

DEVOLUTION AS A STRATEGY TO IMPROVE RESOURCE MANAGEMENT AND ALLEVIATE POVERTY ? EVIDENCE FROM FOREST LAND ALLOCATION IN THE DAK LAK PROVINCE OF VIETNAM

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1. Problem Background

Devolution of forest management - the transfer of resource rights and management functions from state agencies to local users - has emerged as a major policy thrust to cope with the problem of deforestation (Banerjee 1997). Devolution policies are based on the experience that state agencies often have a limited capacity and insufficient incentives to manage natural resources efficiently and sustainably. Devolution aims at contributing to sustainable development, which includes ecological goals, such as a better protection of natural resources, as well as economic and socio-cultural goals, such as poverty alleviation, increased productivity, equity, and protection of minority rights and local lifestyles. However, the hopes that devolution indeed allows societies to achieve these objectives have not often been fulfilled (Meinzen-Dick & Knox, 2001). In an assessment on the experience with devolution of forest management in Asia and the Pacific, Banerjee (1999: 16-19) identified the following problems:

At the macro-level:

- Lack of political will,
- lack of clear policies and legislation for devolution in forestry,
- lack of clear tenure statements,
- lack of technology,

- lack of institutional restructuring, and
- bureaucratic apathy.

At the micro-level:

- Usurpation by local elites and power brokers,
 - failure of reducing the forest dependency of the local population within protected areas,
 - lack of incentives for users,
 - neglect of indigenous technology and local needs, and
 - lack of local participation.

While the problems of devolution have clearly been recognized, there is still a lack of analytical concepts and empirical knowledge concerning the conditions under which devolution policies are able to overcome these problems (Meinzen-Dick & Knox, 1999).

An important process of devolution in South-East Asia is the Forest Land Allocation program in Vietnam. While other countries concentrate on the devolution of rights and responsibilities in forest management to communities or user groups, Vietnam has focused on the allocation of state forest land to private households. This process could also be referred to as “privatization”, however the state will remain to be the formal owner of the land. The forest land allocation policy can be seen in the wider

context of land policy in Vietnam. Starting with the promulgation of the first land law in 1988, Vietnam's land policy has shifted away from a centrally planned system with collective land management to a market-oriented system with an increasing importance of rural households in the management of land resources. While the allocation of land to households proved to be successful in the agricultural sector, the implementation of this policy in the forestry sector has lagged behind. Forest land allocation has been carried out according to Decree No. 02/CP dated January 15, 1994 and revised Decree No. 163/ND-CP dated November 16, 1999 which is based on the land law of 1993 and enables the state to allocate or assign forest and forest land to households, individuals and organizations for long-term sustainable use. The land law has been modified and supplemented in 1998 and the latest revised land law will be validated from August 2004.

Until the end of the 1990s mostly bare land for afforestation has been allocated to households under this program. In 1999, Dak Lak province took over a pioneering role, when it initiated a pilot project and allocated 7,000 ha of *stocked* forest land to individual households with a formal land title (Red Book Certificate). The villagers will receive long-term, inheritable use

rights to the forest land. If harvesting is possible in the first years after allocation, the state forest enterprise that allocated the land will receive a share of the benefits. Taking into account that there is still a considerable lack of knowledge and experience concerning successful models of allocating forested land, this pilot project in Dak Lak Province offers a unique chance for policy-relevant empirical research on forest land allocation.

Under the Decree No.163/ND-CP and Decree No. 01/CP, till end of 2003 there are thousands hectares of forestland have been allocated to individual households, group of households and communities. According to the assessment of natural forest allocation program Nguyen Ngoc Lung (Dec.2003), the forestland allocation program is taking place country wide with full support from local people. The process of renovation state forest enterprises under the Decision No. 187/QD-CP also urges the state forest enterprises to appraise its development strategy as well as their capacity to manage forest without participation from local people. This means that forest land will be allocated based on the demands of local people in stead of state forest enterprise management with rapid degradation like last few decades. The following table illustrates the results of natural forest allocation in some provinces by July 2003.

Provinces	Allocated area	Type of recipients
Thua Thien Hue	1,570	Communities
Thanh Hoa	119,252	Communities, groups of HH, individual HH
Lai Chau	132,445	Communities, groups of HH, individual HH
Son La	384,784	Communities, groups of HH, individual HH
Dak Lak	24,885	Communities, groups of HH, individual HH

Source: Lung N.N (2003)

Although, forest land allocation program has been implemented with the benefit sharing under instruction of Decision No. 178/QD-TTg dated November 12, 2001, the program still need to be improved as its shortcomings encountered during implementation process. Further study in the benefit sharing policy is highly needed to fill the gap for further implementation.

