Vietnam, as in other SEA countries mainly like Thailand, Laos, or Cambodia, forests are common property which belongs to the state, and whatever mangrove restoration is conducted by the state or other agency is still under the management of the state. This kind of policy affects tenure security and access rights of local villagers. In Quang Phong, local villagers were not sure about their rights to access the forest, and all of the forest was under the control of local level administration. Mangrove forests, here, were classified as protected forests, which were under the management of DDFP. No individual household was assigned to manage the forest, which was the same as in the Land Law of 2003 and the Forest Protection and Development Law of 2004, as previously pointed out. Mangrove forests were classified as essential forests that cannot be allocated to local people. However, the criteria for that classification and how the forest protection board managed that forest are unclear. It is clear that local villagers who lived in the area could have been a good manager of the forest for both protection

and development. However, with such current policy and ambiguous understanding about the law, local villagers are being excluded from their land and resources.

Table 4.1 Article 24: Forest Allocation, Forest Protection and Development Law 2004

...
2. Protected forest is allocated to the Forest Protection Board, State Enterprise, Military Unit, individuals and households who lived in the area without any tax in order to protect and develop protected forest according to suitable documents following the Land Law.
...

Table 4.2 Article 46: Protected Forest Management, Forest Protection and Development Law 2004

1. Protected forest with the total area beyond 5,000 ha or below 5,000 ha with the important role in protection will be under the management of the Forest Protection Board which is set up by the government.
2. The other protected forest that does not belong to any kind in no.1 will be allocated to state enterprise, military unit, households, and individuals who live in the area for management, protection and usage.

Table 4.3 Article 76: Protected Forest Land, Land Law 2003

1. Protected forest land are: a) Watershed protected forest land b) Soil erosion protected forest land c) Wave prevention protected forest land d) Environmental preservation protected forest land
2. Upstream watershed protected forest is allocated to forest protection board for management.
3. Forest Protection Board is in charge of forest allocation to households and individuals who live in the area for protection and development. ...

...

5. The Provincial People Committee can decide to give the rights of enterprise for eco-tourism in the forest.

The law is enacted by the powerful actor (State), and the powerless actor (local people) seems to be vulnerable here. The government and other powerful agencies have their own particular worldview, and through the use of language they create an image of mangrove restoration in order to serve their own conservation purposes. However, they almost neglect the embedded environmental impact of the economic and social aspects of these restoration projects. The fact is that although there are mechanisms for creating mangrove restoration plans, there are no forums set up for stakeholder negotiation. It is clear that in the law, there is no specific point that addresses the livelihood of local people. In addition, in Quang Phong, there is no meeting or training about mangrove restoration projects before they are implemented. As a result, local villagers are the last actors to know about the policy after it has been amended.

Forest is a common property, and the costs and benefits should be shared. If the government and local people carry out the projects separately, they could be costly or have zero impact. Therefore, all actors need to share the costs and benefits among themselves (Ostrom and Schlager, 1996). A clear connection between sustainable forest management and benefit sharing among stakeholders should be established because property is not only in the law, it is also associated with society and culture in reality. Mangrove forests are one kind of common property, and, in the past, this kind of common property had shared costs and benefits among the stakeholders. However, after the Doi Moi policy in 1986, new laws and regulations began governing the traditional customs into being a new era of powerful-powerless relations, which cause unequal access to resources. In the past, every villager could have access to the mangrove forest, but after that the mangrove forest has officially been the government's property.

All in all, it seems that mangrove restoration is still following the top-down approach with no tenure security or benefit sharing. There are ambiguous understandings about policy related to mangrove forests, which will be addressed in the next section.

4.3 Environmental Governance and Decentralization: Its Operation in Different Scale

There are varieties of environmental policy in which the government conducts knowledge awareness program about healthy environments to serve their goal in terms of conservation and ecosystem services. Although benefit sharing systems are referred to in the Forest Protection and Development Law of 2004, there are many problems in reality. The focus of this study is on the environmental politics and to examine the relationship between humans and local nature under the impact of politics. In the case of mangrove restoration in Quang Phong, although there are no specific laws about mangrove forests, some related laws in terms of forest management are addressed by the central government and provincial government. In Vietnam, a law is normally amended by the government and will be officially implemented after several related decisions and decrees are issued, followed by many documents at the provincial level. Particularly, there are some documents related to mangrove restoration as follows: a part of Forest Protection and Development Law, dated December 03, 2004, concentrating on reforestation in general and forest conservation, and MARD Decree 85/2007/CT-BNN, about the Protected Forest Afforestation Promotion, dated October 11, 2007, aiming to develop protected forests for sea dike protection. Mangrove forests are some of the most important protected forests for sea dyke protection. Recently, mangrove restoration has increasingly driven the concern of government. For example, The Prime Minister amended Decision 158/2008/QĐ-TTg about National Target Program to respond to climate change dated December 02, 2008, which aims to evaluate the potential impact of climate and development action plans for the country's sustainable development, in which mangrove restoration is one of the national goals for climate change adaptation and mitigation and the Prime Minister also amended Document 405/TTg on the Mangrove Restoration and Development from 2008 to 2015 dated March 16, 2009, in which mangroves are directly referred to by the Development Plan of the country. Following these laws and decrees, a variety of documents were also issued at the local government level for implementation in the local context.

