

**Local Outcomes of Forest Devolution:  
An assessment tool for forest departments  
developed in Vietnam**

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by

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**ABSTRACT**

Devolution programs have generated highly varied local outcomes in terms of changes in forest conditions, local livelihoods, property rights, and governance structures. There is an urgent need to improve understanding of local outcomes as an input into the design of appropriate policy and programs. This paper discusses a tool developed for assessing local outcomes of devolution in Vietnam. The paper describes the social and analytical processes underlying the development of the assessment tool by researchers and decision-makers. Results from its development and application in ten villages in Dak Lak province suggest that the tool provides an effective and feasible way for forest departments to generate relevant information about local outcomes of forest devolution. The tool serves to strengthen the capacity of forest departments to formulate appropriate policy and programs, as they take on new roles in the implementation of devolution and thereafter.

Keywords: devolution, assessment, livelihoods, forest conditions, property rights

## INTRODUCTION

Devolution is ambitious. The reform of legal institutions governing forest is expected to increase the contribution of forests to local livelihoods and improve forest conditions (Ribot 1999; Edmunds and Wollenberg 2003). The reform typically involves a transfer of rights and responsibilities concerning forest from the central government to local people (Meinzen-Dick and Knox 2001, Edmunds and Wollenberg 2003). Yet its presumed effects on livelihoods and forest conditions depend on two crucial conditions. First, the change in legal property needs to effect a corresponding change in actual property relations and governance structures. Second, the change in property relations and governance structures needs to motivate changes in forest management that increase the benefits accrued by local people and improve forest conditions. Considering these conditions, it does not come as a surprise that the actual outcomes of devolution are highly varied (Shackleton and Campbell 2001; Ribot 2002; Edmunds and Wollenberg 2003).

Devolution is also ambitious in another sense. It requires forest departments to take a leap of faith, ceasing direct control over valuable resources and territory (Meinzen-Dick and Knox 2001). Forestry decision-makers are not used to thinking of local people as responsible resource managers. In addition, devolution radically transforms the dealings of forest departments with local villagers (Meinzen-Dick and Knox 2001). Decision-makers lack experience in the design of suitable policy for regulatory oversight and support programs for local forest managers. Their conceptual frameworks diverge sharply from those held by local people with respect to forest management (Edmunds and Wollenberg 2003).

Yet devolution has been adopted as a central element of forest policy in many countries (Edmunds and Wollenberg 2003). Governments across the world are in the process of transferring rights and responsibilities associated with forest to local people. The devolution programs allocate different combinations of rights and responsibilities to local people as individuals, user groups, and village communities. At the same time, knowledge about devolution and its outcomes is limited. There is an urgent need to improve understanding about the local outcomes of devolution (Fisher 1998; Ribot 2002; Shackleton et al. 2002).

In this paper, we present a simple tool for assessing local outcomes of devolution. It is the product of collaborative work with provincial and national decision-makers in Vietnam. The tool generates information about four critical outcomes of devolution: the benefits derived by local people, changes in forest conditions, actual property relations, and governance structures. It also helps judge the influence of devolution on observed changes in these four factors in relation to other influences. The tool is designed for use by forest departments to assess the initial outcomes of devolution programs. More broadly, it is intended to contribute to a learning process around devolution that derives lessons from initial experiences to inform the design of subsequent rounds of devolution.

The paper proceeds as follows. Section 2 identifies critical issues for understanding outcomes of devolution. Section 3 introduces the geographical and policy background in which the assessment tool was developed. Section 4 presents the process by which the tool was developed, with an emphasis on the rationale underlying the process. Section 5 discusses important lessons learned in the development and application of the tool. Section 6 concludes with more general remarks about assessment tools in devolution programs.

## ASSESSING DEVOLUTION

Devolution programs are typically motivated by two goals: they seek to improve forest conditions and increase the contribution of forests to local livelihoods (Ribot 1999; Edmunds and Wollenberg 2003). Forest departments and natural resource agencies transfer rights and responsibilities to local people as a way to have them protect forest cover, timber stands, game, or particular forest products (Ribot 1999, Meinzen-Dick and Knox 2001). They also expect devolution to enhance the contribution of forests to local livelihoods, either as a goal in itself or as a necessary incentive for local people to protect forests (cf. Ostrom 1990; Meinzen-Dick and Knox 2001). Forests can contribute to local livelihoods in many ways, including tangible benefits and symbolic values.

Experience shows that the effects of devolution on forest conditions and local livelihoods vary significantly (Shackleton and Campbell 2001, Edmunds and Wollenberg 2003). Forest has expanded in some places but deteriorated in others (Agrawal and Ostrom 2001; Ribot 2002). Where forest cover has increased, it has sometimes reduced the availability of other forest resources important to local people (Edmunds and Wollenberg 2003). Similarly, devolution has generated significant benefits to some villages but not others (Agrawal and Ostrom 2001; Ribot 2002; Edmunds and Wollenberg 2003). Where it has created benefits, individual villagers have received highly varied shares due to their different economic, political, and cultural resources (Dev et al. 2003; Richards et al. 2003; Shackleton and Campbell 2001).

