EFFECTS OF COMMODITY MARKETS ON COMMUNAL RESOURCE MANAGEMENT: INSIGHTS FROM NORTHERN VIETNAM*

LE THI VAN HUE

In Vietnam, economic reforms, known as *Doi moi*, were introduced in 1986. They included the elimination of the cooperative's monopoly on agriculture and forestry, the introduction of short-term land use rights and encouragement of privatization and market liberalization. The reforms have dramatically improved living conditions in Vietnam, and have been called "one of the greatest success stories in economic development" (ADB et al., 2003, p. 11). It has been argued, however, that the *Doi moi* economic reforms, while opening up economic opportunities for many, have not benefited women and men equally and have resulted in an increasingly stratified distribution of income (Luong, 2003; Le, 2004). Others argue that rising inequality is associated with non-agricultural activities, such as commercial aquaculture, in lowland coastal North Vietnam, particularly when the distribution of land is relatively equitable (Adger, 1999; Lutrell, 2002).

Using the case of a village in northern Vietnam, this paper examines the different practices of women and men in resource use and management and changes in access to and control over mangrove resources. It looks at the conflicts between those who have been able to capture nearly exclusive access and those who lost access as a result of the privatization of coastal aquaculture resources, which had been communal resources. These communal mangrove resources had traditionally served as the economic safety net for resource-poor households in this commune. This paper argues that the *Doi moi* economic reforms, while opening up economic opportunities for many, have not benefited the whole community. Further, the promotion of nationalization or privatization, rather than solving problems of resource degradation and overexploitation, has deprived many rural households of their livelihoods. Conversion to private property did not necessarily enhance sustainability. Women-headed households and women and girls generally have been the most adversely affected, and they have become victims of both environmental degradation and the privatization process.

The paper is organized as follows: Section 1 presents an overview of the study site, and then provides a discussion of the history of mangrove management in Giao Lac Village. Next, it examines the impacts of economic reforms and the involvement of an international NGO project, the Danish Red Cross Mangrove Plantation project, on shrimp and clam management as well as intertidal coastal product collection. Section 2 investigates how social differentiation has affected the ways in which different social groups, defined by gender, class, age, and social status, use and manage mangrove resources within the community. It also

* *This article was issued in the Anthropology Review, No. 2 in 2007 in Vietnamese.*

reviews the extent to which villagers act collectively in defending their rights over local resources, although the village is stratified and response to market demands has been different for individuals. The concluding section suggests alternatives for Giao Lac's mangrove management through a mechanism that would promote social equity as well as productivity and sustainability.

The History of Mangrove Management in Giao Lac Village

Giao Lac[1] was established approximately 150 years ago during the restored Nguyen dynasty. In 1843, Emperor Thieu Tri moved people to the area to cultivate the swamp and to establish farms.

Giao Lac village is a largely Catholic coastal community located in Giao Thuy district of Nam Dinh province, which lies at the mouth of the Red River. The village's land covers an area of about 744 hectares, of which 535 hectares is agricultural land and its population is about 10,000. It is an agricultural community farming rice but also engaging in animal husbandry and fisheries. It is bordered to the south by the central dike, an intertidal area and the South China Sea. The dike is almost three kilometers long. The intertidal area is more than 600ha (hectares), of which 400 have been planted with the mangroves, *Kandelia candel*, *Sonneratia caseolaris* and *Rhizophora apiculata*. In addition, there are five shrimp ponds in this area. Four out of the five ponds and all of the intertidal area belong to the District, which, in turn, mandates the village to manage the ponds and the mudflats.

The next section, instead of going into details and capturing all the facts of Giao Lac's social system, will explore the ways in which mangrove forests have been managed through different periods of time in Giao Lac.