It can be said that these policy documents concentrate only on the development of forests in quantitative and protective functions without a focus on long-term conservation. Additionally, a policy has to come through many levels of administration

which causes the implementation to often take a different direction originally intended. The cooperation among different organizations in the same level is also a problem. For example, the mangrove restoration policy concentrates only how to develop and protect the forest, whereas the land concession project is interested in how to convert land to shrimp farming for economic development. This kind of conflict is one of the causes of the ineffective management of mangrove restoration projects.

The understanding about mangrove restoration differs between levels. Regarding the same question about government policy, a District officer could instruct which laws refer to the policy and when it has been conducted, while local officers have only a basic knowledge of it, and local villagers almost have almost no knowledge of the policy or to which project it refers. The level of understanding here varies with each level. Therefore, it causes a problem in transferring power from higher levels to lower levels. Because the stakeholders have a different understanding about the project, the project's direction sometimes goes a different way than what was intended to occur from the central government's vision.

We conducted two projects in 2009 following Decision 661 of the government under the five million hectare, and the second one was following Decision 57 of the government and 516 of Quang Binh Province about reforestation of protected forest areas. When the forest is regenerated, it can protect the river dike and the village from natural disasters as well as contribute to the increase of our country forest cover. We have done the projects although it is not as successful as we proposed it to be. (Forestry Protection Board officer, December 2014).

According to Hawkins et.al, 2010, the level of management in mangrove and wetlands in Vietnam is divided into four levels, namely national, provincial, district, and Commune or village. Although the process of mangrove restoration projects has been increasingly decentralized to the lower levels, the influence of institutions at the state is still ambiguous. This is because they are responsible for promulgating or helping the central government to promulgate legal documents concerning reforestation policy. At the state, social actors have been involved in the promulgation of the reforestation legal framework. In mangrove and wetlands management, MARD and MONRE both have a

role of management because MARD is responsible for forest management in general and MONRE is in charge of land management throughout the nation. In mangrove restoration, MONRE is in charge of land management and making maps, while MARD is responsible for designing and operating the projects. In general, MONRE takes care of land, and MARD is responsible for the trees in the forest.

After the policy has passed at the national level, it will come directly to the provincial level with the joint management of the Provincial People's Committee, the Forestry Inventory and Planning Sub-Institute, the Provincial Department of Natural Resources and Management, and the Provincial Department of Agriculture and Rural Development. At this level, the Provincial People's Committee plays a role to coordinate the policy with other departments. The other two provincial divisions belong to MARD and MONRE, who will facilitate the projects to the lower level in terms of land and forest management. The Forestry Inventory and Planning Sub-Institute plays a role in planning and design. Depending on the situation of the area, some related documents are issued based on the original document at the national level. In that case, the policy will come to the District level administration, which includes the District People's Committee, the District Department of Natural Resources and Management, the District Department of Agriculture and Rural Development, and the Forest Protection Board. At this level, the Forest Protection Board will work directly with the Commune People's Committee and Farmer Association for the implementation of the project. It means that all of the decision-making processes are done at the highest level—the central government. Several staff members are in charge of the project, such as forestry department officers, agriculture and rural development officers in charge of a forestry sector, and Farmer Association representatives. During the process, the staff will have a meeting with the representative of each stakeholder involved in the project, and then the representative will share the information later with their constituents. However, the fact is that these representatives get only very basic information about the project, and, of course the villagers rarely get exactly the same information regarding what is going on in the project. Information regarding the project is delivered through a top-down process. Therefore, in this kind of policy, it seems that the roles of institutions in the District and Commune levels are really important because they are the entities who understand the context and work closely with the local people. The outcome of the

project will depend on how these institutions perceive the policy and how they work within the context.