Two broad reasons have been identified producing the fact that devolution has not achieved its desired outcomes in many places. First, forest conditions and local livelihoods change in reaction to many factors besides devolution. For example, local people may not protect local forests not because of devolution but because of increased pressure on forests originating from migrants or declining agricultural incomes (cf. Ribot 2002). Second, legal forestry reforms may not effect corresponding changes in local property rights and governance structures. Devolution programs need to change the actual rights (powers) and obligations of various actors with respect to forest (Edmunds and Wollenberg 2003). Important rights include the rights of withdrawal, management, exclusion, and alienation (cf. Schlager and Ostrom 1992; Agrawal and Ostrom 2001). Devolution programs also need to facilitate the development of supportive governance structures. The most crucial ones are those regulating the monitoring of forest use, sanctioning of violations, dispute resolution, and creation of new rules (Ostrom 1990; Agrawal and Gibson 1999; Agrawal and Ostrom 2001; Meinzen-Dick and Knox 2001).

Experience reveals that devolution programs have lead to different changes in actual property rights and governance structures. Different types of actors have emerged after devolution as those whose claims have been strengthened against competing interests in the forest (Shackleton and Campbell 2001). The actors have ended up holding 'bundles' of rights that differ in their composition and extent from place to place (Agrawal and Ostrom 2001, Ribot 2002, Shackleton and Campbell 2001, Edmunds and Wollenberg 2003). Similarly, actual governance structures observed after devolution are highly varied (Agrawal and Yadama 1997; Agrawal and Ostrom 2001; Springate-Baginski et al. 2003; Shackleton and Campbell 2001). While some villagers or user groups have developed effective management regulations, others have not even organized regular monitoring of the devolved forest.

This brief overview highlights that devolution has generated highly varied outcomes. Devolution programs, therefore, require feedback from initial experiences into the formulation of suitable policy and design of subsequent rounds of devolution. This feedback can originate from assessment tools that effectively generate information about changes in forest conditions, local livelihoods, actual property relations, and governance structures as well as the significance of other influences on forest use. The tools also need to be feasible given the human and financial resources of the involved actors. Finally, they need to provide information that is relevant to the decisions that need to be made. These are the basic parameters that have framed the development of the assessment tool discussed in the remainder of this article.

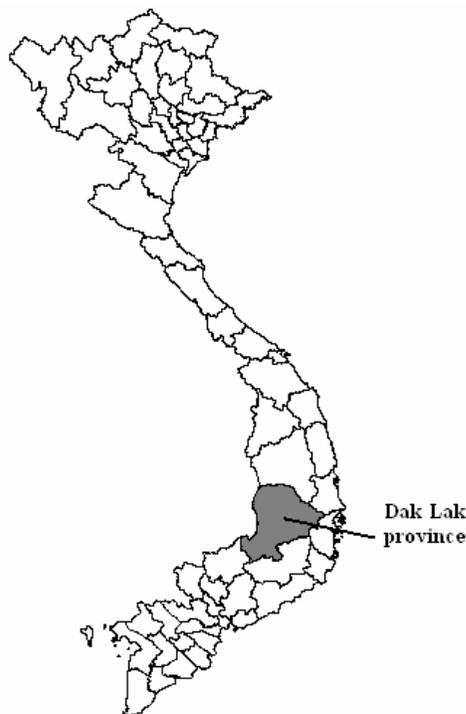
## GEOGRAPHICAL AND POLICY BACKGROUND

Dak Lak is a province in the Central Highlands of Vietnam (see Figure 1).<sup>1</sup> The province includes 43 different ethnic minority groups, of which the E De and Mnong are best known. Ethnic minority groups formed the majority of the population until 1990, but strong migration has propelled the percentage of ethnic Vietnamese living in Dak Lak to 71% in 2003. Migration caused the provincial population to increase by factor five between 1975, when Vietnam was reunited, and 2003. The population boom has been associated with rapid economic growth fuelled by agriculture. Between 1992 and 2001 the provincial GDP tripled. In the same period, the cultivation of coffee, the primary cash crop, expanded from 52,000 ha to 260,000 ha.

Dak Lak's forest reflects the drastic increases in population and economic activity. In 1975, 70% of the province was covered with dipterocarp and bamboo forest, making Dak Lak the province with the largest forested area in Vietnam. Ethnic minority people used the forest for shifting cultivation and as a source of timber and other forest products. The Vietnamese government subsequently established a system of State Forest Enterprises and Forest Unions to manage the forest. State management facilitated the exploitation of the forests to generate much needed resources for national reconstruction and foreign exchange earnings. Yet it also implied the legal exclusion of ethnic minority groups and migrants from the forest. The forest did not fare well under this situation, forest cover declining to 51 percent in 1999 (DARD 2000).

Rampant deforestation combined with political pressure from the central

**Figure 1:** Dak Lak province in Vietnam



<sup>1</sup> Dak Lak was divided into two provinces, named Dak Lak and Dak Nong, in January 2004. In this paper, we use the name Dak Lak to refer to the province in its borders until 2003.

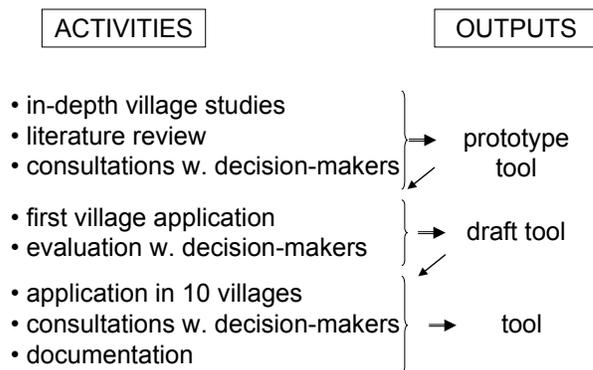
government forced the provincial government to seek new ways for sustainable forest management. In 1998, the provincial People's Committee endorsed a proposal by the Department for Agriculture and Rural Development (DARD) to transfer significant authority over forests from State Forest Enterprises to local villagers. The provincial government expected 'forest land allocation', as the devolution program was coined in Dak Lak, to serve two major goals: stop deforestation and increase the contribution of forest to local livelihoods. Up to 2002, it allocated 16,000 ha of forest land to people in 15 villages, about a third each to individual households, groups of households, and village communities.

