

## **Chapter VIII**

### **Forest Use and Patterns of Interaction**

Facing day to day with incentives or disincentives created by the given characteristics of the forest resources and community, and institutional arrangements, co-users will make choice of different action strategies on their commons. In this chapter, the study will examine three strategies, such as cooperation, opportunism or shirking and free riding, that villagers can choose in using their common forests, which affect their management practice, and associated variables with each choice.

#### **8.1. Cooperation**

One important and fundamental factor that decides the success in managing the commons is the cooperation of co-users. The cooperation in the forest management by village is the villagers' participation in and contribution to the collective actions to achieve the common objective of sustainable management and use of their forest resources. The cooperation, more or less, affected by the available cooperative actions and reciprocal relationship in the normal life of members of communities. If people have ever involved in cooperative actions, it is easier to ask them to contribute to other cooperative actions for common objectives.

As many other rural villages in Vietnam, Van Tien village inherently has the close society structure made up by racial or kinship and neighbor relation. This is fundamental for many collective actions to be done. These actions include labor exchange in production, mutual helping in risk incidents and misfortunes, and common activities of the village as a whole, say, building dams and making roads and so on. The cooperative activities in the village has extended to the ritual of the life circle of human being such as weeding, death-day ceremony, funeral celebration, and so on, that requires so large cost that some households cannot cover. Other households have contributed money as well as material for these households

The inherently cooperative and reciprocal relationship among villagers was “strengthen” when the village experienced the two wars against the enemies, especially American. The villagers voluntarily contributed not only their food and money but also their “blood and bone” to collectively protect the Nation in accordance with Ho Chi Minh’s word of calling for all population for the fighting. Through the collective stage, once again this relationship was reinforced. In that period, under the Cooperatives’ management, all productive activities were collectively done. There were many labor exchange and production groups established at the village level. The villagers had to work together in the Cooperatives and were equally enjoyed their share based on their laboring day contribution. Although these cooperative activities in production were compulsory and organizational, it helped to maintain the inherently cooperative relationship among villagers. After the war finished, together with the fate of the whole country, the villagers had to live in poverty and starvation. The miserable life made their relations closer. The life style of mutual dependency, “only one cry, the whole village wakes up”, and the spirit of mutual helping, “intact leaf protect broken leaf” helped villagers to overcome this arid situation.

Once the market economy penetrated into the rural society in general and the village in particular, money has tended to become a “tool” dominating the rural life. Almost things are attributed to money as a measurement. Likewise, there has been the considerably wealthy stratification in the society. This strongly has affected the traditional cooperative and reciprocal relationship of the village. The reciprocal exchanges have been changed from the fundamental basis on people’s willingness to the basis on people’s conditional expectation. This expectation is that the helper only accepts to help the other when he hopes to be able to get the help again from him at other time. For several productive activities requiring large pooled labor, the villagers had to rent labors rather than called for labor exchange.

Yet, partly there still exist cooperative actions in the village. The labor exchange has usually been made in harvesting rice that needs large labor in a short time. This cooperative labor exchange is quite strict in maintaining equality in the amount of

labor or duration contributed. The villagers, who obtained the labor from other villagers to harvest their rice, then had to return this labor by working for those when they need. In building a house or having ceremonies, it was still easy for villagers to request the help from others because most villagers thought that this was important work for all the human being's life and they helped with their willingness rather than conditional expectation.

The activities for the common objective of the village such as maintaining the irrigation system and building the public works for the village also have been collectively done through common efforts of villagers. These cooperative activities have been organizational and villagers involved for their obligation and duty to the village and their own interest as well.

All cooperative activities are driven from certain motivations. The motivations that lead villagers to cooperate to manage their forest, from the survey, was found as follows.

Table 19. Motivations for villagers to cooperate in forest management

| Motivations             | Case | Percentage |
|-------------------------|------|------------|
| Water source protection | 57   | 81         |
| Outside threats         | 26   | 37         |
| Distrust official       | 9    | 13         |
| Encouraged by leaders   | 41   | 59         |
| Others                  | 4    | 6          |

Source: Survey, 2002

The most important motivation that brings the members of the community together to cooperate in community based forest management is to protect the forest from degradation for protecting water sources. From the survey, there were 81 percent of respondents whose motivation to protect the forests is the water protection.