The Colonial Period

No one remembers exactly how many hectares of mangrove the village had during the French colonial period but there were approximately 100. From 1884 until 1945, the French colonial administration had authority over mangrove forests but no one was assigned to guard them. In 1939, the colonial administration supervised the construction of the central dike in Nam Dinh province. Mangrove forests beyond the central dike were about three meters tall or more. In the forests there were *Kandelia candel, Aegiceras corniculatum,* and *Avicennia lanata*, but *Kandelia candel* dominated. The forests supported many kinds of water birds, such as egrets, herons, pelicans and wild ducks and geese, as well as other wildlife, including eels, snakes, otters and foxes and, also, honeybees. There were plenty of fish, crabs, shrimp, snails and bivalves in the forests. In order to survive, almost everyone went fishing, caught shrimp and crabs and collected firewood in the forests to either eat or sell at the Dai Dong market in order to buy rice to support their families. According to elderly people questioned during the field research, local people only collected the dry branches for firewood. Although there was no law on forest exploitation and management and

[1] Between 1843 and 1951 Giao Lac was called Thien Huong. In 1952 it was named Giao Dong Lac. On October 20, 1956 Giao Dong Lac was named Giao Lac and the name has been kept until today.

there was no guard to protect the forests, no one cut mangrove trees down for firewood and no one shot birds for food. According to these accounts, local practice thus amounted to effective resource conservation.

The Resistance War and the Return of the French

Giao Thuy, including Giao Lac was liberated on August 20, 1945. After the August 1945 revolution, new organizations, such as the Farmers' Association, were formed. In 1949, the French returned to the village and supported a Catholic-led insurrection against the Vietnamese government. Houses of Buddhist families were burnt and many relied on timber from mangrove forests to rebuild their houses when they returned. The new French administration promoted the harvesting of mangrove trees for firewood. The heads of villages granted timber concessions to outsiders who then hired local people to cut the forests for firewood. In November 1953, Giao Lac was liberated.

There was, however, no return to the pre-revolution ethics of mangrove conservation. Mutual aid groups were established in 1956. Early in 1959 the first cooperative, named Lac Hong, was experimentally established in Giao Lac. Later, a number of cooperatives were established in addition to Lac Hong. These included Lac Thanh, Lac Hung, Lac Long, Lac Tien, Lac Tiem, Lac Thang and Lac Cuong. Giao Lac Cooperative was not formed until 1973. During this roughly twenty-year period, the village managed the forests on behalf of the district. The local people were not allowed to go to the forests as they had before. The village's militia unit was mandated by the village to protect the mangroves while preserving peace and order in the coastal area. Members of the militia unit stopped those who went illegally to the mangroves and even confiscated firewood. Still, everyone tried his or her best to poach in the forests. They even cut big mangrove trees down for firewood, a situation that had never occurred before. Sometimes, firewood collectors were caught by the guards and their firewood was confiscated and taken to the Village's People's Committee. The collectors would also be asked to go to the village office for "*giao duc*" (education).[2]

In the 1960s, in response to ocean encroachment and the reclamation policy of the district, Giao Lac opened up Bien Hoa pond, which now has an area of 54 hectares. In order to do this, the village mobilized its entire population to clear the mangrove forests lying between the pond and ocean. Even at that time, however, there were relatively few mangroves outside the pond. Following the opening up of Bien Hoa pond, sea grasses were planted in former mangrove habitat and provided new material for the weaving of mats and floor mats, which were exported to the former Soviet Union and other Eastern European countries through the District Import and Export Company. Then, between 1986 and 1987, the village switched to the more lucrative enterprise of shrimp culture. This was prompted by 1) the collapse of the former Soviet Union and

[2] Education here means instructing the culprit to understand their wrong-doing so that s/he would not repeat it later.

other Eastern European countries (and subsequent loss of the rush weaving market), and 2) the death of the sea grasses due to the fact that the Vop River was blocked, making the habitat became more saline.

Impacts of Economic Reform: New Institutions for Shrimp and Clam Management, and Marine Product Collection

Shrimp Management

In the late 1980s, a household-based economy increasingly displaced the cooperative-based economy (Le and Rambo, 1999). The Government of Vietnam shifted responsibility for the management of natural resources away from village cooperatives and into the hands of individual farm households (Nguyen, 1995). During the *Doi moi* period, China has become the biggest importer of North Vietnam's marine products. In response, a further four shrimp ponds have been constructed by the district. Households or entrepreneurs bid publicly for a lease to manage a shrimp pond. Usually, five or ten households cooperated to manage a shrimp pond. Typically, each pond generated profits of at least VND 140 million/year.[3] Although the bidding process was open to everyone, only the rich, who had sufficient capital, labor and management skills and access to political power, were able to participate in the process. Only the older Bien Hoa pond was managed locally, by the Giao Lac Cooperative. The four new ponds belong to the district. It should be noted that only men are involved in shrimp aquaculture. Women were only hired to collect seaweed for shrimp pond owners.