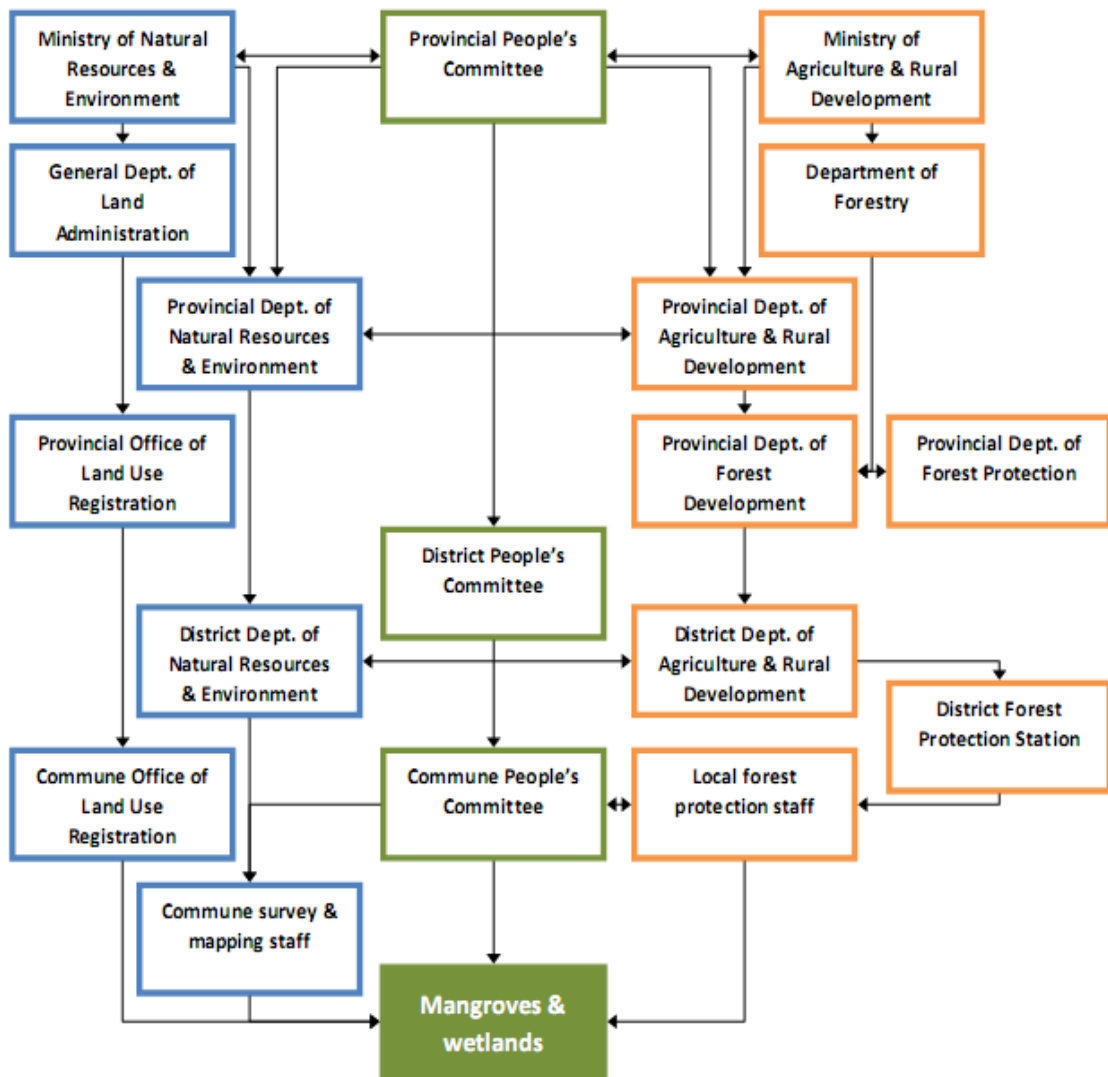


Figure 4.1 Level of mangrove and wetlands management in Vietnam

Source: Hawkins et.al, 2010: 5

In Vietnam, decentralization in forest management has been occurring since the 1990s (Tuan, 2003); however, the outcome of this policy is still limited. The majority of mangrove restoration has operated since the 1990s after the decentralization period; however, in the case of mangrove restoration in Quang Phong, the old project was conducted from 1978-1982 in the centralization and collective period. Thus, in this project, the government framework had some different points that are showed in the

figure 4.2. According to interviews, this project belonged to a National Dyke Protection Policy in which it concentrated on the planting of protected forests. This kind of policy followed a top-down approach with the transferring of power from the central government to the grassroots level. During this period of time, the government mechanism was still simple, so that the power was transferred more directly into the grassroots level they normally had meetings with the participants, so that the understanding of the policy was quite good.

In the first project in 1978, mangrove restoration was in charge of the Ministry of Forestry in cooperation with the Ministry of Agriculture. The interesting thing is that all of the planning and implementation processes were done by forestry staff in the forestry-agriculture enterprise, in which local officers had the rights to manage the project in their own way. In Quang Phong, the project was conducted successfully because the officer was one of the villagers who clearly understood the context and respected the elder generation in the area. The important point is that although there was no specific point about the meetings for gathering information among the villagers, she did it because she believed the project would be better planned if there was a meeting for gathering information before implementation.

