In recent years, the government of Vietnam has taken the bold step of devolving forest management rights to local people. What are the implications for households? This chapter subjects the question to empirical study in Dak Lak Province, Vietnam, using field data collected in 2002–2003 in 13 villages where forest devolution took place between 1999 and 2000. Findings suggest that forest devolution has the potential to contribute to the household economy, but to varying degrees across households and villages. Consequently, the incentives for local people to participate in the management of devolved forest depend on having a feasible benefit-sharing mechanism that addresses the needs of the poor and disadvantaged members of the community.

HISTORICAL BACKGROUND

The past two decades have seen radical changes in forest tenure arrangements in Vietnam. The changes were driven by a quick decline in the area of forest a decade after unification, the ineffectiveness of the state forest enterprise system in forest management, the state’s increased recognition of the importance of local people in forest management and the success of agricultural reforms of the late 1980s. Now the government is devolving forest management rights. Furthermore, the new Forest Protection and Development Law, passed in December 2004, contains clauses in favour of community forest management. The ultimate purpose of such policies is not only to maintain and improve the existing cover of forest but also to improve forest people’s participation and livelihoods. For this purpose, it is
important to know how forest devolution policy is affecting the economy of local households before it is applied to the whole country.

**FORESTS AND FOREST MANAGEMENT IN VIETNAM**

Vietnam is a tropical country located in Southeast Asia’s Indochina Peninsula. Its territory stretches from 8°02’ to 23°23’ North latitude and from 102°08’ to 109°28’ East longitude. The total land size is 33.038 million hectares, administratively divided into 64 provinces and municipalities.

According to the most recent statistics, 57.6 per cent of the land in Vietnam is classified as forest land (Table 12.1). Total forested area is 12.62 million hectares, of which natural forest covers 10.28 million hectares and plantation forest 2.33 million hectares. This is equivalent to a national forest cover of 38.2 per cent (31.1 per cent natural forest and 7.1 per cent plantation forest). By uses, forests in Vietnam are classified as production forests (36.3 per cent of the total forested area), protection forests (48.1 per cent) and special-use forests (15.6 per cent).

**Table 12.1 Forest classification according to uses**

<table>
<thead>
<tr>
<th>Forest types</th>
<th>Total area (ha)</th>
<th>Special-use forest (ha)</th>
<th>Protection forest (ha)</th>
<th>Production forest (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Forested area</td>
<td>12,616,700</td>
<td>1,958,320</td>
<td>6,172,062</td>
<td>4,486,318</td>
</tr>
<tr>
<td>A. Natural forest</td>
<td>10,283,173</td>
<td>1,874,829</td>
<td>5,302,652</td>
<td>3,105,693</td>
</tr>
<tr>
<td>B. Plantation forest</td>
<td>2,333,526</td>
<td>83,492</td>
<td>869,410</td>
<td>1,380,625</td>
</tr>
<tr>
<td>II. Non-forested forest area</td>
<td>6,411,990</td>
<td>417,716</td>
<td>3,377,417</td>
<td>2,616,857</td>
</tr>
<tr>
<td>Total</td>
<td>19,028,690</td>
<td>2,376,036</td>
<td>9,549,479</td>
<td>7,103,175</td>
</tr>
</tbody>
</table>

Source: www.kiemlam.org.vn.

At present, forest land in Vietnam is being managed under different tenure arrangements. According to the current definition applied by the Ministry of Agriculture and Rural Development, forest owners comprise eight major groups: 1) state enterprises, 2) management boards of protection forest, 3) management boards of special-use forest, 4) joint venture enterprises, 5) individual households, 6) collectives, 7) army units and 8) people’s committees. Among these owner groups, state enterprises, individual households and people’s committees are the largest forest owners, and army units and joint venture companies own the least forest area (Figure 12.1).

Forest management under the eight ownership groups can be classified into four major tenure arrangements: public property, private property, common property and forest contracting (see also Nguyen, 2005a). State or public property refers to forests under management by owner groups 1, 2, 3, 7 and 8 above. Under
this arrangement, forest is allocated to state bodies for an unspecified period of
time. Where the forest falls into the special use or protection category, forest owners
are entitled to receive state funds for management of the forest. Private property
includes forest management by individual households and joint venture enterprises
(owner groups 4 and 5 above). Under this arrangement, forest is allocated to its
owner for long-term (50-year) management. In most cases, forest owners under
this arrangement are entitled to a legal title for the forest area they are given.
Common property is found in forest managed by collectives (owner group 6). How-
ever, official statistics count only those collectives legally recognized by the
state; areas under traditional communal management (not officially recognized
by the state) are not included. Under the collectives system, forest is allocated to
a group of individuals, each with similar rights and responsibilities. Finally, forest
contracting in Vietnam is formed when an owner of state forest property signs
a contract with an organization, a household, a group of households or a village
to protect the forest. Under this arrangement, rights of ownership of the forest
under contract remain with the contractor and the contractee has only the rights
specified in the contract.