As mentioned, the attribute of the forests, particularly the open forest, is to border with many other communes, so that it frequently is exposed to outside threats. The illegal exploitation from outside has heavily caused the degradation of the local forest. So another motivation for cooperation is to exclude the outside from the forest. However, the percentage of villagers who have this motivation is not high since the open forest is considered as the state property rather than common property, which affect their attitude.

Likewise, the encouragement and mobilization by the leaders created the motivation for villagers to protect the forests. After the collective stage, the majority of the open forest became the barren hills. The consequence of that was that it happened regularly flood and drought that made crops destructive. In front of this situation, the commune authority paid much attention in and put necessary priority for the forest protection. The communal and commune leaders conducted propagating and mobilizing villagers to protect the forest resources and gained the supportive responds from the villagers. From the survey, 59 percent of respondents participated in protecting the forest for encouragement by the leaders.

Having the motivations to protect the communal forests, villagers participate in the cooperative activities of forest management. There are many cooperative activities in which the villager participate for managing the forests, the study, however, examines three major activities which are considered as regular and important and require the voluntary participation of members of the community. These are the participation in monitoring, village meeting, and common activities for forest protection mobilized by village leaders.

The first is monitoring, which is a basic responsibility for everybody to have the ears and eyes for the community when strolling in the forest areas on a daily basis. Although the monitoring tasks are assigned to forest protectors, with the large forest area and not big enough number of protectors, it is difficult to implement these tasks efficiently as expected unless villagers participate voluntarily in monitoring. The villagers' participation in monitoring here does not mean that they function as the

protectors, but rather they always pay attention in others' activities related to the forest resources, discover violation and inform the authorized persons. Not the same as groups of assigned monitors mentioned in Chapter 7, the monitoring by the villagers has so far not had any control mechanism as well as specific assignment, but rather it was based on their voluntary consciousness and awareness. However, this monitoring was regularly presented in the village meetings in order to consider and judge the spirit, attitude and responsibility of each villager in forest management. From the survey, it was found as Table 20.

Table 20. Percentage of villagers who participate in monitoring

|       | Cases | Percentage |
|-------|-------|------------|
| Yes   | 50    | 71         |
| No    | 20    | 29         |
| Total | 70    | 100        |

Source: Survey, 2002

Among villagers who participated in monitoring, most of them pay attention to others' activities on the village forest rather than the open one. They thought that the open forest had its owners who are the state forest enterprise and households allocated on lease. These owners were responsible to protect their own forest other than them. The remainders, who did not participate in monitoring, stated that this task was the responsibility of the protectors. They added that if they discovered the violators and informed the protectors, they gained nothing. The violators however would be left with the bad impression because they could be exposed.

Although there is still a small fraction of villagers who did not participate in monitoring, it is the big problem for the management of quite large forests. It seems not to make the rules to encourage villagers to participate in monitoring. It is desirable to promote propagation and education to improve their awareness, and to create incentives for their participation.

Second is the participation in the village meetings relating to the forest management. The village meeting is the arena where issues on the forest management are discussed, the villagers have opportunities to put forward their opinions, and the rules are interpreted and introduced. It, from the survey, was found that 93 percent of respondents participated in the village meeting and 7 percent did not.

Table 21. Participation in the village meeting

|       | Cases | Percentage |
|-------|-------|------------|
| Yes   | 65    | 93         |
| No    | 5     | 7          |
| Total | 70    | 100        |

Source: Survey, 2002

Normally the meetings discussing about the forest management were integrated into, rather than separated from, the regular meetings of the village and public associations for others usual issues, of which the villagers rarely were absent. So the percentage of villagers who attended the meeting concerning forest management is so high. The very low percentage of villagers who did not participate in the village meeting is those who have special situations, for example the family with the header who is widow, or the family with only elders. The high percentage of villager participating in the village meeting would not means they are all interested in the forest issues since it is possible they are interested in other issues in the meeting. Anyway, thanks to the participation in village meetings, villagers have frequently been approached regarding issues on forest management of the village, which in turn can, more ore less, affect they behavior toward the forests.