2. Objectives

The case study aimed to contribute to overcoming the knowledge gaps identified in preceding section by analyzing an empirical case of devolution in forest management: the pilot program on forest land allocation to households in Dak Lak Province, Vietnam.

The specific objectives of the research project were

- to assess the role and the interaction of governmental and non-governmental stake holders involved in the FLA process at different levels,
- to examine the degree of participation of households in the forest land allocation process in selected villages, where the program was implemented,
- to identify the expected impact of forest land allocation on livelihoods of local residents, and on forest protection, and
- to derive policy recommendations with regard to devolution in the forestry sector.

3. Empirical Studies on Forest Management in Vietnam

A historical review of forest management in Vietnam, starting from the pre-colonial period, is provided by Poffenberger & Phon (1998). The authors point out that forests remained under

customary communal management during the colonial period, while after independence, state administration of forests by government offices and state forest enterprises gained importance. Traditional forest management received limited recognition under new laws (Poffenberger & Phon 1998: 10). The changes in forest management during the last 40 years have also been described by Sikor & Apel (1998). Sikor (1998) emphasizes the more recent policy trend from state to household forestry.

Comprehensive studies on devolution in Vietnam's forestry sector which aim to analyze the experience and prospects of forest land allocation are almost non-existent. An exception is study by Morrison & Dubois (1998). A major part of the literature on the forest management in Vietnam has focused on case studies of the different ethnic groups living in the mountain areas of Northern Vietnam, applying a holistic ethnographic approach. Examples are Thang's (1995) study of forest management by the Hmong and Dzao peoples, the study of two Black Thai villages in Son La Province by Apel & Sikor (1998) and the collection of village forestry studies edited by Poffenberger (1998).

An overview of natural resource management in the Central Highlands, where Dak Lak Province is situated, has been provided by Huy & Nghi (1999). The most important ethnic groups in Dak Lak Province are the Ede, the Jrai and the Mnong. Hung & Vorpohl (1997) carried out a short-term study on traditional natural resource management systems of the Mnong from a cultural anthropology perspective. Junker (1999) conducted a similar study for the Jrai. Such studies provide useful background information for the analysis of devolution processes.

4. Theoretical concepts and hypotheses

For the case study, a theoretical framework based on concepts of resource economics and New Institutional Economics was developed (see Birner et al., 2002). The major propositions derived from the theoretical considerations can be summarized as follows:

P-1: If “push factors” such as insufficient income from agricultural land and lack of alternative income sources cause encroachment and illegal logging, forest land allocation alone will not create sufficient incentives for forest protection. The incentives for protection created by forest land allocation depend on the discounted benefits from allocation which have not been enjoyed prior to allocation and on a potential “ownership effect”.

P-2: Households which receive forest land have an increased incentive to stop other villagers from illegal activities on the allocated forest land.

P-3: Households which did not receive forest land will have a lower incentive to co-operate in forest protection, especially if they consider the forest allocation process as unfair and if they lose benefits from the forest which they enjoyed or expected prior to allocation. Phrased differently, forest land allocation to individual households may weaken traditional institutions of forest protection if these institutions depended on voluntary co-operation of the villagers.

P-4: If some areas of forest land are allocated, while other forest areas which are accessible by villagers are not allocated, households may shift encroachment and logging activities to areas which have not been allocated. This may apply both to households which received forest land and those which did not.

P-5: The incentive of the state forest enterprises to monitor forest protection after forest land allocation depends on the interest of the enterprise in the allocated forest after allocation, which is influenced by the discounted value of the share of benefits which the state forest enterprises will receive.

5. Research methods

The research methods used for the case study included (1) qualitative interviews, based on interview guidelines, with stakeholders involved in forest land allocation at different levels, and (2) a survey in a stratified random sample of 150 households in selected villages in which the forest land allocation program has been implemented. The study covered the forest land allocation projects conducted by the Ea Hleo and Cu Jut Forest Enterprises. These two cases have been selected because the Forest Land Allocation process was particularly advanced there and because the cases captured a considerable variation in socio-cultural and ecological conditions.