The area under different forms of ownership is shown in Table 12.2. The area
of forest under contractual arrangement is included as part of the area under state
ownership. At present, there are around 2.26 million hectares (17.93 per cent of
the total forest area or 24.76 per cent of the forest under state ownership) under
protection contracts with local people (see also www.kiemlan.org.vn; Nguyen,
2005a).
Changes in forest policy are summarized in Box 12.1 (see also Nguyen et al, 2001; Nguyen, 2005a). Until the early 1990s, management of forest by state organizations was the only form of forest tenure. Efforts were made to introduce private forest management in Vietnam following the approval of the Forest Protection and Development Law in August 1991. In addition to introducing ‘private property’ in forests, the law also established a legal basis for setting up management boards for protection forests and special-use forests as new forms of state forest management. Private management of forest land was also supported with the approval of the new Land Law in July 1993, according to which land users were entitled to long-term (50 years for forestry land and 20 years for agricultural land), renewable land-use titles, or Red Book certificates, with five rights: to exchange, to transfer, to inherit, to mortgage and to lease.

In 1994 and 1995, people’s involvement in forest management was supported by two decrees. One, intended to allocate forestland to organizations, households and individuals for long-term (50-year) use in accordance with the use of each forest type (production, protection or special-use forests), provided a framework for transferring management of forestland from the state to local organizations, households and individuals. The other supported the involvement of people in forest management through long-term contracts with state organizations.

However, only owners of non-forested land or plantation forest were given Red Book certificates; no natural forests were allocated. A subsequent decree, issued in November 1999, provided a new framework for allocation and lease of forestland to organizations, households and individuals for sustainable and long-term forestry uses. Though the purpose of allocation remained similar, it was now possible to issue titles for allocated forestland.

By the end of the 1990s and early 2000s, forest management by household groups or communities emerged. Though community forest management was not

### Table 12.2 Forest area by tenure arrangements

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Natural forest</th>
<th>Plantation forest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area (ha)</td>
<td>Percentage</td>
<td>Area (ha)</td>
</tr>
<tr>
<td>Public</td>
<td>7,862,663</td>
<td>76.5</td>
<td>1,273,054</td>
</tr>
<tr>
<td>Private</td>
<td>1,919,472</td>
<td>18.7</td>
<td>1,002,041</td>
</tr>
<tr>
<td>Common</td>
<td>501,038</td>
<td>4.9</td>
<td>58,432</td>
</tr>
<tr>
<td>Contract</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

† This figure is from the Five Million Hectare Reforestation Program only; the area is formally state property.
Sources: www.kiemlam.org.vn; Nguyen (2005c)

To date, the most important outcome of tenure reform has been the involvement of various stakeholders, particularly local people, in resource management (MARD, 1999; Nguyen et al, 2001). Although currently the state still administers a large area of forest, the trend shows an increase in forest area under long-term management
by people, either individually or collectively. For example, the forest area under
management by local people has increased from 2.62 million hectares in 2003 to
3.16 million hectares in 2004 and 3.41 million hectares in 2005, or from 29.8 per
cent to 34.7 per cent to 37.4 per cent of the forest area under state management in
the respective years. Furthermore, a legal framework for tenure reform and benefit
sharing now exists.

Nevertheless, challenges remain for decentralization of forest management in
Vietnam (Nguyen, 2003; Nguyen, 2005b; Roth, 2005; Wode, 2003). In general,
forest tenure reform is likely to be successful if the allocated land is near residential
areas (in most cases this is barren land and poor forest). A problem often arises
with management of natural forests, which are often relatively far from residential
areas and thus difficult to protect and manage. In addition, forest boundaries are
often uncertain and the immediate benefits are not apparent to the local people.
Most people still consider natural forests – even if they have been allocated
– ‘open access’ resources that belong to everyone. Furthermore, many people like
to convert natural forest into plantations, which offer more immediate benefits.
As a consequence, a benefit-sharing mechanism that is clear and secure for forest
holders has yet to be achieved.