Third is the participation in common activities for forest management mobilized by the village leaders. There are usually incidents in connection with protecting the forest. For instance forest fires and illegal exploitation in a large scale that the only protectors force cannot be able to contain. In these cases, the village leaders have to

ask villagers to voluntarily contribute their forces. From the survey, it found that 87 percent of respondents participated in such activities and 13 percent did not.

Table 22. Participation in other collective activities concerning forest management

|       | Case | Percentage |
|-------|------|------------|
| Yes   | 61   | 87         |
| No    | 9    | 13         |
| Total | 70   | 100        |

Source: Survey, 2002

Even though this participation can be compulsory or voluntary, it more or less reflects the cooperative attitude of the villagers in managing the forests of the village.

Under constraints by the rule system, the cooperative or defective strategy that the villagers chose is shown through whether they comply these rules or not. This is the subtle issue that it is difficult for individuals to give the exact information. Moreover, final decision-making on individual action is a matter of the internal world of the individual conditioned by mental images of obstacles and inducements in relevant environment (Ostrom 1990; Oakerson, 1992).

However, from the survey, with the judicious manner of asking questions to obtain honest answers, we, in some extent of exact, found that the percentage of respondents who always accepted to comply with the established rules is so high. This is showed in Table 23.

Table 23. Choice of strategy in compliance with the rules

| Strategies | Case | Percentage |
|------------|------|------------|
| Cooperate  | 65   | 93         |
| Defect     | 5    | 7          |
| Total      | 70   | 100        |

Source: Survey, 2002

To cooperate or defect to comply with the rules is constrained not only by the characteristics of the rules itself but also by other factors. Most of 93 percent of respondents who complied with the rules thought that the rules imposed were to aim at protecting the forest, which in turn brought benefits for themselves. They emphasized the destruction by the natural disasters in the time when the local forest was heavily depleted. To comply with the rules regulating use of a resource, local users must be aware of the possible consequences of not complying with the rules (Ostrom, 1990). Moreover, they said that if we had not complied with the rules, we would have been discovered and punished. This indicates that the implementation of rules has been strictly monitored. To understand that there is sufficient monitoring of rule compliance is the necessary for people to adhere the rules on the resources (Ostrom, 1990). In addition, they expressed their thinking that being the member of the village, they must be responsible to follow its rules imposed.

Among individuals who defected to comply with the rules, most of them had their explanation that their livelihood still had to depend on the forest resources while the rules imposed is too strict to make them meet a lot of difficulties in meeting their needs for forest products for livelihood. In the interviews, some respondents said "Some time while working in the field, unfortunately the laboring tools, say, plough or harrow, are broken, we have to cut the tree for repairing, however this is still not allowed by the rules". Moreover, it was shown that all households who did not cooperate to comply with the rules are the poor ones, for whom income from fuelwood is the important part. But, the rules do not allow exploiting this kind of fuelwood because in order to have this kind of fuelwood suitable with requirement of market, it is impossible to avoid from exploitation of the living trees that bring the harm to the forest. From the survey, 75 percent of respondents who had cash income from the forests cooperated to comply with the rules, while 98 percent of those who had no cash income from the forests did.

Accepting the rules, in spite of just the thinking, affect the strategy villagers make choice in complying with the rules. It was found that 98 percent of respondents who voluntarily accepted the rules cooperated to comply with the rules, meanwhile 78



percent of those who reluctantly accepted the rules did. All respondents who did not comply with the rules were the ones who did not participated in decision making. It might be possible that they did not understand the reason for the rules and did not know the rules in detail. Whilst, all respondents who participated in rules making, accept to comply with the rules.

The different perception of the villagers on the legal status of the forests leads to their different choice of strategy in term of rules. It was shown that 100 percent of respondents who did not cooperated to comply with the rules were the ones who perceived the open forest as the state property. That is, individuals who perceive it as state property resource are more likely to defy the rules than those who perceive the forests as common property resource. The reason is that, with communal property, the villagers have a sense of attachment and obligation with other community members as they maintain reciprocity within the village community.