Forest land allocation involves the devolution of significant rights to villagers. In the terms of Schlager and Ostrom (1992), forest recipients have the following legal rights:

- **Withdrawal:** Forest recipients have the permission to harvest timber and non-timber forest products for home-consumption. They are also entitled to exploit timber for sale, receiving a share of timber revenues that increases over time. Timber exploitation requires the approval of a management plan by the local government.
- **Limited management:** Forest recipients are allowed to convert five percent of the forest to agricultural uses. Other management practices require the approval of a management plan by the local government.
- **Exclusion:** Forest recipients have the right to stop others from exploiting timber and other forest products and cultivating fields on the allocated land.
- **Limited alienation:** Forest recipients are entitled to pass forest titles on to their children, exchange them among each other, and use them as collaterals for bank loans.

Forest land allocation also involves a change in legal oversight over the forest. Local authorities and village communities take over most of the tasks previously taken on by State Forest Enterprises. Village communities receive the mandate to monitor forest use, resolve minor disputes, and develop internal management regulations. Local governments are required to fine violators, while district courts receive the new responsibility to resolve larger forest disputes. The changes imply a significant downward shift in control over forests from the State Forest Enterprises, which are responsible to the provincial DARD.

Dak Lak's initiative met strong reservations on the side of the Ministry of Agriculture and Rural Development. The reason was that forest land allocation in Dak Lak went far beyond the practice of forest land allocation in other parts of Vietnam. In Dak Lak, allocation includes natural forest, not only planted forest or barren land as in other provinces. Moreover, forest recipients in Dak Lak receive the right to exploit timber, even for sale. The provincial initiative, therefore, provoked initial resistance by the central government. In 2000, however, the Ministry recognized the provincial initiative, according it an experimental status. The pressure was on DARD to prove the benefits of devolution or abandon its initiative.

**Figure 2:** The social process of tool development

## DEVELOPMENT OF THE ASSESSMENT TOOL

### The social process

DARD reacted by requesting the German Agency for Technical Cooperation (GTZ) to support an assessment of the initial experience with forest land allocation. The province and GTZ brought the assessment underway by way of a planning workshop in April 2001. They hired two researchers to facilitate of the assessment, including one DARD official who had played a central role in the allocation program so far.<sup>2</sup> They formed an advisory team including three senior officials from the Ministry of Agriculture and Rural Development and three experienced researchers with backgrounds in economics, ethnology, and social forestry. They also invited Humboldt University Berlin to contribute scientific advise to the assessment and train the two researchers. GTZ subsequently confined itself to providing financial support, having project oversight rest largely in the hands of DARD.

The development of the assessment tool took three rounds (see Figure 2). The first round from July 2001 to January 2003 served the preparation of the assessment. The two researchers performed a review of the relevant literature at Humboldt University and conducted in-depth studies of two villages. They consulted decision-makers in the People's Committee and DARD about their primary interests in the assessment. The consultations indicated that Dak Lak decision-makers primarily wanted to know about the effects of devolution on forest conditions and benefits.<sup>3</sup> These interests informed the development of a prototype tool, including a set of indicators and techniques for data collection and analysis.

The second round from February to April 2003 subjected the prototype tool to empirical application and joint evaluation. A team of three forest officers applied the tool in a village with assistance by the researchers. The two researchers, the advisory team, and Humboldt University evaluated the application and its results through joint fieldwork in the village. The researchers also presented the process and results of the village assessment to provincial

<sup>2</sup> The two researchers are the Vietnamese co-authors of this article.

<sup>3</sup> The decision-makers raised two additional issues, which were included in the tool. We do not discuss them further in this article, because they are too specific to the interests of decision-makers in Dak Lak. See Tran et al. (2003a, 2003b) for further information.

**Text box 1: The assessment tool**

In Dak Lak, village assessments included the following activities:

- (1) Preparation (2 days): The team leader compiles secondary data about the village and forest, makes the practical arrangements with villagers, local authorities, and State Forest Enterprise, and conducts wealth ranking for the selection of the household sample.
- (2) Fieldwork (5 days): The team leader and two enumerators collect data through household interviews; key informant interviews with the local forest officer, village leaders, expert villagers, and a person from a neighboring village; forest walks; and, focus groups with forest recipients and non-recipients in the village.
- (3) Data input (3 days): The team leader and enumerators put the collected data into a database.
- (4) Data analysis and report writing (4 days): The team leader analyzes the collected data and writes a report on the assessment results.

The tool is documented in a set of practical aids, including an operational work plan for a village assessment; data collection forms and instructions for all activities in the field; a database with user's guide; instructions for data analysis; and, a template for the village report. The aids are available in Vietnamese from the authors on request.

leaders, seeking their comments and suggestions for modifications. They made necessary adjustments to the tool and documented the resulting draft tool in a manual.