All in all, in this case, the understanding of a policy went directly to the local area with its own original aim and adaptation to the local context by a useful initiative of a local forestry staff officer. The reason for that is, during the collective period, there were several interested groups which did specific work that they specialized in and understood the purpose as a member of the cooperative farm. There were some productive teams in the cooperative farm; each team was divided into small groups, such as a cultivation group, an aquaculture group, and so on. Each team member responsible for their own work and received the same points for a whole day of working. In this project, mangrove restoration was also counted as a cooperative farm's activity, and the participants got the same number of points as one who worked on a farm. Furthermore, in this case, the local officer knew the cultural meaning of the forest during the Vietnam-American War as well as the social meaning in terms of local livelihood, so that the Veterans Association and Elderly Association were also involved. This led to the combination of local knowledge and scientific knowledge. The period before 1986 can be called a time that power devolved from the central government to

the regions directly. In the case of Vietnam, local government somehow could implement the policy closer to the context than the central government and this case showed that.

Table 4.4 Level of Mangrove Restoration Management in Quang Phong in 1978

Level 1	Central government Ministry of Forestry Ministry of Agriculture
Level 2	Provincial People's Committee Department of Forestry Department of Agriculture
Level 3	District People's Committee Quang Trach Forestry-Agriculture Enterprise Forestry State Enterprise
Level 4	Phong Tan People Committee Phong Tan Agricultural Cooperative Phong Tan Veterans Association Phong Tan Elderly Association

After that program, there were some tending and caring activities conducted by local villagers until the second big mangrove restoration in 1992, in which local villagers tried to replenish the areas of dead trees by planting new ones. The mangrove was nearly fully developed until it was almost destroyed by unexpected weather of cold and floods in 2007. A new restoration project of DDFP under the 661 Program of 4.2 ha followed. This project area was only 0.7 ha after the long and tremendous flood in 2010. After that, DDFP conducted a long-term project of 4.1 ha in 2011 and 4.2 ha in 2012 and a tending process in 2013. From the lesson learnt from the previous policy, the new policy tried to come up with benefit-sharing among the stakeholders, like I pointed out in section 4.1. However, due to unclear understanding of the policy at different levels of administration and the complicated institutions in the new government mechanism, the system was still ambiguous.

Additionally, in this new policy, the relationship between humans and nature seemed to be ignored by the local MARD officer. Some of the reasons they pointed out were too much pressure by higher level institutions regarding planning, overly complicated meeting agendas, a limited budget of only 15,527,621 VND/ha (around 739USD), and harsh weather with a lack of rain and a long cold winter. Something to point out is that the officers were not people from the local area and seemed to care only about the quantitative report of the project for the higher administration, so they did not organize any meetings or training for the projects. From my survey, it is showed that more than 100 local people participated in the restoration activities and more than 8 ha were planted in comparison with 12 participants and 4 ha in the 1978 project. It appears that they did not sufficiently consider the qualitative aspects of the mangrove rehabilitation or ensure the understanding of other factors, such as the local villagers' cultural or socio-economic aspects. The level of their understanding here was that more mangroves were restored, the cost of the dike maintenance would be reduced, and it would create a natural disaster barrier for the area. It was believed that dike maintenance and natural disaster protection was very important, however, the local knowledge and understanding about this case should have been taken into account. It is a fact that local people were often left out of decision-making processes in forest restoration and were only asked to participate once implementation had begun, while local people's livelihood has depended on mangrove forest for a long time.

In addition, there was a close relationship between local people and their resources as well as their social structure, traditional customs, culture, and political practices (Truong and Orlando, 2010). However, during the conducting of these projects, their voice had not been recognized by the local government. As a result, local people in general were not interested in participating in forest restoration. Put another way, cultural meaning and ecological conservation seems to have been contested in the area, however, there were some interwoven points such as the meaning of natural disaster reduction and sustainable development. Although there was an understanding about mangrove forests among stakeholders, there were still some differences in the level of understanding. While the MARD and Forestry Department officer could give the exact decision and how it should be implemented, the local people committee and Farmer Association's representative knew only the name of the project. Government officer looked at

mangrove restoration as ecological services following the government policy; the local villagers just viewed it as sightseeing, a source of livelihood and a part of culture.