FOREST DEVOLUTION IN DAK LAK PROVINCE

Dak Lak and its forests

Dak Lak Province is situated in the Central Highlands of Vietnam (Figure 12.2). In
2004, Dak Lak was split into two provinces, but when the research for this
chapter was conducted, it was still one province, with 1.96 million hectares, more
than half of which was classified as forestland. Agricultural land accounted for 26
per cent of the total land area. Population was about two million people, most of
whom had come from other provinces during the previous two and a half decades.
The Ede, Jarai, Mnong and other indigenous groups account for around 18 per
cent of the province’s population.

At the end of 2003, Dak Lak had 979 thousand hectares of forest (959,000ha
natural forest and 20,000ha plantation), equivalent to 50 per cent forest cover.
Almost half of the forested area was production forest. The remainder was split
between protection and special-use forests.

Since the end of the American War (known in the West as the Vietnam War),
forests across Dak Lak had been managed by the state. At the field level, state forest
enterprises were in charge of forestry activities. Forest cover in Dak Lak declined
rapidly after the war. Around 242,000ha of natural forest were lost between 1982
and 1999. In addition, forest quality decreased. Areas with high-quality forest
decreased from 73,000ha in 1982 to 15,000ha in 1999, and poor forest increased
from 278,000ha to 411,000ha in the same period (DARD, 2001b).
Experimental forest devolution

In response to the deforestation and degradation of forest resources, Dak Lak initiated an experimental forest devolution programme. The initiative started in 1998 with technical support from a German-funded project, namely the Sustainable Management of Natural Resources in the Lower Mekong Region Project. The objectives of the programme were 1) to maintain and improve the province’s forest cover and 2) to improve the livelihoods of local people. The idea was to devolve the rights to natural production forests from local state forest enterprises to either individual households or groups of households. Beginning in 2001, the programme also handed over forest management rights to communities (Nguyen, 2005b).

Dak Lak’s forest devolution programme fitted into the province’s political economy. More than two decades of state forest management, coupled with the recent development of cash crops and the arrival of migrants, had led to the erosion of the local land tenure system (Bui, 1989; Ngo, 1989; Nguyen, 1989). By devolving the rights to local forests to the local inhabitants, particularly to the
indigenous groups, Dak Lak’s forest devolution programme called attention to the indigenous land tenure system. Though the programme still emphasized state control over local forest resources, it marked the start of a change in the province’s policy framework – towards recognition of local land tenure.

In its experimental programme, Dak Lak granted long-term land-use titles (Red Book certificates) for forested land to local people. In addition, a contractual agreement between the state forestry representative, local authorities and local people was attached to each title. This contract specified the benefits from devolved forest that people were entitled to. Nevertheless, the programme did not specify what mechanisms were available or how to realize these benefits. Furthermore, the contract set constraints on what people could and could not do with the devolved forests. For example, forest recipients were required to ask for permission from competent state organizations to collect timber products or use forest land for cultivation. The restrictions did not conform with the rights vested in the land-use title as specified in the Land Law. Lacking prior experience, Dak Lak proceeded slowly and gradually introduced the concept of individual ‘ownership’ of natural forest into the existing forest tenure arrangements.

At the field level, the programme started with a plan to devolve 7000ha of forest from state forest enterprises to local people in 1999. By the end of 2000, forest devolution (in the field) was completed in 13 villages, with approximately 7100ha of forest having been devolved to 339 individual households and to 19 household groups consisting of 149 households (DARD, 2001a). Issuance of forest land-use titles to local forest managers was completed shortly thereafter. In April 2001, the province reviewed the forest devolution process, after which the programme continued with an experiment in the third form of devolution: forest devolution to a community. By the end of 2002, the programme had devolved 24,900ha of forestland to 3243 individual households, 10 groups of 111 households, and 24 communities (including the 13 villages in which forest devolution had been completed in 2000). To date, an additional area of around 7700ha has been allocated to 18 household groups and seven communities. On average, an individual household received 5–10ha of forest, a group of households 150–200ha and a community 400–500ha (Nguyen, 2003).