[3] In 2000, one USD was equivalent to VND 14,000.

Clam Farming

In 1990, people in Giao Xuan village, Giao Lac's neighboring village, began farming clams by putting in place a system of nets on the inter-tidal area. They were the first people to start the business, thanks to their connections with Chinese traders who sold to the bivalve markets in China. In the past, clams were so cheap that people substituted them for rice. Now clams have become a valuable commodity, about five times more valuable than in the past. One kilogram of clams presently fetches VND 5,000-6,000. Both central and local governments have encouraged clam farming. National Decree 773-TTg, for example, stipulates that open coastal areas and water fronts can be used for shrimp and crab farming. Local people have applied the same policy to clam farming.

Many people have become rich very quickly from farming bivalves and trading in coastal produce. The collectors, on the other hand, often suffer the impact of price fluctuations. Before this time, the intertidal mudflats were common property that everyone had access to. Then, people began to acquire the use-rights to farm clams by setting up their own nets and claiming the mudflats as their own. The village cadres measured the areas that the people claimed as their farming sites and the farmers paid rent to the Village's People's Committee based on these measurements.

This process of claiming land excluded the poor and female-headed households, groups that had no access to productive resources, such as the newly

privatized coastal aquaculture and capital resources. These people did not have any place to go and dig clams. Consequently, a number of people, especially poor women and girls, became marginalized. They were hired to collect clams with somebody else's net and earned VND 10,000/day. Some poor men had to watch shrimp ponds for the rich for VND 150,000 a month. Conflict between those who had the nets and those who lost the resources increased to the extent that it resulted in physical fighting. Owners of clam farming areas had the right to beat anyone whom he encountered collecting clams in open areas, which-they claimed-were owned by them. Through leasing of previously common resources, the rich acquired the use-right to appropriate formerly common resources.

Thus, the poor once again were excluded. To collect bivalves, they had to go further to coastal areas that were not within walking distance. So ten or 15 people gathered together and hired a motorboat to get there. They got up earlier and stayed longer in the inter-tidal mudflats. They had to spend part of the money they earned by the end of the day to pay for the boat. Those who could not afford the boat had to stay at home, and therefore could only depend on wet rice production, which typically provided only enough subsistence for 7-8 months/year.

Catching Shrimp Using Electricity

Pulling trap (*te thuyen*) used to be a very common shrimp catching gear in the past. It was well known as an environmentally sound method. Based on interviews with those who used the gear, their catches were much smaller than those using electricity. Market incentives have led villagers to harvest a larger portion of the resources. Consequently, the use of destructive fishing methods by male villagers between the ages of 20 to 40 years has increased It is reported that motorized boats (*te ui*) and push nets (*te dien*) using electricity to catch shrimp appeared in the village in the early 1990s. The *te ui* and *te dien* people were blamed for killing all baby shrimp and crabs, and fish and shrimp eggs. Villagers believed that marine eels and mature crabs lying at the depth of ten centimeters in the soil were also killed by the electric current.

According to Decree 48CP dated August 12, 1996 by the Government of Vietnam, those who used electricity either with motorized boats or push nets to catch aquatic products would have to pay a fine of VND 4 million or VND 500,000 respectively. Those who intentionally violated the rules would be administratively prosecuted. It was reported, however, that those who are mandated to protect the wildlife and marine resources in the buffer zone, including Giao Lac, did not enforce this decree. Therefore, all shrimp farmers in Giao Lac were very angry with those who used electricity to catch shrimp and fish. According to the shrimp farmers, their catches were reduced as once abundant wild shrimp populations, especially wild shrimp post larvae declined as a result of using destructive catching equipment, such as the *te ui* and *te dien*. Many times the Giao Lac

shrimp farmers sent their claims to the Border Post No. 84, with no results. Their voices were not heard.