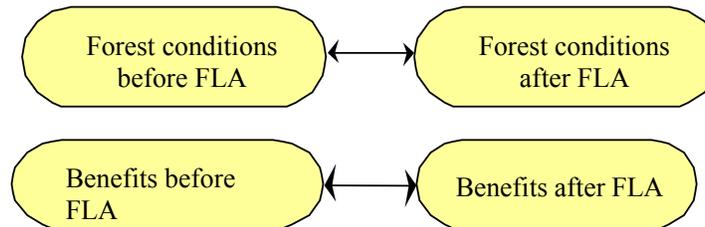
The third round from May to July 2003 centered on the application of the tool (see Text box 1). Three teams of forest officers conducted assessments in ten villages, using the draft manual under supervision of the researchers. They documented their results in village reports and a database. The researchers synthesized the village results in an overview report and incorporated new insights into the manual. They presented the overview report and manual to decision-makers in Dak Lak and Hanoi. They finally had the report and manual printed in Vietnamese and English and distributed them among decision-makers and international development practitioners in Dak Lak, Hanoi, and provinces with significant forest.<sup>4</sup>

**The analytical process**

The tool and associated practical aids are very specific to Dak Lak, as they reflect the interests of decision-makers and local conditions there. What is broader interest, however, is the more abstract rationale underlying the tool development. This rationale can help forest departments develop similar tools assessing devolution outcomes in other contexts and for other interests. The rationale demonstrates how forest departments can translate the interests of decision-makers into concrete questions for the assessment, how they can use analytical frameworks to define the needed variables, how they can derive concrete indicators and data collection techniques from the list of variables, and how they can use analytical techniques to answer the concrete questions guiding the assessment.

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<sup>4</sup> See Tran et al. (2003a, 2003b) for the English versions of the manual and report.

**Figure 3:** Changes in forest conditions and benefits*Concrete questions and analytical frameworks*

Dak Lak decision-makers expected the assessment to produce insights into the effects of devolution on forest conditions and the benefits derived by villagers from the forest. These two primary interests motivated five concrete research questions. The questions, in turn, inspired the development of simple analytical frameworks as a way to identify relevant variables for the assessment.

*Question 1: How have forest conditions changed after devolution?*

*Question 2: How have the benefits derived from forest changed after devolution?*

The questions called for direct comparisons of the situation immediately before devolution with the situation at the time of assessment (see Figure 3). The comparisons distinguished different kinds of forest resources and types of benefits. They also recognized that the benefits derived by individual households are likely to vary.

*Question 3: What are potential causes of observed changes in forest conditions and benefits?*

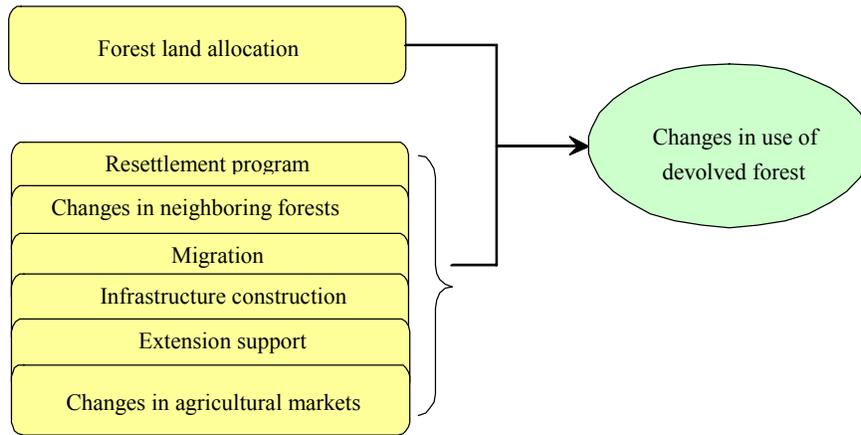
Question 3 was about the degree to which the observed changes in forest conditions and benefits probed by the first two questions are due to devolution. It prompted assessments to check the plausibility of a causal relationship between observed changes and devolution. Forest conditions and benefits typically change due to the simultaneous effects of multiple factors, especially in highly dynamic settings such as those prevalent in Dak Lak. It is difficult to establish the causality between one factor and the changes in forest conditions and benefits. Question 3 therefore proposed a simple check on the potential causes underlying observed changes (see Figure 4). Its objective was not to identify the exact cause(s) producing observed changes, but to understand if there were other factors beyond devolution that may have contributed to the observed changes in forest conditions and benefits.

*Question 4: What are potential changes in forest conditions in the future?*

Question 4 expanded on Question 1 probing for changes in forest conditions associated with devolution. The recent timing of forest land allocation motivated it. Changes in forest protection and management were unlikely to have found their expression in changed forest conditions already. In addition, changes in the local forest institutions in reaction to forest land allocation could be expected to happen gradually and take time.

The analytical framework associated with question 4 linked potential changes in forest conditions in the future to property rights and governance structures (see Figure 5). The