In general, the area of forest devolved to local people was modest. Forest devolution in Dak Lak has, however, made two breakthroughs. First, it gave local households the rights to natural forest resources together with the Red Book certificates for forested land. Second, it reintroduced the ideas of direct sharing of timber benefits and land use for cultivation purpose by local forest managers. These two points had been under discussion before, but Dak Lak’s forest devolution programme was the first to effect change. As a result, the programme has gained the attention of international donors, forestry policymakers from the ministry level and other provinces (Nguyen, 2005b; Tran, 2005). Learning from the Dak Lak example, Son La Province in the Northwest also took action to devolve its forest area to local people with the help of the German-funded Song Da Social Forestry
Development Project. By the end of 2004, around 825,000ha of forest in Son La had been devolved to local people.

It is still not clear, however, whether the forest devolution programme in Dak Lak has achieved its stated objectives. A 2003 assessment of 10 villages revealed that forest cover and volume of standing timber were still declining (Tran et al, 2003b). In addition, benefits from the forest tended to increase after devolution but their distribution among local households and villages was skewed. As discussed by Nguyen (2005b and 2006b) and Tran et al (2003b), factors hindering the fulfilment of intended objectives include inadequate attention to local rules on forest tenure, lack of legal support to help local people realize their new rights, unclear and unfeasible benefit-sharing mechanisms, and insufficient or no support to help local people, particularly the poor and disadvantaged, benefit from the forest.

RESEARCH SETTING AND METHODOLOGY

By the end of 2000, when the experimental forest devolution programme in 13 villages was almost complete, Dak Lak asked the Tropical Ecology Support Program of the German Agency for Technical Cooperation (GTZ) to support research to evaluate outcomes at the local level. The proposal was accepted, and the Dak Lak Department of Agriculture and Rural Development took charge of conducting the research with academic support from Humboldt University, Berlin, and institutional support from the Sustainable Management of Natural Resources in the Lower Mekong Region Project, and later on the Watershed Management Component under the Mekong River Commission. Fieldwork was conducted from March 2002 to June 2003 in all 13 villages in five districts where forest devolution took place.

Of the 13 study villages, four were dominated by Jarai people, five by Mnong and two by Ede. The two remaining villages consisted of migrants who had come to Dak Lak during the 1980s. Populations ranged between 290 and 590 people, and villages had 42 to 115 households. The villages were located in an economically poor area, according to Vietnamese classification. The local people’s most important source of livelihood was agriculture. Forest products were collected mostly for domestic use. The most popular off-farm sources of income were salaries, war remuneration, and returns from trade and services.

The research sought to examine:

1. harvests of major products from the devolved forest, which included timber, non-timber forest products (bamboo, bamboo shoots and forest leaves) and crop production on forest land;
2. the relative economic significance of forest harvesting compared with other sources, such as cropping and off-farm income; and
Data were collected at the household level in two studies. The first study looked at two villages in two districts between March and September 2002. A census of all 95 households in the two villages was undertaken. In the second study, 228 out of the total 931 households in 11 villages were surveyed between February and May 2003. Households in the second study were selected based on a stratified random sample, in which all households in a village were stratified according to legal ownership (or not) of devolved forest and wealth, and then selected randomly. Altogether, data for 323 households from 13 villages were used (see Nguyen, 2005b, for a detailed discussion on data collection and methodology). Results are reported in Nguyen (2005b and 2006b), Tran (2005), Tran et al (2003a, 2003b and 2004), Sikor et al (2005), and Tran and Sikor (2006).

It is important to note that Dak Lak remains a special case of forest devolution in Vietnam because it received substantial technical and research assistance in implementation and documenting the process and its effects. Only one other province in the northwest of the country, Son La, has received a similar level of external technical and research support.

ECONOMIC IMPLICATIONS FOR LOCAL HOUSEHOLDS

Potential for economic benefits

Under devolution, recipient households were entitled to Red Book certificates (which could be used as a mortgage against formal credit) and became ‘owners’ of the devolved forest. Households possessing certificates, whether jointly or individually, were legally entitled to specific uses of the forest resources; those who were not included in the devolution programme had no legal rights to the forest. Each recipient household was entitled to 10m$^3$ of timber (originally half that) every 20 years for housing, with logging activity subject to approval by a competent state organization. In addition, when forest became mature enough for commercial logging, the household would be entitled to a six per cent share of the after-tax value of logged timber for every year of protection. Forest recipient households were entitled to collect and use all non-timber forest products under the forest canopy without having to pay the resource tax. Each household would also be legally entitled to a limited area of cultivated land in the devolved forest, the conversion of which was subject to approval. It was unclear, however, how much land a household would be legally allowed to use for agricultural purposes.