Danish Red Cross Mangrove Plantation Project

In 1997, the Danish Red Cross assisted Giao Lac to plant mangroves for the protection of sea dikes as well as the lands and the village community behind them. The district cleared the clam farming area on Trong Island and enclosed an area of 400 hectares for mangrove plantation. As planned, one main household and another three supplemental households were to be chosen to plant each five hectares of new mangroves. To qualify, the District required that the main household had to be a poor household with sufficient labor. The other three households were to be selected by the Giao Lac Red Cross and other local leaders. For each hectare of mangroves planted, a group was to be paid VND 360,000. So much for project design. In reality, very few poor households were actually selected to participate. The majority selected were middle or upper middle households.

After the mangroves were planted and grown, the quantity of the marine catch increased, especially that of baby shrimp and crabs. They traveled from the ocean to mangrove habitats in search of food, thus supplying larvae for shrimp and crab rearing households. Once there were plenty of shrimp, crabs and clams in these new mangroves, local people tried to poach the mangroves to catch these creatures, although they knew that they were not allowed to. They were told by the guards that they might kill the mangroves while walking around looking for crabs, or digging bivalves. In 1999, when the mangroves were two years old, the village guards who were paid more than VND 350,000/month decided to sell tickets to local people who wanted to collect marine creatures in the mangroves. For one entrance, each person had to pay VND 10,000. The guards kept the money for themselves. This created resentment between people in the village and the guards. The result was highly inequitable, as the poor could not afford to buy the daily entry ticket to the newly-established communal mangrove forests to look for marine creatures.

The newly planted mangroves had opened up opportunities for many people, but not to all the villagers in the village. Those who were older than 45 years of age, for example, could not go to the mangroves or the mudflats at night to look for baby crabs, as they would not be able to see the small crabs. The rich and the upper middle classes earned more from the mangroves or the mudflats than the middle and poor classes, as they had labor and management skills. More importantly, the richer population had access to political power and the capital needed to invest in shrimp ponds and clam farming.

Newly Planted Mangroves and American Technologies, ATI-Vietnam

ATI-Vietnam

ATI has been in the engineering business for over 10 years. Headquartered in Tennessee (USA), ATI claims to be one

of the pioneer companies in the modernization of Vietnam through activities of transferring and providing high technology services from the US to Vietnam. ATI-Vietnam was founded in Vietnam in 1997 and currently has its representative office in Ho Chi Minh City, Hai Phong, Son Tay and Lao Cai. ATI-Vietnam's main fields of activities are petrol, informatics, e-commerce and ecological environment.[4] Dinh Duc Huu, the director of ATI was born in Giao Thuy district and is an American businessman. He has returned to Vietnam and invested in oil and gas exploration and exploitation.

Supported by the Vietnamese Government, ATI-Vietnam expressed its desire to form a joint aquaculture venture with Giao Thuy district in the intertidal area of Giao Lac and Giao Xuan. The total area of the intertidal area is 1,500 hectares. ATI-Vietnam's proposal was accepted by a high ranking official. According to him, a coastal province like Nam Dinh would need a joint venture with a foreign partner so that it would be able to develop its entire intertidal area into a commercial aquaculture. After the Provincial People's Committee received the signal from the Central Government it requested the District People's Committee to assist ATI-Vietnam to carry out its aquaculture project as soon as possible at any cost. The District People's Committee assigned the New Economic Zone Department to be in charge of the ATI-Vietnam project.

According to district officials the Government of Vietnam planned to lease the intertidal areas in zones 3 and 4 to ATI-Vietnam for 50 years. The Director of ATI was assigned by the Government of Vietnam to discuss with the Nam Dinh Provincial People's Committee the opportunity to carry out the project. According to a district cadre at the District New Economic Zone Department, this was a very large project.

The company intended to invest 90 billion VND in aquaculture. The plan was to invest in intensive shrimp farming with a production of between two and three tons/ha/year. The District People's Committee was asked by the Provincial People's Committee to acquire shrimp ponds in these two zones, which the district had leased to shrimp farmers until 2010.[5] Regarding the compensation policy, the deputy director of the District New Economic Zone Department, who had been hired as a consultant to the company said that the district would measure the value of the pond based on the condition of the pond and the creatures that the pond had. More specifically, the value of the pond would be measured by taking the amount of money the owners of the pond had invested in the fry minus the pond's depreciation. Owners of the pond would then have two options. One was that the pond owners could receive cash compensation which would be based on the government's rates. The other was that owners of the pond could become a share-holder of ATI-Vietnam.