The villagers whose motivation to protect the forests is the encouragement by the communal leaders are likely to cooperate to comply the rules. From the survey, 97 percent of respondents whose motivation to protect the forests was the encouragement by the communal leaders cooperated to comply with the rules. Meanwhile, 86 percent of those without this motivation did.

Using land hill for cultivation is also a factor that determines the compliance of the villagers with the rules. It was found that, respondents who had hill land were much more possible to defect to comply with some rules concerning hill land use than those who did not were. As mentioned in Chapter 5, there were 44 percent of households interviewed having the land hill. This land was not allocated but previously illegally occupied. According to some rules imposed, recently the commune authority has confiscated some hill land areas that were left unused or used ineffectively and reallocated to other households. Because of being able to be lost of land, most of households who had this kind of land had such attitude while the household who had not hill land were favor of these rules. However, it was very possible for households with the hill land to accept to comply with other rules on

using other forest resources, especially firewood. The reason is that these households they created and would be able to create substitutes for forest products on their hill land. Moreover, this land brought employment and additional income, in spite of not high, to them. Therefore the limitation on exploitation of these products did not become a problem to them.

Between the households who had hill land and those who did not have this land, the problem here did not only stop at whether or not they comply with the rules but became the conflict among them. For the rules to be enforceable, it is necessary to make these rules be precise and reach the consensus of majority of villagers. Moreover, households who had this land play an important role in monitoring because they usually go into the forests for cultivation and harvesting on their land areas. It needs to pay attention in attracting their participation in monitoring.

In short, the above discussion is about the determination of individuals relating to cooperation in the management and use of forest resources. If the users chose the defective strategy, their benefit will not reach the optimal point while the commons resources are overused, leading to degradation (Ostrom, 1990). Endurance of community based forest management depends on the commitment of the members of the community to cooperate and comply with the rules. That almost individuals chose the cooperative strategy with the rules does not mean that they will not ignore the rules once facing with temptation of benefit and that they have never committed violation of the rules. This will be discussed in detail in the next.

## **8.2. Opportunism**

This is one strategy, which individuals may choose in the use of common property resources, which can be seen as the problem in institutional arrangements that there can be temptations inside a common property regime to cheat on community rules (Miller, 1993). The higher the individuals have opportunistic behavior, the lower they have voluntary consciousness to follow the rules. If a large number of appropriators act opportunistically or feel that the others also act opportunistically in such a setting

it is difficult to develop stable, long-term commitment to cooperation (Ostrom, 1990). In this situation, tough monitoring and sanctioning mechanism is needed.

From the survey, with the question used for interviewing “If you had an opportunity to exploit forest resources by violating the rules without being noticed by anybody, would you take that chance?”, there were 18 percent of villagers interviewed took opportunistic action whenever they had the chance, and 82 percent did not.

Table 24. Percentage of villagers taking the opportunistic behavior

|       | Case | Percentage |
|-------|------|------------|
| Yes   | 13   | 18         |
| No    | 57   | 82         |
| Total | 70   | 100        |

Source: Survey, 2002

Those who accepted to comply with the rules do not mean that all of them will do not chose the opportunistic behavior. With the so great number of individuals accept to comply with the rules as mentioned above, there, however, are some individuals who will ignore the rules and act opportunistically when given a chance. It may be because that there are some situations in which the potential benefits are so high that even strongly committed persons will be tempted to shirk. In reality, the overwhelming adoption of rules will not mean the reduction of opportunistic behavior to zero (Ostrom, 1990).

The opportunistic behavior is also determined by several variables. The variables that significantly associate with the choice of opportunistic behavior are examined in the table below.