“The mangrove forests provided food and firewood for us in the past, and it provide the source of shrimp and fish for our shrimp farms currently. When I grow some mangrove trees along the bank of my shrimp pond, it helps reduce the loss of fish and shrimp during floods” (Shrimp farmer, December 2014)

Table 4.5 Level of Mangrove Restoration Management in Quang Phong in 2009

Level 1	Central government Ministry of Environment and Natural Resources Management Ministry of Agriculture and Rural Development
Level 2	Provincial People’s Committee Forest Inventory and Planning Institute Department of Forestry Department of Agriculture and Rural Development
Level 3	District People’s Committee District Department of Agricultural and Rural Development District Department of Forest Protection
Level 4	Quang Phong People Committee Quang Phong Farmer Association

One more point is that during the planning process of the project, FIPI was carried out very carefully, including methodology, hydrology, and soil quality, in order to choose the right species and method to conduct the mangrove restoration, but DDFP forgot to organize a meeting to get the local knowledge from the local villagers about the specific detail of the area. For example, according to FIPI, a tide cycle is the daily tide and the tide’s highest point is 1.4 m, the soil is mixed with sand and soft, and the soft layer is about 15cm all of which are scientific knowledge. They know trees can be grown in the nursery until they reach $H_{vn} \geq 70\text{cm}$ and $D_{cr} \geq 0.4\text{cm}$ and the time to plant is September and October. Regarding the local knowledge of villagers, the water way comes in at 8

am, 1pm, and 4 pm and is dug at 10 am, 3 pm, and 6 pm respectively; the tide is normally as high as 1m and as low as 0.5m but can reach up to 1.5 m in the rainy season; the soil is soft and can allow seeds to be planted as deep as a finger-length ; the best tree to be planted best on the type of tree while locals normally use fruit trees and small seedlings from the forest; and the best time to plant is in the beginning of February when the weather and tide are stable. It can be seen that these two kinds of knowledge are different yet somehow intertwine with each other. It would be best if the DDFP can know how to combine both of them.

In this case, according to household surveys, 79.1 % of local villagers want to participate in the decision-making process and meetings about mangrove restoration, whereas 20.8% of them do not want to participate. The reason for desire to participate is that they want to share their experience about the mangroves learn new knowledge about mangroves and how to expand livelihood-based opportunities, know about government policy, and share lessons learnt from previous projects. Some villagers do not want to participate because of a lack of time, they have no any knowledge about mangroves, or they have health problems. All of the information they have about mangrove restoration comes from the village headman. One interesting question some of them raised was why they could participate in meetings at the time of land concessions for shrimp farms but there have been no meetings for mangrove restoration because shrimp farms are a source of their livelihood and the forest used to be as well.

The concession that transformed rice fields into shrimp farms affected 7.9491 hectare in 2002, as mentioned in chapter 3. It was one of the government economic development policies during the period after 1986. From 1991 to 2001, the number of shrimp farms increased almost doubled because encouragement through policy from the government. Thus expansion of shrimp farms affected the mangrove degradation in Vietnam (Hawkins, 2010). Under this policy, the government promoted economic development by means of converting agricultural land into shrimp farms. This process had to be collaboration between MARD and MONRE because MONRE designed the concessions while MARD was responsible for agriculture management; aquaculture land was a type of agricultural land according to the Land Law of 2003. The policy provided for a conversion of paddy rice fields next to the dike into shrimp farms, which had higher profits. This land had already been allocated to the villagers without a land

title, causing an interesting situation in the area- a lottery meeting as described in chapter 3. After this meeting, all of the villagers had land titles for both cultivation and paddy land. The way people reacted was interesting. Normally when the policy came to the lowest level, it was just implemented. The one who had land in the area to be converted just converted it. But in this case, local people realized the benefits from shrimp farming, so they held a lottery requiring a lot of local involvement. Also interesting is the way they used their local knowledge to participate in the mangrove restoration in 1978.

It can be seen that in the 1978 project, during the centralization period, the involvement of the lowest level seemed to be clearer than the engagement of the local community in the 2009 project onward. This can be credited to the fact that in the 1978 project, the government policy was embedded in the local context by a local officer who understood the local situation. Additionally, the level of involvement in cooperative farms seems to be a more strong point of the 1978 project when livelihood security was coincidentally provided. Participants received the same points as with their agricultural activity. Their livelihood was secured, so they concentrated on mangrove restoration activities. Lastly, the mangrove restoration's cultural meaning drew the interests of the Veterans Association. Mangroves played an important role for these veterans in the past and now they were recovering it as part of a spiritual significance. In the scale-making process, this project seemed to work well when power was transferred directly to the grassroots level. Whereas, in the projects in 2009 onward, the involvement of the different levels is more complicated. The lowest level involvement seems to be not strong enough for a sustainable project.

In the politics of mangrove restoration, the actors and their interactions always need to be taken into account clearly. Mangrove restoration should be put into a triangular framework of how state operates the policy, how local government interprets and implements the policy, and how local villagers use their environmental knowledge to participate in this kind of project. Additionally, scientific knowledge and local knowledge are either opposing or intertwining depending on which scale the project is operated.