[4] The information on the company is based on an interview with the head of the ATI-Vietnam office in Hanoi in 2000 and the company's website: http://atechinc.com and http://ativietnam.com.

[5] In fact, in Giao Lac shrimp ponds has been leased for between three and five years.

In the latter situation they would not have any right to manage the pond. Instead, the company would provide aquaculture technology. Nevertheless, the pond owners could be hired to work for the company as wage workers, if they wished. When the company harvested shrimp, profits would be divided among share-holders. When the deputy director was asked if clam farming sites would have to be removed, he said that the district would ask them to move without compensation, because clam farmers had acquired their sites illegally. Based on the information provided by the deputy director of the District New Economic Zone Department, the company would have to pay VND 13 billion/year to the government according to the government's land law after Year 10. According to him, the price as such was very low. Still, it was acceptable because ATI-Vietnam would establish farms to create thousands of jobs for the villagers.

Local Resistance

Between August and September 2000 Giao Lac's residents heard about the ATI-Vietnam project from village cadres. No one in the village supported the project. They thought this was a private project, rather than a state one. They all believed that if the project was implemented, the mangrove forests would be destroyed and then converted into shrimp ponds using intensive aquaculture, thus polluting the entire area. More importantly, they would not have the rights of access and use to the intertidal resources as they normally did. Consequently, they would lose their main sources of income. If the project was carried out, it would abolish all rights of Giao Lac's community to access and use of the entire intertidal resource area, thus depriving thousands of households of their livelihoods and leaving them only the opportunity possibly to work as wage labourers. Therefore, villagers determined to fight to the death for their livelihoods.[6] On October 2, 2000 the deputy director of the District New Economic Zone Department invited all shrimp pond owners of Giao Lac and Giao Xuan to a meeting at Giao Lac's People's Committee with the director of ATI. At the meeting, the ATI-Vietnam project was rejected by all the shrimp farmers.

At the same time, in Hanoi, the Danish Red Cross and the Mangrove Ecosystem Research Group at the Center for Natural Resources and Environmental Studies at Vietnam National University, Hanoi were discussing the plans for the management of the mangrove forests in Giao Lac and Giao Xuan after the project would come to an end. According to the donor, the mangrove plantation project had benefited villagers in the communities that were chosen to rehabilitate mangroves. In fact, the income-generating benefits were largely captured by the rich and upper-middle households. The Danish Red Cross, therefore, decided to extend the project to the third phase (2001- 2005), which aimed to help coastal villages, including Giao Lac, in the Red River Delta to be well-prepared for storm hazards. More importantly, the program was designed to strengthen the Vietnam Red

[6] Interviews with the heads of 32 households sampled and group interviews.

Cross's capacity and skills so that it can operate a single, well co-ordinated disaster preparedness program on its own in the Red River Delta region after the project ended.

Since the Danish Red Cross project finished in 2005 and all villagers in Giao Lac and Giao Xuan rejected the AIT-Vietnam project, the company was advised by the Government of Vietnam to withdraw its file. The reason was that the Central Government of Vietnam had signed an agreement with the Danish Government, according to which support from the Danish Government is concentrated on the principles of environmental protection and poverty alleviation in Vietnam. Sustainable administration of coastal zones and protected marine areas is considered the focal point. The Danish Red Cross Disaster Preparedness Phase 3 was therefore well aligned with these principles. The withdrawal of ATI-Vietnam reveals that villagers were not passive or were waiting for ATI-Vietnam to come and take their means of livelihoods away. They were fighting against the decision of government, provincial and district officials and ATI-Vietnam.

Alternatives for Giao Lac's Mangrove Resource Management

The Danish Red Cross Disaster Preparedness Phase 3 was carried out. During this phase, the guards were continuously paid by the project and the Giao Lac Red Cross was still in charge of the project, as it had been in the previous phase. Since then no new proposal to any organization for intertidal resource management has been made. In 2005 when Phase 3 was under way and guards were still paid by the project, several hectares of mangrove forests were cleared for clam farming. It should be noted that village cadres and even officials of the District Red Cross were the culprits. As a result, clam farmers also took the opportunity to expand their clam farming sites illegally. This is due to the fact that, in 2004, clam farmers caught a great deal of natural clams and earned huge profits. It was reported that in August 2005 the village was hit by Hurricane No. 7. All villagers were evacuated elsewhere, to Hanoi or further inland. According to those interviewed during the field survey in May 2006, if there had been no mangroves the villagers would have been dead. The project came to an end at the end of 2005.