**Figure 4:** Possible causes of observed changes

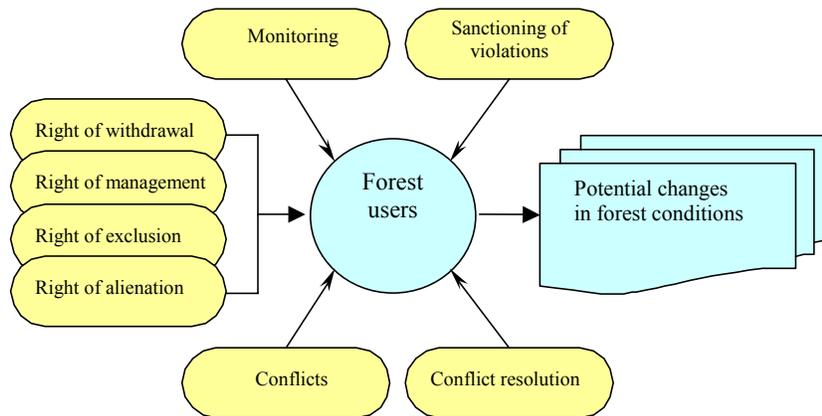


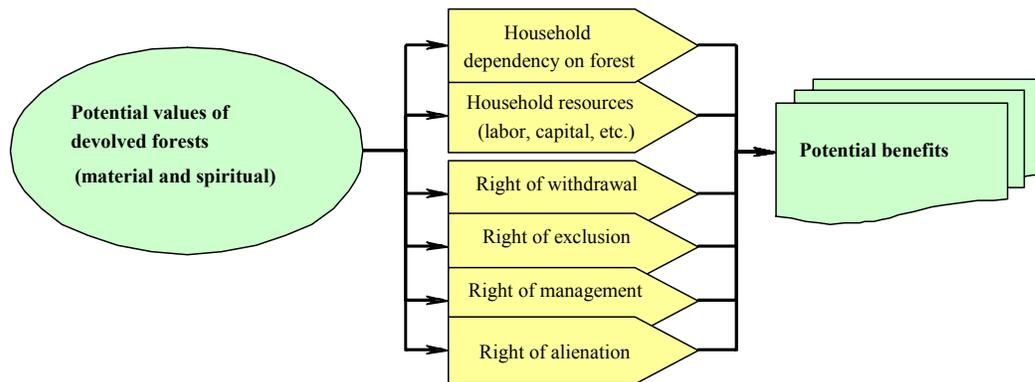
underlying assumption was that forest conditions improve if forest recipients have secure rights on the forest, if monitoring of forest use and sanctioning of violations exist, and if conflicts are minimized through appropriate mechanisms for conflict resolution. In this way, forest recipients have both the incentive and the means to manage forests in a more sustainable fashion.

*Question 5: What are potential changes in benefits in the future?*

Question 5 expanded on question 2 examining changes in the benefits derived from devolved forest for the same reasons as stated on question 4. Just as question 4, question 5 linked potential future changes in benefits to property rights (see Figure 6). The assumption was that the higher the potential values of the forest itself, the more secure people's rights to the forest, the better their resources, and the more extensive their dependence on the forest, the more likely they will benefit from allocated forest in the future.

**Figure 5:** Factors with influence on future forest conditions



**Figure 6:** Factors with influence on future benefits

*Indicators, data collection techniques, and analytical techniques*

The primary interests of decision-makers in the assessment therefore yielded five concrete questions. The concrete questions inspired simple analytical frameworks, which, in turn, defined a series of variables. The variables could be grouped into six sets: (1) forest conditions and benefits from forest; (2) forest users and uses; (3) property rights on forest; (4) governance structures; (5) household attributes; and (6) potential causes of observed changes in forest use.

Indicators served to identify concrete measures to describe the abstract variables (see the Appendix). The indicators originated from the researchers' intimate knowledge of local conditions, as they had conducted two village studies to gain the required in-depth understanding of local conditions. The choice of indicators was also informed by comparable assessments undertaken elsewhere, such as the work of CIFOR on criteria and indicators (Prabhu et al. 1996). Each variable received at least one indicator. The more important variables were measured by up to three indicators.

Data collection techniques helped the assessment to obtain the data required for the indicators. They included the collection of existing government statistics about the village and the allocated forest; forest walks to describe forest topographic conditions, accessibility, and changes in forest resources; focus groups with forest recipients and non-recipients on changes in forest resources, property rights, and governance structures; key informant interviews with village leaders, the local forest officer, and a person from a neighboring village on forest use, property rights and governance structures; and, household interviews on the use of forest, tenure rights, household resources, and main sources of income (see the Appendix). The use of multiple techniques was intended to improve data quality through triangulation. Data required for the more important indicators were collected from multiple informants and through the use of multiple techniques. For example, changes in forest conditions were described by direct observation and focus groups with villagers.

As a final step, the definition of analytical techniques helped to relate the collected data back to the questions defined at the beginning. The analytical techniques were simple, mostly relying on direct comparisons in tables and charts. In concrete, the analysis proceeded as follows:

- Question 1: Table on forest conditions before devolution and at the time of assessment. Table on changes in conditions of the devolved and non-devolved forest.
- Question 2: Table on aggregate benefits derived from devolved forest before devolution and at the time of assessment. Statistical t-Tests on benefits derived from devolved forest by households with and without devolved forest. Tables on benefits derived by (a) rich and poor households and (b) households with and without a government official.
- Question 3: ‘Manual correlation analysis’ of potential causes, using cross tabulation to check for the presence of additional influences and the direction of their influence.
- Question 4: Table on actual property rights, governance structures, and conflicts. Discussion of difference with ideal conditions.
- Question 5: Discussion of difference between actual and ideal conditions. Table on potential benefits derived by (a) rich and poor households and (b) households with and without a government official.

The analytical process informed the development of the assessment tool and associated documentation (see Text box 1). It took several rounds of iteration, informed by new insights gained from the trial application of the tool, joint evaluations, consultations with Dak Lak decision-makers, and the eventual application of the tool in ten villages. Nevertheless, the analytical process demonstrates how the assessment tool was designed to generate the information expected by decision-makers. It linked the practical implementation of the village assessments to the interests motivating those.

## LESSONS LEARNED

The assessment was designed to meet three criteria determining its utility. First, we expected the tool to be effective, producing sufficient and accurate information about critical outcomes of devolution. Second, the tool needed to be feasible in the sense that DARD Dak Lak had the human and financial resources required for its application. Third, the information needed to be relevant for decision-makers, facilitating improved decisions about the design of the forest land allocation program in Dak Lak and Vietnam.