The interviewed stakeholders comprised representatives of state agencies at the provincial level, including the Department of Agriculture and Rural Development, the Sub-Department of Forest Development, the Department of Forest Protection, and the Department of Land Management. At the District level (Ea Hleo and Lak), representatives of the following state agencies were interviewed: People’s Committee, Cadastral Office, and Forest Protection Section. In the communes of Ea Sol and Dak Phoi, the chairman of the People’s Committee and the administrative staff involved in forest land allocation were interviewed. Interviews were also held with the leaders of the Ea Hleo Forest Enterprise and the Lak Forest Enterprise. Each enterprise allocated forest land in two villages, so that the household survey was conducted in four villages.

In order to get unbiased representative field data, a stratified random sample of 130 households, comprising 75 recipient and 55 non-recipient households of forest land were interviewed, using a standardized questionnaire. Next to the recipient/non-recipient status, poverty class was used as stratification criterion for the random sampling. The data on the recipient status were provided by the state forest enterprises. To get data on the poverty status, the official classification system was used, which distinguishes four classes on the basis of food availability and holding of land and other assets: better-off, medium, poor, and hungry. The SPSS program was used for the statistical analysis of the household data.

6. Results

The interviewed stakeholders involved in the forest land allocation program emphasized two major objectives: (1) to reduce forest degradation by providing incentives for forest protection, and (2) to contribute to poverty alleviation. The theoretical considerations above show the two objectives are closely linked. The results presented in the following sub-sections refer to these objectives.

6.1. Targeting

In order to reach the poverty alleviation goal, targeting plays an important role. The allocation procedure was such that the villagers were informed about the programs during meetings held at the village level. Based on this information, they were required to apply for forest land. At the same time, the state forest enterprises and the political decision-makers developed criteria that the applicants had to fulfill to be entitled to receive forest land. The interviews showed that the implementing agencies had developed criteria for forest land allocation which reflect a strong concern for the capacity of the households to protect forest land. Such criteria tend to exclude certain categories of poor households, for example, single-women households.

Table 1 displays the total number of recipients and non-recipients of forest land in each poverty class in the four villages, where the survey was conducted. In absolute terms, most recipients of forest land are classified as “poor” or “hungry”. However, Figure 1 also shows that the percentage of recipients in the “hungry” class (33 %) is lower than in the “poor” class (46 %).

Table 1: Poverty of Recipients and Non-Recipients of Forest Land

	Better-off		Medium		Poor		Hungry	
	N	%	N	%	N	%	N	%
Recipients	8	40%	21	40%	111	46 %	34	33 %
Non-recipients	12	60%	32	60%	132	54%	69	67%
Total	20	100%	53	100%	243	100%	103	100%

Source: Household survey, 1999

Several binary logit models, using recipient status as the dependent variable, were developed to find out whether poverty status, household size, dependency ration, land holding and other

socio-economic had a significant influence on the probability to receive forest land. However, the different models predicted only one third of the non-recipients correctly and about 80 % of

the recipients correctly. Poverty status was the only variable that had a significant influence in these models. Belonging to the “hungry” or “poor” class increased the possibility to receive forest land. The low explanatory power of the regression models showed that other factors than socio-economic variables were important for the likelihood to receive forest land. The qualitative information collected in the villages suggests that “closeness to political decision-makers” at the commune level, which can be conceptualized as “political capital” was an important influencing factor.

The interviews and qualitative information collected at the village level showed that the selection process was not very transparent. The selection criteria, for example, were not common knowledge. This can be related to an unequal participation of the villagers in the meetings held in the course of the forest land allocation process. Members of the poverty classes “medium,” “poor” and “hungry” participated, on the average, in approximately 2.5 meetings,

while members of the “better-off” class participated on the average in 4.0 meetings. In 87 % of the interviewed households, only male family members attended the meetings.

6.2 Size and quality of allocated forest

The size and the quality of the allocated forest determine the benefits that the households can derive from the forest land allocation program. The household interviews indicated that the state forest enterprises primarily allocated less valuable forest resources. 65 % of the respondents classified the forest resources they received as “poor” and 18 % as “degraded”. Only 1.5 % of the allocated forest land was classified as “rich”, the remaining forest resources were considered as “medium” (13.8 %) or young (1.5 %).

The size of the allocated forest plots differed between one and 35 ha, with a mean of 13 ha per household. A linear regression analysis (OLS) was conducted to identify the factors influencing the size of the allocated forest land.