Phase 3 came to an end in 2005. On May 31, 2006 the chairman of Giao Lac was requested to sign a one-year contract with the People's Committee of Nam Dinh province, according to which the Giao Lac People's Committee is mandated to collaborate with the provincial forest rangers to protect its mangrove forests, a total of 395 hectares from destruction and fire. Giao Lac is granted a budget of VND 50,000/ha/year, and the contract will be signed yearly. According to the chairman, Giao Lac will hire a new guard who is assigned to protect the forests and report to the police whenever someone violates the rules, although the budget is sufficient for Giao Lac to hire only two guards. According to him, the guards that were hired by the project were not doing their jobs well.

One may wonder: 1) Could one guard would be able to protect almost 400 hectares of mangroves; 2) Could these new arrangements be sufficient for Giao Lac to protect its mangroves from people wanting to convert them into clam farms, a business which would bring clam farmers large profits?; 3) What would be the role of the community at the intersection of markets and mangrove resource management in Giao Lac where the community is highly heterogeneous?; and 4) How would the community be able to maintain the management strategies that have been successful in reversing the trend of resource degradation?

All inhabitants of the village want to manage their mangroves. According to the heads of the 32 households interviewed, the village's people would like to draft their own rules. They would like to hire three guards. The salaries for the new guards would be based on the People's Committee's standard of VND 150,000/month. They all said that the forest itself could generate a much greater amount of money. When the project is over they would let 20 people put grape and gill nets at the edge of the forest. Each owner would have to pay from VND 500,000 to one million VND per year for the rent. VND 5.4 million would be spent to pay the guards' salaries and the rest would belong to the Village People's Committee so that the money could be spent on roads or schools for the village.

The guards would be nominated and then publicly selected by each hamlet. Each guard would serve for a term of only one year. The term would rotate every year. Also, according to the rules, if someone does not do a good job, he or she would be replaced right away. In order to make the rules effective, a Committee of Mangrove Management and Protection should be created and the Giao Lac People's Committee and the Giao Lac's Red Cross should be members of the committee. They should be included in the drafting process and would play a very important role in implementing the rules later on.

In this way, the forests will be protected, while bringing benefits to the local people, which, in turn, will help manage the resources in a sustainable manner. Poor, female-headed households and marginalized groups of people would be included in the process and would have a voice in the decision-making as well. In other words, the proposed mechanism would promote social equity as well as productivity and sustainability.

Vietnam gave legal status to community forestry in 2004. In Vietnam, the revised Forest Protection and Development Law passed by the National Assembly in late 2004 acknowledges residential communities are legal entities to which forests are allocated. The law creates the legal basis for community forestry designates in its list of land users. Although the law has just recently passed, many residential communities throughout the country have been allocated forested land in the last ten years through internationally

funded pilot projects. Community forestry potentially increases the forest resource "pie" at the village level, and benefit sharing potentially increases the share of that larger pie available to the community (Sunderlin, 2004, p. 12-13). However, Giao Lac has not gained the means to effectively manage its tenure and resource access issues in a sustainable manner.

Conclusions

The present total area of mangrove forest in the environs of Giao Lac village is larger than it was during the war period. The mangrove forests still serve as ecological and social buffers during the period of *Doi moi* reform. The *Doi moi* economic reforms, while opening up many economic opportunities, have not benefited the entire community. Rapid changes in the allocation of land to private leaseholders in the coastal area and the legalization of the private businesses, which exploit these resources and new institutional arrangements for mangrove and other aquatic resources, have deprived many poor households of livelihoods. Conversion to private property did not necessarily enhance sustainability. In fact, market incentives have led villagers to harvest a large proportion of their resources and destructive catching equipment was consequently used by a group of villagers. This has resulted in damaged nurseries and breeding and feeding grounds of estuarine species, and a decline in the catches of villagers who relied on these species for food and livelihoods. As a result, female-headed households are the most adversely affected-with women and young girls becoming victims of both environmental degradation and the privatization process.