### **Effectiveness**

Application of the tool generated rich information about changes in benefits derived by local people from devolved forests, forest conditions, property rights, and governance structures. The assessment results also indicated villages where devolution was associated with improved forest conditions and increasing benefits and villages where it was not. The information was documented in the form of brief village reports and an overview report. It was also stored in a database for comparative use in future assessments.

The information presented in the village reports and overview report appeared reasonably accurate. We compared the assessment reports from three villages with the findings from our in-depth fieldwork in an adjacent village, finding those consistent in the sense that there were no apparent contradictions. At the same time, we believe that the accuracy depended on the background and training of team leaders and enumerators. We selected as team leaders only those forest officers who had prior experience with participatory methods in forest management. We instructed them and the enumerators about the application of the tool not only in the office but also in the field. The in-class training lasted three days and included

many role plays and applied practices. In addition, we closely supervised the first village application to provide practical advice to the assessment team in the field.

Despite the training, enumerators faced problems to inquire about property rights, and team leaders had difficulty writing about them. The problems originated from three sources. First, property is very complex, involving multiple actors, resources, and rights (Ribot 2002). In the face of this complexity, enumerators tended to fall back on simplistic notions of property, such as private property and communal ownership. Second, some terms used to describe property rights and governance structures in the international literature were not easy to translate into Vietnamese. For example, the Vietnamese term for ‘management’ includes the notion of ‘exclusion’, complicating the distinction between the two rights. Third, property relations were largely ‘invisible’ to villagers. They were ‘invisible’ because villagers were used to think about the use of and control over forest in different terms. In addition, villagers knew the rules, but they were not used to talk about them. We therefore decided to orient the assessment more towards concrete practices in forest management than abstract rights and obligations. This orientation also helped the assessment teams make the distinction between legal institutions and actual property relations.

A related problem is that changes in actual property relations take time. Legal reforms are unlikely to affect property relations in the short term, even if forest departments issue land certificates, signpost devolved forest parcels, and announce forest management regulations in public places, as happened in Dak Lak. The local effects of legal reforms depend on negotiations and changes in material and symbolic practices that unfold over time only. As a result, the most important finding about property relations in the Dak Lak assessment was just that: actual property relations were difficult to describe and take time to change. Further information depended on the skills of the forest officers applying the tool. Nevertheless, some assessments came up with highly interesting observations. For example, the assessment in Buon Cham found out that local people had started to cooperate in stopping illegal encroachment on allocated forest and had called upon the local authorities to fine the illegal loggers in several instances.

Just as property relations take time to change, so do the benefits derived by local people and trends in forest conditions. An assessment of local outcomes undertaken a few years after legal devolution cannot be expected to indicate significant changes in benefits and forest conditions. Our experience demonstrated, however, that observed changes might be indicative, even if they are small. Observed instances of changing benefits and forest conditions indicated shifts in underlying trends that take more time to come to the fore. For example, villagers in Cham B were quicker than people in other villages to clear a share of the allocated forest for upland fields. The agricultural products harvested on those fields assumed a small share of total harvest, but they also indicated the value attributed to forest land as a source of land for cultivation in village with limited agricultural land.

We found it useful to develop the construct of ‘potential changes in the future’ to complement the actually observed changes in forest conditions and benefits that had taken place since devolution. ‘Potential changes in the future’ referred to changes in forest conditions and benefits that one may expect if property rights, governance structures, and all other influences on forests remained the same. We found this construct useful to motivate the attention to property relations and governance structures. For example, we interpreted the collective organization of forest protection in Buon Cham as an indication that forest conditions may improve and the benefits derived by forest recipients rise in the coming years.

The underlying - and debatable - assumption was that benefits and forest conditions improve if appropriate property rights and governance structures are in place.

The assumption of direct causal linkages between devolution and changes in benefits and forest conditions is problematic, particularly in dynamic settings such as Dak Lak. There are many more factors than legal reforms in the forestry sector that influence local forest use (cf. Shackleton et al. 2002; Ribot 2002). One cannot attribute improvements in benefits and forest conditions to devolution without further attention to other influences. Vice versa, one cannot blame devolution for declining benefits and forests without further analysis. The assessment tool, therefore, includes three procedures that help check the plausibility of causal relations between devolution and observed changes. First, it takes advantage of the recent timing of devolution to establish a baseline against which one can assess the benefits and forest conditions at the time of assessment (cf. Ribot 2002). Second, the tool guides forest officers to perform a ‘manual correlation analysis’ to identify and rule out potential influences on forest use practices. Third, the assessment of household benefits compares households with and without allocated forest within a village. The three procedures did obviously not produce firm answers, but they helped the assessment teams judge the plausibility with which changes in benefits and forest conditions had been caused by devolution.

The assessment tool does not foresee the inclusion of ‘control villages’, i.e., villages without devolution in similar conditions to those with devolution. We did not include ‘control villages’ because they would have required development of different data collection procedures and forms. In hindsight, we consider this a weakness. The inclusion of ‘control villages’ would improve the robustness of the causal effects attributed to devolution. This became clear to us when the assessment teams found out that forest cover had declined in devolved areas. Yet they also found out that the estimated deforestation was about three times higher on land managed by the State Forest Enterprises. The evidence about the change in non-allocated forest was rather weak, however, as it was based on rather crude estimates by villagers and Enterprise staff only. More importantly, the comparison did not probe for other factors that could explain the different rates of deforestation.