Table 2: Descriptive statistics of variables influencing forest land allocation

	n	mean	STD	Minimum	Maximum
allocated forest land (ha)	75	13.32	7.84	5	35.0
size of all paddy plots (ha)	75	0.04	0.11	0.0	0.7
size of all upland plots (ha)	75	0.81	0.71	0.0	3.0
number of cattle	75	0.57	1.42	0.0	8.0
Dependency ratio	75	0.46	0.15	0.2	1.0

Source: author

The model included several indicators of household wealth, including the size of the paddy and upland holdings, and the number of cattle, as an important wealth indicator. An

indicator of the dependency ratio, to capture demographic household characteristics, was included as well. As shown by the R-square value reported below Table 3, the model explains 42 %

of the observed variation in the size of the allocated forest land. The size of the paddy holdings and the number of cattle had a significant positive influence on the size of the allocated forest land, while the size of the upland holdings had a negative influence. This indicates that the better-off households, with have larger paddy holdings and cattle numbers, received larger forest plots. The indicator of the

dependency ratio (measured as number of working household members as percentage of total household members) had a significant negative influence, which indicates that households with a relatively higher labor capacity received smaller plots of forest land. These figures point to problems with regard to the goal of targeting poor households with abundant labor resources.

Table 3: Factors influencing the size of allocated forest land (Regression results)

	B	std	standardized beta	T	Significatif
Constant	18.82	3.01		6.25	0.000
Size of paddy land	42.84	11.64	0.48	3.68	0.001
Size of upland	-3.46	1.49	-0.33	-2.32	0.026
No of cattle	1.41	0.55	0.32	2.56	0.015
Dependency ratio	-11.10	6.50	-0.22	-1.71	0.096

Dependent variable: Size of allocated forest land; R-square (corrected) = 0.422

6.3. Expected benefits from forest land allocation

The interviews showed that the majority (74 %) of the recipients of forest land consider an income from timber as the major benefit from the allocated forest land. 18 % expected that they will be able to convert a part of the forest to agricultural land, which was foreseen in the forest land allocation program for households with limited land resources. Taking into consideration that the allocated forest resources were predominantly classified as poor, degraded, or young (see above), it is not likely that the households will receive an income from timber within the next twenty years. Some allocated plots may be suitable for earlier harvest, but in this case the benefit sharing rules with the state forest enterprises reduce the income to be

received by the household the more, the closer is the time of harvesting. Moreover, if the current national plans to implement a logging ban in the regions where forest land is allocated will be realized, an income from timber can only be expected after such a ban has been lifted again. Some of the interview partners mentioned non-timber forest products as benefits from forest land allocation. However, these are not benefits which will be created by the forest land allocation program because non-timer forest products are already collected under the present system. Due to these considerations, one cannot expect that the forest land allocation will directly improve the livelihoods ore reduce poverty in the near future. This conclusion is consistent with the calculations of Bartels (1999) who showed that forest land allocation is not a

sufficient means to eliminate poverty in the villages where forest land is allocated, even if one assumes that productive forest is allocated and the value of non-timber forest products is taken into account as additional benefit.

The interviews showed that there was also a strong tendency among the villagers to compare the forest land allocation program with the assignment of forest protection contracts under the so-called 327 Program. Therefore villagers tended to expect some immediate benefits such as the payments made for the protection contracts. Even though the villagers were told that no such payments will be made, they appeared to expect some benefits from other programs which may be linked with forest land allocation. Therefore, it appears necessary to take care that forest land allocation does not create expectations which cannot be fulfilled. This consideration also refers to villagers that did not receive forest land. With the exception of one respondent, all interviewed non-recipients of land mentioned that they expect to receive land in the future, even though this was not an explicit plan of the authorities in charge.

An indirect effect of forest land allocation on improved livelihood and poverty alleviation may arise due to the possibility to use it as a collateral for loans, if allocation occurs with Red Book Certificates. However, this indirect benefit of forest land allocation depends on the extent to which capital is actually the most serious constraint to increasing rural incomes. Moreover, access to loans alone can hardly be expected as a sufficient measure to alleviate poverty, since other services (extension, marketing, etc.) will have to be provided as well. One also has to take into consideration that providing credit to poor households does not

necessary require collateral in form of land since group liability has proved to be an effective mechanism, as well.

The implication that forest land allocation in the cases under consideration will not generate additional income for the households within the next years is, of course, not an argument against forest land allocation. The generation of benefits in the future can also be considered as an important goal and the interviews indicate that the expectation to pass on forest land to the children is highly valued by the villagers, as the following sub-section will show.