Of the surveyed households, 55 per cent (179 out of 323 households) were entitled to forest Red Book certificates and could legally enjoy the forest benefits described above. These households received a total of 2615ha of forest with an
estimated standing timber volume of 153,827m$^3$. Average forest size per household with forest was 14.6ha, ranging from 3ha to 28ha. Average timber volume was 859m$^3$, ranging from 0 (no timber forest) in 23 households to more than 3500m$^3$. In theory, these timber and forest areas would be the potential benefits for the forest recipient households. Unfortunately, no data on non-timber forest products were available.

Harvests from devolved forests

Timber harvest

The survey asked local people to choose the three timber products that were most significant to them. All households in each village were then asked about the harvest of those products for the study years (1999 and 2001–2002). For the sake of comparison across sites, the results are presented in the products’ cash value.

Timber appeared to be less important than other resources from the devolved forest (Table 12.3). In 2001, only 81 of the 323 surveyed households (25 per cent) had harvested timber products. Among them, 48 households had legal forest Red Book certificates and 38 did not. The value of timber harvest was between 0.08 and 16 million Vietnamese dong (VND) per household, and about 2 million VND on average (US$1 ≈ VND15,000 in 2002–2003).

<table>
<thead>
<tr>
<th>Households (percentage of total)</th>
<th>Total quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest of timber</td>
<td>81 (25)*</td>
</tr>
<tr>
<td></td>
<td>165.5 million VND</td>
</tr>
<tr>
<td>Harvest of non-timber forest products</td>
<td>145 (45)</td>
</tr>
<tr>
<td></td>
<td>18.6 million VND</td>
</tr>
<tr>
<td>Upland field in the devolved forest</td>
<td>119 (37)</td>
</tr>
<tr>
<td></td>
<td>90.56ha</td>
</tr>
<tr>
<td>Paddy field in the devolved forest</td>
<td>23 (7)</td>
</tr>
<tr>
<td></td>
<td>8.2ha</td>
</tr>
<tr>
<td>Crop harvest from field in devolved forest</td>
<td>110 (34)</td>
</tr>
<tr>
<td></td>
<td>161 million VND</td>
</tr>
<tr>
<td>Aggregated harvest from devolved forest</td>
<td>217 (67)</td>
</tr>
<tr>
<td></td>
<td>345 million VND</td>
</tr>
</tbody>
</table>

Note: * Number in parentheses refers to the percentage of households deriving the corresponding harvest over the total surveyed households.

Non-timber forest products

As for timber, people identified the three most important non-timber forest products, and the harvests were converted to a cash equivalence value. Non-timber forest products from devolved forests appeared to be more popular than timber, but their value was lower. Around 45 per cent of the surveyed households (145 out of 323, comprising 90 with legal certificates and 45 without) collected some ‘considerable’ quantity of these products from the devolved forest. The value ranged...
between 0.01 and 2.7 million VND per household. An average household collected 0.13 million VND worth of non-timber forest products.

Cultivated land and crop production

The use of land in the devolved forest for cultivation was more important than timber but less important than non-timber forest products. Around 37 per cent of the surveyed households (119 out of the total 323, comprising 95 with legal certificates and 24 without) had a total of 90.56ha of upland field in the devolved forest. Fields ranged between 0.06 and 3.7ha, with an average of 0.76ha per household.

In addition to upland fields, 7 per cent (23 households – 18 with certificates and five without) had a total of 8.2ha of paddy field in the devolved forest. Fields ranged between 0.1 and 3ha, averaging 0.025ha per household. Around 13 of the 23 households who had paddy fields in the devolved forest also had an upland field.

Of the total surveyed households, 110 (86 with certificates and 24 without) had harvests from cultivated land (both upland and paddy fields) in the devolved forest. The value of the crop harvests was between 0.05 million and 9.8 million VND per household, averaging 1.4 million VND.

In summary, around 67 per cent (217 households) of the surveyed households had some kind of harvest from the devolved forest in 2001–2002, with a total cash equivalence value of 345 million VND (excluding cultivated land). Among them, 20 households harvested timber, non-timber forest products and crops; 79 households harvested two kinds of products; and 118 households harvested only one. Distribution of aggregated harvests ranged between 0.01 million and 16 million VND, an average of 1.6 million VND per household.