Attention to equity effects proved another challenge to the assessment. The tool makes attention to equity effects within villages with devolved forest a central concern. It compares the rights and benefits of households with and without allocated forest, rich and poor households, and households with and without a government official. In contrast, the tool is blind on intra-household dynamics. We decided to ignore them to keep the tool simple and because, judging from the preceding in-depth village studies, we did not expect to find significant differentiation within households. The tool also pays relatively minor attention to the claims of non-villagers on the devolved forest, limiting it to one key informant interview with a person from a neighboring village and a few questions in the key informant interviews with villagers and the local forest officer. A more in-depth investigation of those claims would have required additional resources and difficult to standardize.

### **Feasibility**

The village assessments were well within the human and financial resources available to DARD. The department included sufficient staff members who could serve as team leaders and enumerators. They possessed the interviewing and computer skills required for enumerators as well as the organizational, analytical and writing skills demanded from team

leaders. The simplicity of the tool and the user-friendly documentation clearly helped its application. The required number of labor days amounted to five percent of the labor required for the implementation of forest land allocation. As for financial costs, they amounted to between five and ten percent of the costs of allocation, depending on the size of the devolved forest. Labor requirements and financial costs implied a relatively minor increase in overall costs and were not perceived as an obstacle by DARD.

We anticipate that the overview assessment poses a significant challenge to the human resource capacity of forest departments. In Dak Lak, the two researchers performed the overview assessment with assistance by Humboldt University. In other cases, forest departments may not have the capacity to conduct the village comparison, which is less standardized than the village assessments. Some parts of the overview assessment are relatively easy, using averages and sums derived from the standardized village reports. Other parts of the cross-village analysis require analytical skills that are rarely available at forest departments. Similarly, the overall interpretation of village results depends on a familiarity with socio-economic concepts that is scarce at a typical forest department. Without the necessary skills and knowledge, forest officers may easily draw wrong conclusions from the village results. They may resort to long-held views and seek to confirm prejudices in their interpretation of the results, instead of learning from the results. The challenge, therefore, remains how to guide forest officers to draw broader conclusions from the village assessments.

## **Relevance**

The assessments generated information relevant to the needs of national and provincial forest departments. Much of the relevance derived from the fact that devolution is in its initial stages not only in Dak Lak but also in Vietnam. National and provincial decision-makers lacked relevant experience with devolution to guide the design of forest policy and programs. The assessment in Dak Lak provided much needed information about local outcomes of devolution to national and provincial decision-makers in a timely fashion. A report about the outcomes of forest land allocation commissioned by the Ministry in 2004 drew extensively on the results from Dak Lak (Nguyen 2003). In Dak Lak, decision-makers decided on the basis of the assessment results to initiate further pilot projects before scaling the forest land allocation program up to the provincial level. They also recognized the need to strengthen the benefits derived by forest recipients from allocated forest by way of post-devolution support programs.

Decision-makers at both the national and provincial level consider the assessment tool as suitable for generating reliable information about the local outcomes of forest land allocation. The Ministry intends to include the tool in a 'Forestry Manual' summarizing best practices in Vietnamese forestry. The professional magazine published by the Ministry invited a feature of the tool (Tran et al. 2003c). More importantly, Son La province in northern Vietnam has started to adapt the tool to its own needs and conditions. The provincial forest department has applied the tool in one village on an experimental basis and prepares its application to evaluate the forest land allocation program implemented in Son La in 2001.

The less tangible effects on forestry decision-making are, perhaps, more important, but also more difficult to document. The assessment tool has increased the awareness of decision-makers to the gap between legal rules and regulations, on the one hand, and de facto property relations and governance structures, on the other (cf. Fisher 1999). In fact, the assessment

results have served as an eye-opener to many decision-makers, calling the drastic difference between the expected results and actual outcomes to their attention. They now understand better why policy evaluations require systematic investigation in the field to examine how rules and regulations are mediated locally. More specifically, the significance of property rights and governance structures in forest management has become much more apparent.

Another less tangible effect is that the tool has found recognition by both national and provincial forest officials, as they cooperated in its development. In 2000, the Dak Lak authorities and the central government were at loggerheads about devolution. Dak Lak's decision to allocate standing natural forest to villagers met strong reservations in Hanoi. Joint development of the assessment tool provided an important platform for national and provincial decision-makers to meet. Participation in tool development helped the provincial officials gain recognition for their policy innovation and national officials to assess the provincial initiative. Once they found the tool to be reliable and relevant, both sides recognized the information about local outcomes generated from its application.

In contrast to the relevance to national and provincial decision-makers, the assessment results and tool were largely irrelevant to the decisions taken by local people and local government. Data collection in the village assessments was 'extractive', in the sense that local people served as informants with no influence on the analysis and further use of the data. Forest officers analyzed the data and compiled the village reports. The reports were of little use to villagers, even if they received a copy. Similarly, local government officials were unlikely to fully grasp the findings documented in the village reports and translate those into concrete actions.

## CONCLUSION

Just as devolution is ambitious, so is the objective to assess its local outcomes. In this paper we have discussed a tool developed in Vietnam that helps forest departments assess local outcomes. Judging from our experience in Dak Lak province of Vietnam, the tool generates information about changes in benefits, forest conditions, actual property rights, and governance structures associated with devolution. It requires human and financial resources that are within the means available to forest departments. The information generated by the tool is highly relevant to forestry decision-makers, facilitating much needed knowledge about local outcomes of devolution in a timely fashion. At the same time, we have also suggested several aspects where the tool needs further refinement, such as attention to the differentiation of benefits within households.