4.4 Local Participation in Mangrove Restoration Activities

When it comes to local context, environmental policy is often introduced into a region without taking into account local conditions. However, in reality, participation at the local level is essential. Thus, the points needing to be discussed here are how policy is perceived locally and what levels of participation in policy implementation and awareness of duties are required. Local in this context means not only local villagers but also local government. Among the different levels of administration, the levels of understanding and participation are different and can produce unintended outcomes.

In the new mangrove restoration in Quang Phong, DDFP is the direct institution managing the project in cooperation with QPPC and Farmer Association, while DDARD just has the role of consultant. Compared to the old project, DDARD played the main management role and the Veterans Association and the Elderly Association played important roles in both consultation and implementation. As section 4.1 pointed out, during the collective period, a group of interested local players had an important role throughout the process. In the old project, 12 people from the Veterans Association and the Elderly Association participated in the project actively by meeting, planning, and implementing. However, in the new project, local villagers are only asked to participate in the implementation activities after the planning is done. Obviously, there is not any real active participation here, but there is still some who are active in the mangrove restoration. They are the same people who participated in the old project and clearly understand about the role of mangrove forests. They are also the village leaders, former leader, or Farmer Association representatives who have knowledge and experience with mangrove restoration. There are also some from the younger generation who have adopted the ideas from the older generation. Thus, in Quang Phong, people do not seem to be passive in reality. According to the household survey, 54.7% of the people participated in the mangrove restoration, of which 7.5% had also participated in the old project. 13.2% of the people can name the types of main species existing in the mangrove, which are Đước (*Rhizophora stylosa*), Vẹt dù (*Bruguiera gymnorhiza*), Bần ổi (*Sonneratia ovata*), Mắm ổi (*Avicennia marina*), and Sú (*Aegiceras corniculatum*). 79.2% can name some kinds of trees, whereas only 11.3% do not know any of the type of trees in the mangrove forest. All of my interviewees know about mangrove restoration in the area; however, the level of understanding is different.

Additionally although the majority of villagers can distinguish between the old and new projects, they do not know which higher institution managed the projects. According to them, the old project was conducted by the Veterans Association and the Elderly Association, and the new one was conducted by the Farmer Association.

According to the villagers, the mangrove forest existed long before the Vietnam-America War. It played not only an important role for local people's livelihood but also a shelter for Vietnamese soldiers and cargo during the war. The forest also provides a habitat for bird and aqua species, which are a source of income for the local people. During the war, this forest acted as a habitat for local people and Vietnamese soldiers as well as their cargo, which was really important for the Vietnamese military. Because of this important role, this forest was destroyed by American bombing from 1968 to 1973. The primary mangrove forest was lost and replaced by rice fields after the war in 1975 and then by shrimp farms in 2002. Long after the war and before the Doi Moi policy, the government started a restoration project for dike protection. Therefore, the mangrove forest in Quang Phong Commune was restored by the MARD District office, the Quang Phong Association of Elderly, and the Quang Phong Association of Veterans from 1978-1982.

This project was one of the most successful projects not only in Quang Binh Province but also in the Central Coast of Vietnam. The mangrove restoration had a really effective plan and implementation. All of the members of these two organizations participated in the project under the guidance of the MARD District officer. According to Vietnamese government regulations before the Doi Moi policy, the agricultural system was still under the control of the government following the collective farm model, so all of the members who participated in the restoration project could get points just as if they participated into the other agricultural activities, such as rice cultivation or growing crops. There were 12 people who participated in the activities at that time. they could receive 10 points per day (equal to 0.4 kg rice per day) for planting or tending activities in the mangroves. The roles were divided among the members of the group by the group leader. According to the MARD District officer, because of budget limitations and out of respect for the older generation who had knowledge about the forest, she organized the consultation meeting her to gather information and plan for the project. She also emphasized that the Farmer Association representative actively participated in

the project. Although there is no official rule about punishment, he set a strict rule for punishment in the case of livestock or anthropological disturbances to the forest. If any villagers broke the law, their labor points were eliminated according to the level of law violation. It can be concluded that the old generation had much experience and also were veterans who understood the importance of the forest during the war, therefore they were more active in participating. When they participated in the project, they still received points to redeem for food in the cooperative farm, so they do not need to be too concerned about their livelihood. Thus, it can be said that although the project did not realize the important role of livelihood in the local context, one way or another it played a balanced role in conservation and livelihood.