Harvests before and after devolution

As Table 12.3 indicates, total upland area in the devolved forest cultivated by surveyed households increased from 36.83ha in 1999 to 90.76ha in 2002, representing an increase of almost 250 per cent. By contrast, the change in paddy land was relatively minor. A statistical test confirms the significant difference in means of upland fields in the two years, with t=4.0309 and p>t<0.0001, and the insignificant difference in means of paddy fields, with t=0.1549 and p>t=0.8769.

A significant increase in harvests from fields in the devolved forest was also observed. Overall, there was a growth of 300 per cent in the value of crop outputs. Statistical tests confirm a significant difference in harvests before and after devolution, with t=4.314 and p>t<0.001.

By contrast, the difference in harvests of timber products from devolved forests before and after devolution was insignificant: the change in total output value was 120 per cent, and statistical tests show insignificant differences in the timber
harvests of the two years, with $t=0.7651$ and $p>t=0.4445$. As for non-timber forest products, the difference in value of harvests before and after devolution was around 160 per cent. Statistical tests back up this fact, with $t=1.7724$ and $p>t=0.768$.

Nevertheless, the aggregated value of all harvests – timber, non-timber and crops – from the devolved forest was significantly larger following forest devolution than preceding it. An increase of over 170 per cent was observed between 1999 and 2001–2002 (Table 12.4). Results of statistical tests show a significant difference before and after devolution, with $t=3.2239$ and $p>t=0.0013$.

**Economic significance of forest harvests**

*Forest harvests versus major sources of livelihoods*

The harvests from devolved forests played an important role in the household economy (Figure 12.3). Compared with total harvests from cropping, the most important source of local livelihoods, the value of harvests from devolved forest was around 22 per cent (345 million VND of total harvest from devolved forest compared with 1.55 billion VND from crop production) in 2001–2002. In two villages, harvest from devolved forest was more than 34 per cent of the total value of crop production; in a third village, it was 8 per cent; and in the remaining villages, it ranged between 14 and 26 per cent.

Compared with aggregated income from off-farm sources, the total value of harvests from the devolved forest accounted for an average of 67.6 per cent. In six villages, aggregated harvests surpassed cash income from all off-farm sources. By contrast, value of the harvests was 30 per cent or less in three villages. It was between 47 and 68 per cent in the remainder.

The contribution of harvests from devolved forests to the household economy grew not only in absolute numbers but also proportionately compared with income.

![Figure 12.3 Total harvest from forest versus off-farm income and crop outputs](image-url)
from off-farm sources and total crop production. From 1999 to 2001–2002, harvests from forest grew 22 per cent relative to total off-farm income and 3 per cent relative to crop production.

**Paddy and upland fields in forests versus total farmed land**

Cultivated land in the devolved forest represented an important portion of household land resources (Figure 12.4). As of 2002, upland fields in the devolved forest accounted for 17.5 per cent of the total upland area (90.8ha of 518.6ha) of the surveyed households. Paddy land in the devolved forest was 14.4 per cent of the total paddy land (8.2ha of 57ha). In four villages, local people had roughly 30 per cent or more of their dry land in the devolved forest. By contrast, in two villages around 5 per cent or less of the upland fields was from the devolved forest. As for paddy land, only six out of 13 villages had paddy land in the devolved forest, but two villages had more than 50 per cent of their paddy land there.

![Figure 12.4 Fields in devolved forests versus total farmed land, 2002](image)

**Food production from forest versus total household food production**

Food production from fields in the devolved forest contributed to total household food production (Figure 12.5). On average, 15 per cent of the total household food produced came from the devolved forest in 2001–2002. In one village, this figure was almost 60 per cent. By contrast, in four villages 6 per cent or less of their total food production came from the devolved forest. In the remaining villages, the figure was between 10 and 25 per cent.
Compared with 1999, food production from fields in the devolved forest generally increased in the study villages. The share of food produced from devolved forests increased from 7 per cent of total food production in 1999 to 15 per cent in 2001–2002. In absolute terms, the amount of food produced in the devolved forest increased threefold. An increase in the absolute value of food production in the forest was observed in 11 villages. Only in two villages was less food produced in 2002 than in 1999.

**Figure 12.5 Food crops from forest fields versus total food production**

Compared with 1999, food production from fields in the devolved forest generally increased in the study villages. The share of food produced from devolved forests increased from 7 per cent of total food production in 1999 to 15 per cent in 2001–2002. In absolute terms, the amount of food produced in the devolved forest increased threefold. An increase in the absolute value of food production in the forest was observed in 11 villages. Only in two villages was less food produced in 2002 than in 1999.