The adoption of non-agricultural income activities by the district such as the privatization of formerly commonly managed resources has caused inequitable access to and control over commercial coastal aquaculture resources. Further, there is a resulting inequality in household income distribution. Those with connections to powerful local bureaucrats and party leaders gained access to these resources. The poor, a social group who traditionally have been the most dependent on the local mangrove resources, have become the social group with the least access to these resources. This has occurred within a development context in which modest amounts of international NGO applied funding were used, with the intent of securing pro-poor outcomes from the rehabilitation of mangrove resources. In fact, the rich and the upper middle-income households had better abilities to exploit new opportunities associated with the liberalization period. More important, they were able to capture nearly exclusive access to the newly privatized coastal aquaculture resources. This further differentiated them from the other groups, namely the middle and the poor households who were simply unprepared to grasp emerging market opportunities, due to lack of capital and labor. Once nearly exclusive access was secured, those better-off were able to consolidate advantages and more firmly establish a

superior standing within the village economy. These households worked hard, were willing to take risks and had previous management and entrepreneurial skills.

Although the village is stratified and response to market demands has been different for individuals, village members acted collectively and successfully to exclude outsiders who threatened to abolish their rights over their local resources. The case, nevertheless, shows how fragile local rights over local resources are in the present system. No one knows if any new proposal for the organization of intertidal resource management will be proposed. Local rights over local resources could be abolished by the stroke of some government official's pen.

As the case of Giao Lac Village in this study illustrates, neither state control nor private sector control alone can provide a viable solution to mangrove resource degradation. Likewise, it does not make sense to propose only "community-based resource management," because the local community itself is highly heterogeneous and outsiders also use the resources. A combination of national control, private ownership and community-based co-management therefore appears to be the most suitable strategy to promote in the context of Giao Lac. The province would manage the dike system since a breach in the dike system can cause damage to many communities. Households would continue to manage the auctioned shrimp ponds according to private sector principals, since the proceeds from the bidding process can be spent on the village's infrastructure, such as roads, schools and health clinics. And the community would manage the mangrove forests and be granted the right to require shrimp pond and clam farmers to pay money into a local fund that would be used to offset loss of income to other villagers as a result of mangrove habitat destruction. They also would be required to provide a fund to be used to reclaim abandoned shrimp and clam farms for mangrove or some other productive and communally owned habitat.

References

1. ADB et al. (2003), "Vietnam Development report 2004: Poverty", *Joint Donor report to the Vietnam consultative group meeting*, December 2-3, ADB, AusAID, DFID, GTZ, JICA, Save the Children UK, UNDP and the World Bank, Hanoi, Vietnam.

2. Adger, N. W. (1999), "Exploring income inequality in rural, coastal Vietnam", *Journal of Development Studies* 35(5), pp. 96-119.

3. Le, C. T., and T. A. Rambo. (1999), *Composite swidden farmers of Ban Tat: A case study of the environmental and social conditions in a Tai ethnic minority community in Hoa Binh province, Vietnam*, Center for Natural Resources and Environmental Studies (CRES), Vietnam National University, Hanoi.

4. Le, T. V. H. (2004), *Coastal resource use and management in a village of northern Vietnam*, Ph.D. dissertation, Institute of Social Studies, The Hague, The Netherlands.

5. Luong, H. (2003), "Gender Relations: Ideologies, Kinship Practices, and Political Economy", in: Luong, H. (ed.), *Postwar Vietnam: Dynamics of a Transforming Society*, Institute of Southeast Asian Studies, Singapore, pp. 201-223.

6. Lutrell, C. (2002), "Embracing and resisting the global shrimp boom: Shifting access to resources in the Vietnamese renovation", *Paper presented at the ninth conference of the International Associations for the Study of Common Property (IASCP)*, Victoria Falls, Zimbabwe, 17-21 June.

7. Nguyen, S. C. (1995), *Agriculture of Vietnam 1945-1995*, Statistical Publishing house, Hanoi.

8. Sunderlin, W. D. (2004), "Community Forestry and Poverty Alleviation in Cambodia, Lao-PDR, and Vietnam: An Agenda for Research", *A position paper presented at the Regional Consultation Workshop for ADB-RETA 6115: "Poverty Reduction in Upland Communities in the Mekong Region through Improved Community and Industrial Forestry*", Bangkok, Thailand.

Overview of a La Ha's village in Son La province, Vietnam.

Photo: Nung A Thao