The participants constructed one cottage every twenty five meters along the mangrove side in order to protect the forest from anthropologic disturbances or natural disasters. It is believed that the mangrove restoration was a very complicated process and caring attending played an important role in the outcome of the mangrove restoration. According to the interviews, the participants built the cottages in order to take care of the mangrove trees, especially the seedlings. Firstly, they protected the mangrove forest from fishers from other villages who always caught fish and river shrimps or cut down the forest trees along the outside edge of the forest. Secondly, they could remove waste, snails, and mangrove oysters (*Crassostrea* sp.) from the mangrove seedlings because, in this area during the high tide, water brought waste and oysters which attack the mangroves roots, barks, and leaves, causing serious consequences for the development of the mangrove seedlings.

We built the cottage every twenty-five meters along the mangrove side in order to protect our mangrove trees because the fishers outside the village wanted to cut down the forest, not only for wood but also for their livelihood strategies. They used to catch fish and shrimp in the forest areas, so they still want to fish in this area as they used to do in the past. In addition, the oysters are very dangerous for mangrove trees and they come with the tide every day, so we have to remove them from mangrove seedlings in order to protect the tree. And it worked well. (Former Mangrove Planter, December 2014).

During the time of restoration, the MARD district officer and local people cooperated tightly from the beginning of the project to the end. Although the physical conditions, such as the budget and techniques were very limited, the stakeholders cooperated well for a successful project. Firstly, the meeting among stakeholders was conducted before the operation of the project in order to gathering the knowledge of local people about time, location, and suitable techniques to use in the project. Secondly, the local knowledge was applied in combination with the knowledge from the MARD officer for a mangrove restoration solution. Thirdly, the caring process was conducted for a long time after the restoration time, which is one of the most important points for the success of the project. According to the former MARD officer who implemented the project in 1978:

We had to go to another place to buy seeds and then use our knowledge to raise seedlings. We also organized meetings with local villagers in order to gather their knowledge and opinions about which months were good for planting the trees, what was the most suitable time during the day for planting, what kind of species was suitable in the area, what methods should be used with different types of species, and so on. They were the ones who understood about the place because they have lived there for generations. In addition, the budget was very limited; the District provided enough budget only for seedlings, so that we had to cooperate tightly with the local villagers to reduce the cost of the mangrove restoration. (Former MARD officer, December 2014)

The species that was used in the project was chosen after careful consideration of both scientific and local knowledge. Some species can regenerate directly by viviparous seed, such as *Rhizophora stylosa*, *Bruguiera gymnorrhiza*, *Avicenia marina*, and *Avicenia alba*, whereas others have to be grown in a nursery to become seedlings before planting, such as *Aegiaras corniculatum* and *Sonneratia ovate*. Additionally, because the size of *Avicenia* is so small, only about 2-3 cm, the local villagers also collected the seeds and nurtured them in the nursery for two months before planting. In the case of *Rhizophora*, they simply collected the seed and put it into a bag for two weeks before planting. They normally planted the mangrove in the beginning of February, when the tide and soil is stable, and normally they prepared the seedlings beginning in December. They also use their network and experience to reduce the cost of plantating. That is

something that scientific knowledge cannot do without the assistance of local knowledge.

In the 1978 project, we went to another Commune to buy seeds and seedlings as well as ask them about their knowledge of regeneration and protection of the mangrove forest. We applied our own experiences in combination with their experiences in order to generate the new forest, and it worked effectively. (Former mangrove planter, December 2014).

Based on which types of mangrove tree, we decided the best way to regenerate them depended on their biological characteristics. For example, between *Rhizophora stylosa* and *Avicenia marina*, we collected their seeds from the tree. For *Rhizophora stylosa*, we put the seeds into a bag for two weeks and then planted them directly in the forest area. However, the *Avicenia marina* seeds need to be cared for in the nursery, which was established in the mangrove area, for around two months before we plant it. The reason we did it like this is because of the size of *Avicenia marina* seed. When the seedlings have grown enough, it will have the ability to adapt to its new environment under the strong tide. (Former mangrove planter, December 2014)

Because of balanced cooperation among stakeholders, the project was successful. However, only the ones who were involved in the mangrove restoration project knew about what actually happened during that time. The others just knew when it took place. In addition, no women were involved in the project except the former MARD officer who directly implemented the project. This begs the question about the role that women play on the ground. All in all, the project is still a pilot of mangrove restoration in the Central Coast of Vietnam which has been studied by the other areas during the period that the Vietnam government focuses on reforestation.