**Contribution of devolved forest to cash income**

Though modest, cash income from devolved forest fields made a contribution to household cash income (Figure 12.6). On average, around 5 per cent of the income from cash cropping came from the fields in the devolved forests. In six villages, no income was observed to come from the forest. However, in one village 48 per cent of the income from cash cropping came from fields in the forest. In other villages, the figure was between 4 and 10 per cent.

Besides direct cash income from crop harvests, new fields in the devolved forest also affected cash income from cropping by making land in other places available for production. When people grew food crops on the new fields in the devolved forest, existing fields could be shifted from subsistence food production to cash cropping.

In general, the average share of cash income from devolved forest fields relative to the total cash income from cropping rose from 1.4 per cent in 1999 to 7 per cent in 2001–2002. In absolute terms, income from fields in the devolved forests in 2001 was approximately 2.5 times that of 1999.
Forest devolution and access to credit

The Land Law provides that a forest land-use title can be a valid document for formal credit. Nevertheless, the actual use of forest Red Book certificates as collateral for loans was rather poor. Of the total of 176 households with certificates in the sample, only six households in one village, with support from the local authorities, were able to get a loan from a local bank by using their certificates as collateral. One reason was the low market value of the forest and high expected cost of liquidating this asset in case of failure of repayment. A title for agricultural land or residential land, which had also been given to local people, would be more acceptable for mortgaging purposes than a forest land-use title. Furthermore, the complicated procedures for loan applications discouraged farmers from trying to borrow.

Nevertheless, the experience in Dak Lak shows that forest devolution provides a chance for farmers to get credit through a development project. The six households are an example. In cooperation with local authorities, the Dak Lak Department of Agriculture and Rural Development selected six households to experiment with a farm forest model on their devolved forest. With the pledge of local authorities to back them up in case of default, each household was given a loan of 2 million to 5 million VND, using their forest Red Book certificates as collateral. The loan was then used for cattle raising and cashew plantation.

Household costs related to devolution

In addition to benefits, households receiving forests also had costs to bear. Their most important cost was labour, which was incurred both during the devolution
process and after its completion. During the forest devolution process, each household had to attend on average two meetings and spend a day in the field. Until the completion of forest devolution, a minimum of two working days, valued at 40,000 VND in cash equivalence at current market rates, were spent by each household.

The realization of benefits also involved labour expenses. In theory, forest recipient households were expected to abide by state regulations on the use of forest resources. They had to acquire logging permits for timber and follow the logging plan for large-scale commercial logging. They were also required to seek permission when they wanted to change the land use in the devolved forest, including converting forestland to cropping land. In addition, local forest managers were expected to regularly patrol their forest to detect, stop and report unauthorized uses of the resources.

For a forest recipient household, the greatest challenge was obtaining the required permits for logging timber and converting forest into cultivated land. Even the district officials were unclear about how farmers could get official permission. Farmers had to comply with administrative procedures and travel to the district capital to apply for permits. For example, one farmer trying to apply for a logging permit to build a house made three trips to the district centre 30km away without any success. In the end, he decided to log the timber without a permit, taking the risk of being caught and having his logs and equipment confiscated.

Forest patrolling also required labour from the household. In most villages, forest recipient households said they had visited their forest between 10 and 15 times during the previous year. Most of these trips, however, were combined with other activities, such as collecting forest products.

Labour for opening new fields, logging or collecting non-timber forest products was the most prominent cost, particularly in the absence of modern machinery and equipment. Cutting 1ha of secondary or young forest to create new fields, for example, took 40 days on average. Once the trees dried, it took five to 10 days of labour to clear the ground using fire. Approximately 10 to 15 more days of labour was needed to fence the field. Altogether, it generally took 45 to 60 days to convert 1ha of devolved forest into cropland.

**DISCUSSION AND RECOMMENDATIONS**

Forest devolution has the potential to improve local livelihoods, yet the participation of local people in the protection of devolved forests hinges on transparent and workable benefit-sharing mechanisms that pay attention to poor and disadvantaged members of the community. To date, most of the benefits from devolved forests have accrued to a small group of households (Figures 12.7 and 12.8).

For example, 63 per cent of the local households did not have any upland fields in their devolved forest, and 30 per cent had no more than 1ha; only 7 per
cent had more than 1ha. The distribution of paddy land was even more uneven. Around 93 per cent of the surveyed households did not have access to paddy land in the devolved forest—all the land belonged to just 7 per cent of the sample.