6.4. Incentives for Investment

From an economic perspective, the incentives to invest labor and capital in the allocated forest land depend on the expected future income, taking discounting into consideration. The perceived security of the rights to the income from investment and the possibility to bestow the land to the children can be assumed to have a positive impact on the investment decision, which may be considered as an „ownership effect“. The interviews indicated that the perspective to pass on the forest land to the children was indeed be a strong incentive to invest into the forest land, even though the discounted present value of the future income will be low due to the long investment periods. 63 % of the respondents stated that they plan to engage in afforestation or enrichment planting on their allocated plots. Poverty status did not show to have an influence on these plans.

The interviews also indicate that allocation with a formal land title, the Red Book Certificates, will increase the perceived security of the right to the income from investment, especially for farmers who are already familiar with Red Book

Certificates from the allocation of agricultural land. A negative impact on perceived security, especially if allocation takes place on a contract basis rather than with Red Book Certificates, can be attributed to the negative experience that the forest protection contracts under the above mentioned 327 Program unexpectedly stopped after some years, even though the farmers understood that these contracts would last for up to 20 years. The interviews also showed that the benefit sharing rules with the state forest enterprises were not very clear. Negative experiences with unclear benefit sharing rules in other enterprises, especially coffee and rubber plantations, as indicated in the interviews, could have a negative impact on the perceived security of the future income from allocated forest land. Moreover, the open question of the logging ban mentioned would have to be discussed in order to avoid a negative impact on the incentive to invest.

6.5. Incentives for Better Forest Protection

As mentioned above, an important goal of the forest land allocation program was to improve forest protection. Interestingly, almost all (95 %) of the recipients of forest land were members of forest protection groups. This institution, which was supported by the state forest enterprises, can be seen as an important instrument of realizing economies of scale in forest protection, in spite of allocating forest land to individual households. Respondents who were classified as “poor” or “hungry” reported that, on the average, they participate in forest protection activities 6.4 times per month, while the respondents in the “medium” and “better-off” classes participated on the average only 2.6 times per month. According to a t-test, this difference was significant at the 5 % level. This indicates that

poorer households tend to be more concerned about forest protection than the better-off households.

According to the theoretical considerations, the impact of forest land allocation on forest protection also depends to the type of threats to the forest resources. There were clear indications that „push factors“, especially the lack of agricultural land, are an important reason for forest encroachment in both communes included in the survey. To some extent, this problem is addressed by the forest land allocation program because agricultural land is allocated together with forest land. However, these agricultural land resources may not be sufficient to solve the problem of lacking agricultural land. The need for pepper poles can also be considered as a push factor in the Ea Sol case. The development of alternative methods to cultivate pepper, for example, using live trees, could be considered as a potential solution. A further problem concerning forest protection can be seen in the relocation of logging and encroaching from allocated forest land to areas where forest land has not been allocated. The interviews indicated that this has occurred during the time of the 327 Program, therefore one may assume that this problem continues to exist. The development of alternative income sources in order to remove the “push factors” should be considered as a prerequisite to solve the relocation problem.

7. Concluding remarks

The empirical study on the pilot forest land allocation program in Dak Lak province, under which forest land was allocated to individual households, has revealed both considerable challenges and remarkable potentials. The household survey showed that the goal to target primarily poor households with limited land resources was only partially reached. We found

no indication that the richer farmers were more likely to receive forest land, which can be considered as a success already, because richer farmers usually have better possibilities to use political influence in order to receive forest land. However, among the recipients, we found statistical evidence that richer farmers, indicated by the size of their paddy holdings and the number of cattle, were more likely to receive larger forest plots. Moreover, the allocation process did not seem to be very transparent, and non-recipients had strong expectations to receive forest land in the future, even though there were no concrete plans for further forest land allocation in the respective villages. These findings indicate that more transparency and participation in the targeting process would be required to reach the equity and poverty alleviation goals of the program.

Another major challenge can be seen in the low quality of the allocated forest land, which may be due to a tendency of the forest enterprises to allocate the less valuable forest resources. Political intervention would probably be required to solve this problem. The results of the household survey showed that, in spite of the low value of the allocated forest land, the recipients were willing to invest their time for forest protection. This propensity was even more pronounced among the poorer villagers. The majority of the villagers also planned to invest in the afforestation of the allocated forest land. The prospects to bestow the allocated land to the children appeared to be a major motivation for protecting and improving the allocated forest land. This "ownership effect" can be strengthened by allocating the forest land with a formal title, the Red Book Certificate. The case study also suggests that in view of the pressure on forest land caused by poverty, the forest land allocation program should be accompanied by

programs that aim to increase agricultural production on the forest land that has already been converted.

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