Table 25. Summary table of the variables significantly associated with the choice of compliance with the rules

| Characteristics of people                    | Have opportunistic behavior |        |
|--|-----------------------------|--------|
|  | Yes (%)                     | No (%) |
| Cash income from forests                     | 66.6                        | 5.4    |
| Perceiving the forests as a common property  | 5.5                         | 23     |
| Participation in decision making             | 0                           | 26     |
| Participation in Monitoring                  | 3                           | 16     |
| Participation in other collective activities | 14.7                        | 44.4   |
| Motivation being water protection            | 12.2                        | 46.1   |
| Motivation from leaders                      | 2.5                         | 40     |
| Participation in social groups               | 15                          | 41     |
| Secondary job                                | 13.6                        | 26.3   |
| High dependence on water sources             | 20                          | 67     |
| Cultivable hill land area                    | 38.7                        | 45.6   |

Source: Survey, 2002

The difference in total household income does not significantly associate with the opportunistic behavior. However, the cash income from forests is significantly associated with it. From Table 25, it can be seen that the possibility of opportunism is so high in the group of households with cash income from the forest compared with the group without this kind of income. Households who obtained income from the forests primary through trading fuelwood were the poor ones and have no alternatives for their livelihood. Therefore, not only they took the given opportunities, did they desperately struggle for this income. Although the prime product for which the villagers act opportunistically is fuelwood, this, for the regenerating forest, affects strongly the ability of the forest to recover.

A dominant characteristic that affected villagers' opportunistic behavior is their dependence on water sources from the forests. From the survey, the difference in taking opportunistic action is not significant among groups who have different levels

of dependent on water sources as categorized in Chapter 5. However, when this dependence was categorized into two groups, high depending on water source and the rest, this difference is very significant. It may be because the number of cases in each group as categorized in Chapter 5 is not large enough. It was found that only 20 percent of respondents who high depended on water sources were possible to take opportunistic action while 67 percent of respondents who did not high depended on water source were readily to take it. As discussed in previous chapter, these water sources played the role as a decisive factor on productivity of crops in the village, which affects the security of livelihood of the villagers. In turn, the wealthy of the water sources depend on the status of the forests. This was proved through the development of water sources when the status of the forest changed through time. The expectation of the villagers from forest management is the adequate water sources for cultivation. Therefore, it is reasonable that this characteristic strongly affect villagers' behavior. Logically, the motivation of villagers to protect the forests that is water protection has affect on villagers' opportunistic behavior, since this motivation derives from their dependence on water sources from the forests.

Besides fuelwood, dependence of the villagers on the forest for others products were not significantly associated with the possibility of opportunism. There are some reasons for that. The households' dependence for wood was mainly for building but not for trading, so that they had little incentive to act opportunistically for they have had their houses. The chestnut has been open to everybody. The fertility of the rest hill land areas was not attractive enough for the household to exploit; therefore they had no incentive to take the given opportunity. In general, the available endowments of the forest, except for fuelwood, are not much attractive to make villagers do opportunistically action.

It appears that the possibility of opportunism is high in the group of households who have no secondary jobs. Table 25 show that among respondents readily to do opportunistic action, 13.6 percent of them were the ones who had secondary jobs and 26.3 percent had not this kind of job. This implies that the secondary job play an important role as a safety valve for sustainable use of forest resource.

Individuals who did not participate in the social groups had the higher possibility of opportunism than those did. Being the member of the public association, the villagers have the sense of attachment and obligation with the village. Furthermore, they have been regularly propagated and educated about the role of the forest as well as forest management, so that their consciousness is higher on the forest.

In Table 25, it can be seen that the percentage of villagers perceiving the forests as a common property had opportunistic behavior is very higher than that of household perceiving the forest as another property. Motivation for forest protection is significantly associated with opportunism. Individuals whose motivations of protecting the forests are the water protection or inspiration by the leaders had the higher possibility of opportunism than those whose motivations are none of them.

The participation in decision-making process, monitoring, and other common activities are all significantly associated with the opportunism. From Table 25, the rate of villagers who participated in monitoring and common activities but had the opportunistic behavior is significantly lower than the rate of villagers who did not participate in these activities and had the opportunistic behavior. The villagers who participated directly in decision-making process were committed to the rules devised, so that they were unlikely to do opportunistic action.