The distribution of income from harvesting in the devolved forest was also very uneven. Around 75 per cent of the sample did not have benefits from timber and 14 per cent had less than 1 million VND. Around 6 per cent had 1 to 2 million. By contrast, 2 per cent of the population had more than 6 million.

**Figure 12.7** Distribution of forest fields among households

![Distribution of forest fields among households](image)

**Figure 12.8** Distribution of crop outputs and timber harvests among households

![Distribution of crop outputs and timber harvests among households](image)
In most cases, economic benefits accrued to wealthy households and those who had labourers (Figure 12.9). As measured by an index representing ownership of a good house and expensive household assets (for example a motorbike, sofa or TV), around 181 poorer households in the sample (56 per cent of the total) enjoyed only 37 per cent of the total value of economic harvests. The same amount of benefits was derived by 96 households of medium wealth class (30 per cent of the total sample). The remaining 26 per cent of the benefits went to the richest 14 per cent of the sample. On average, the benefits from devolved forest derived by an economically medium household and a rich household were around 190 per cent and 280 per cent, respectively, of that of a poor household.

Furthermore, some benefits accrued to those without legal rights to the devolved forest (Figure 12.10). Around 57 per cent of households without forest Red Book certificates in the sample derived some benefits from devolved forest, compared with 76 per cent of the households with certificates. On average, the value of benefits that went to the former was relatively low, at 1.1 million VND, compared with 1.9 million VND for certificate holders. However, households without title were generally collecting more timber from the forest than those with title.

Although benefits from devolved forest made a significant contribution to the household economy in general, forest recipient households face challenges in protecting the forest and maintaining its benefits in the future. It was difficult for local people to exclude fellow villagers who had been relying on the forest for supplies of materials for daily use. But the use of forest benefits by those without legal rights may undermine the incentive of local forest managers to spend their own labour to protect the devolved forest. Furthermore, since most of the benefits accrued to wealthy or labour-rich households, those without adequate resources
to take advantage of the forest may not have sufficient incentive to continue protecting it.

From an economic point of view, the problem is the absence of a transparent and feasible benefit-sharing mechanism and a monitoring system for implementing such a mechanism. For local farmers in Dak Lak, the benefit-sharing mechanism introduced by the forest devolution programme was difficult to comprehend, and it was unclear what organizations would help them in realizing their devolved rights. That a farmer made three trips to the district centre and still failed to obtain a logging permit indicates that the system is not working well.

From a policy point of view, findings from this study have the following implications. First, forest devolution can provide local people with true economic benefits and stimulate their interest in local forest management. Nevertheless, it is important to take into account that devolution benefits are likely to vary among households and villages. Such variations reflect the varying ability of local households and villages to make use of the devolved forest.

Second, the state cannot simply give local citizens the rights to the devolved forest and expect them to benefit. Rights alone are insufficient for acquiring true economic benefits – other resources, such as labour and capital, are also needed. The state should enable people to benefit from forests.

Third, resource-poor households are often in a poor position to benefit from government policies. Rural development policy, therefore, should target or positively discriminate in behalf of these households.

Fourth, the role of external support is important in forest devolution. Devolving the rights to forest to local people is a radical change from Vietnam’s long-standing state management in forestry. Such implementation therefore requires significant
facilitation from outside, particularly in countries with complicated systems of laws and regulations.

Finally, it is important to develop a clear and feasible monitoring system for state policy at the field level. For forest devolution, such a system should track actual local resource use and make sure that both rights and duties are respected and followed. In addition, a clear, understandable system will help local people avoid unnecessary costs in trying to realize their rights.

ACKNOWLEDGEMENTS

Funding for field research was from the Tropical Ecology Support Program under the German Agency for Technical Cooperation. The Sustainable Management of Natural Resources in the Lower Mekong Basin Project and later the Watershed Management Component of the Agriculture, Irrigation, and Forestry Program under the Mekong River Commission handled the funding. The project was affiliated with the Dak Lak Department of Agriculture and Rural Development in Vietnam and the Institute of Agricultural Economics and Social Sciences, Humboldt University, Berlin, in Germany.

This chapter benefited greatly from comments by participants from the Workshop on Forest Governance and Decentralization in Asia and the Pacific organized in Yogyakarta, Indonesia, on September 2006. I would also like to thank the Center for International Forestry Research for sponsoring my participation in the workshop and for institutional support in writing this chapter. Thanks also to five anonymous referees who gave invaluable comments on an earlier version.

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