I think this project was successful because there was good cooperation among stakeholders. According to Uncle Ho's quote 'Together we can change the world'. One tree cannot make a mountain but three trees can. Each person can solve one side of the problem. (Former MARD officer, December 2014)

According to the interview, the second project has launched by local people in 1992 to replace the dead trees. However, under the effect of the storm and flood in 2007, the mangrove forests decreased dramatically. The new projects operated directly by DDFP in collaboration with QPPC and the Farmer Association, lasted from 2010 until 2013. Under the 661 Program, following Decision 661/QD-TTg and dated July 29, 1998, the mangrove area has been restored again with 4.7 ha. And then, another project was conducted in 2011 and 2012 according to Decision 57/QD-TTg, dated January 09, 2012, about “Forest Protection and Development Plan 2011-2020”, and Decision 516/QD-BNN-KHCN, dated February 18, 2012, from the Ministry of Agriculture and Rural Development about “Reforestation Planning” for reforestation programs of Quang Binh Province.

In these new projects, DDFP officers were allocated using a top-down approach, in which no meeting was held and there was no consultation with local villagers. At the time of implementation, there were 100 people who participated in the project and were paid 100,000 VND/day (USD 5) for their participation. In addition, with these current projects, the participants mostly came from the middle age group and young group. They have almost no rich experiences with mangrove restoration in comparison with the older people in the village. For example, a forestry department officer came to the area and gave instructions to all of the participants. While some followed the advice, others ignored it and just did as they thought it should be done. Moreover, there is no tending or caring processes for mangrove trees after their planting. There is one person in charge of the protection of the mangroves, for which he is paid 2,200,000 VND per year (around USD 110 per year). However, the interesting point is most of the local villagers receive information only from their village leader and Farmer Association representative. In this case, it is interesting that the village headman and former participant in the old projects play a good role in spreading the information about mangrove reforestation. They try to create awareness among the villagers through meetings. That is why the awareness of local villagers here is quite a lot better than first imagined. Additionally, the fact is that local knowledge has been queried by journalists or researchers on occasion, but nothing has been done with it, so the local villagers have lost their faith in the project.

Many people come to ask me about what we did in the past and how their project can be successful like ours. They also asked me how to collect seeds and seedlings as well as the way to take care of the mangrove trees. However, I think they have not applied what I told them because the new projects have not done well recently. I hope our knowledge can continue to be of use in the future. (Former mangrove planter, December, 2014).

The final point is the mangrove forest in the Central Coast of Vietnam has been studied since 1991 by Prof. Phan Nguyen Hong; however, the studied area is just located in a few areas such as Thua Thien Hue or Quang Nam Province, where the study conditions are more convenient than in other Provinces. Therefore, the mangrove forest or local knowledge in the other Provinces have been in a situation of being ignored for generations. Under economic development, local people find it more interesting in earning money, migrating to the city or doing non-farm work. The awareness of mangroves in terms of cultural and social aspects is in danger of disappearing because the ones who have the knowledge about mangrove restoration are going to be in their 80's; some had passed away already. It is believed that knowledge is valuable and that local context provides a diversity of views, so nothing can replace traditional knowledge within a specific area. It needs to be protected in the era of rapid changes. Another point that needs to be addressed is the tenure security of local villagers to the mangrove forest. Before the 'Doi Moi' policy and before the Land Law and Forest Protection and Development Law were amended, local villagers could access the forest, whereas, now they cannot access it because of the law. Although the project seems to be successful, the decision making process is still a big problem and needs to be addressed by the policy makers. In Vietnam, the project always follows the top-down approach, where the lower level of administration is considered as a tool to implement the policy from the central government. Lastly, the access control has been limited by the government because all of the forest belongs to the state as the law points out.

4.5 Summary

To sum up, the mangrove forest is still not clearly classified in the law, and there is no law that refers to mangrove restoration, specifically. However, in the era of climate change, nowadays there are some documents that refer to climate change adaptation and

realize the important role of mangrove forests. When the law is transferred to different levels of administration, the understanding can become different; this depends on how each institution perceives it. Additionally, the decision-making process still lacks engagement of the lower institution from the national mechanism scale. Decision making processes still lack the involvement from different levels of administration. In this kind of policy, power is transferred using a top-down approach, which affects the right of access to resources of the local villagers.

Furthermore, this case showed the relationship between historical, political and social contexts in environmental projects. Historical contexts changed over time, while the political context changed and led to significant changes in the socio-economic context as well as traditional culture. The political and ecological cannot be separated. These factors affect the outcome of environmental projects, whether it is embedded or not embedded in the social context.

Next, the participation of local villagers in the project has been affected by many factors. These factors are the understanding about local customs, respect of local knowledge, involvement in local livelihood strategies, and the role of project leader. Additionally, the role of village leader is really important in the local context. For example, in the case of a shrimp farm or raising awareness about the mangrove, no one can do it better than the village leader, who is respected by local villagers and understands the local context well.

Lastly, mangrove restoration is a very complex process. It is not only an ecological restoration but also a cultural recovery. Therefore, projects need to promote local autonomy in decision-making processes. Also training and ongoing care processes of newly-planted trees need to be considered.