Land hill is also an essential resource for cultivation. It both brings income to households and provides products that can substitute for forest products, especially firewood. It should have strong associated with villagers' opportunistic behavior. In Table 25, it can be seen that the percentage of respondents who had hill land were ready to take opportunistic action is not significantly different from that of respondents who had no hill land were. This means it did not strongly associated with the villagers' opportunistic behavior. As mentioned in Chapter 5, there were 44 percent of households interviewed having the land hill. In other words, the percentage of households who had hill land and households who did not is almost the same. In another hand, all households who had cash income from forest fell in the group of

households without hill land. This should have made the percentage of respondents having opportunistic behavior in this group so high compared to in the other group. However, because most of respondents participating in decision-making also fell in this group, the percentage of respondents taking opportunistic action in this group became not quite high and different from in the other group.

Opportunism or shirking is a pattern of behavior that could jeopardize reciprocity in the use of common property resource if it becomes the choice of the majority of users. Opportunistic behavior is a possible strategy that all users will face in an attempt to manage common property resources, no matter how well their institutions are devised (Ostrom, 1990). It is best to keep this strategy from becoming the practical action by promoting monitoring and sanctioning.

### **8.3. Free ridding behaviors**

Free-riding is a behavior in which people contribute less but want to take more than expected in a reciprocal relationship (Oakerson, 1988). Thus, this behavior would make benefit for some individual members of group while making more cost to collective group. In managing the commons, contribution by co-users is not only their materials or money but also their efforts; the reciprocal relationship partly is a relationship in which individuals agree to a pattern of mutual restraint, and mutually enforce such a pattern in order to draw the larger benefit. In case of the village, common efforts of the villagers, which are reflected through making and enforcing the rules to protect the forests, are much more important than other contributions. Therefore when analyzing this behavior, we only emphasized on villagers' breaking the common rules of the village. Any individuals who broke the rules are ones who took benefit from common efforts of the whole village.

Normally, it is reluctant for people to report their violation. So in order to collect this kind of information, the investigator took much time for approaching and making friend with the villagers to be interviewed. The friendly interview came up with the result presented in Table 26 underhere.

Table 26. Percentage of respondents having broken the rules related to forest management

| Breaking the rules | Case | Percentage |
|--------------------|------|------------|
| Never              | 51   | 72         |
| One                | 3    | 4          |
| Twice              | 2    | 3          |
| More than twice    | 14   | 20         |
| Total              | 70   | 100        |

Source: Survey, 2002

It is no surprising that the percentage of individuals who broke the rules was so high (28 percent). Because the part of the forests, particularly the open forest, has been changed from an open access resource with few, if any, limitations to a common property resource with the rule system imposed. In the beginning of this transition, it was possible that villagers broke the rules because their previous needs for forest products were limited by the rules. However, it may be that the problem of free ridding has not been serious because if so, the community-based forest management would not exist to day.

Rules that individuals usually broke are the ones on hill land exploitation grazing and collection of forest products, particularly fuelwood. However, recently the illegal exploitation of land has been not problematic, but rather the serious problem has been the collection of fuelwood.

Three cases violating the rules one time occurred in the village forest. However, the nature of these cases is not serious. They usually happened in the situation in which the violators really needed immediately some additional trees while making the house or animal cottage because of unpredicted shortness. Moreover, these cases



thought that their breaking of rules does not make the forest as a whole dangerous. Although these rules breaking events are not consciously, they, more or less, affect negatively others' attitude toward the forest management.

Two individuals who broke the rules twice thought that others did likewise. They both broke the rules on the forest-land occupation at beginning of the time when these rules was imposed. Individuals who broke the rules more than twice were mainly the ones collecting fuelwood for trading. They were really the poor. In interviewing, some of them said that they should have not done like that, but because of no alternative they had to do it for survival.

In short, free ridding by the villagers in the village community has not yet reached a serious degree, however, it is necessary to limit these incidents. Because the forest has been regenerating and it is quite vulnerable to these incidents. Moreover, It is the obstacle for the reciprocity and cooperative actions, which are necessary to the commons management, and thus negatively affecting the existence of the community based forest management. Therefore it is important to keep the number of free riding incidents to the minimum.