The tool discussed in this paper has the purpose to strengthen the capacity of forest departments to formulate appropriate devolution policy and programs. This purpose sets the tool apart from those developed for local user groups (Dev et al. 2003, Richards et al. 2003, Springate-Baginski et al. 2003) and people's organizations (Hartanto et al. 2002, Dolom 2003). The focus on forest departments is motivated by two concerns. First, successful devolution requires strengthening the confidence of forestry decision-makers in the potentials of devolved forest management. The tool allows forest officers to gain on-the-ground knowledge of devolution outcomes. Second, successful devolution requires forestry decision-makers who can adapt general recommendations to local conditions. The tool facilitates decision-makers to not only assess the initial outcomes of devolution programs but also identify priorities for adjustments to policy and programs.

We are conscious that the intent motivating the assessment tool and the context in which it was developed have influenced its nature (cf. Conley and Moote 2003). First, forestry decision-makers have defined the goals that devolution is presumed to serve and influenced the indicators used for measuring variables. Local people are likely to have chosen different goals and indicators. Second, the intent of the assessment has determined the standards of comparison, i.e., the comparisons between outcomes and goals and among devolution projects in Dak Lak. Third, the context of the assessment has motivated a method that combines an emphasis on measuring tangible outcomes with some attention to process indicators. The tool gives little consideration to local people's perceptions and judgments. Finally, the tool does not rank projects by achieved outcomes by weighting individual outcomes and producing summary evaluations. Its purpose is to generate empirically rich information for decision-makers to inform subsequent decisions on devolution policy and programs.

Before we conclude, we want to emphasize the need for complementary tools and in-depth research. Short-term assessments cannot replace more rigorous research, just as we combined the assessment process with two in-depth village studies. Assessments conducted by forest departments should also be connected with monitoring and evaluation undertaken by local people and their organizations (cf. Hartanto et al. 2002). Our point is that forest departments need to improve their capacity because governments around the world have initiated devolution and because the shift towards devolved forest management requires forest departments to take on new roles in forest management. More broadly, the assessments may serve as eye-openers for forest officials who have little experience dealing with local people and very little background on the socio-economic aspects of forest management (cf. Edmunds and Wollenberg 2003). The assessments may in this way help prepare the ground for more participatory monitoring, which may see local people and forest departments together assess local outcomes of devolution one day.

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APPENDIX: VARIABLES, INDICATORS, AND TECHNIQUES FOR DATA COLLECTION

<i>Variables</i>	<i>Indicators</i>	<i>Techniques for data collection</i>
<b>Forest conditions and benefits from the forest</b>		
1. Forest conditions	Area (ha) & forest stock (m <sup>3</sup> )	Observation in field, Focus group meetings
2. Benefits from the forest	Area of land under cultivation, agricultural output, timber, and non-timber products	Household survey
	Support received through programs targeted at forest recipients	Household survey
	Stated spiritual relation with the forest	Household survey, key informant interview
3. Potential benefits from the forest	Timber stock, area of land for cultivation, stock of important non-timber products	Focus group meetings, key informant interviews
	Current value of the allocated forest	Household interview
4. Potential values of the forest	Timber stock and area of forest at the time of allocation	Secondary data from the time of allocation
	Entitlement to state support	Key informant interview
	Stated spiritual relations with the forest	Key informant interview
<b>Forest users and uses</b>		
5. Forest users	Villagers and other people with material and spiritual interest in forest	Key informant interview, focus group meetings,
6. Forest uses	Main kinds of forest use by type of agricultural crops and forest product	Key informant interview, group meetings.
<b>Property rights on forest</b>		
7. Right of withdrawal	To what forest products do people have a right of exploitation? Who has such a right, who does not? Who grants the permission?	Key informant interview, household survey
8. Right of alienation	Who can sell forest products? What products can be sold, what products can not?	Household survey, focus group meeting, key informant interview
9. Right of exclusion	Can forest recipients stop others from entering the allocated forest? If yes, in	Key informant interview, household

	what case and for what kind of forest resources?	survey
10. Right of management	Who has the right to clear fields, intercrop trees with agricultural crops, and conduct thinning? Is permission needed? Who issues the permission?	Key informant interview, household survey
<b>Governance structures</b>		
11. Monitoring and sanctioning of violations	Number of violations against forest protection regulations Organization of forest protection in teams, groups, or households Frequency of patrolling, number of violations reported and prosecuted	Key informant interview, household survey
12. Types of conflict	Type of conflict by actors involved (within village, between forest recipients and non-recipients, villagers and state agency, etc.) Severity of conflict	Key informant interview, household survey
13. Mechanisms for conflict resolution	How are conflicts solved? What roles of village elders, the village headman, and commune people's committee play?	Key informant interview, household survey
14. Form of devolution	Devolution of forest to individual households, groups of households, or whole village	Secondary data, key informant interview
<b>Household attributes</b>		
15. Household dependence on the forest	Land area under cultivation and income from crops	Household survey
	Off-farm income, including remuneration from employment	Household survey
	Average income per capita	Household survey
	Number of members/number of laborers	Household survey
16. Household resources	Number of laborers	Household survey
	Political office and special skills	Household survey
	Education level of household head	Household survey
<b>Potential causes of observed changes in forest use</b>		
17. Implementation of forest devolution program	Number of households/groups of households who receive forest	Key informant interview, Secondary data
	Area of forest allocated to households/groups of households	Secondary data
	Has the household received forest? Area and stock of the allocated forest	Secondary data, household survey

18. Implementation of resettlement programs	Number of households who have participated in the program over the past 5 years	Key informant interview
	Number of households planned to participate in the program in the next 3 years	Key informant interview
19. Development of forest protection regulations	Has the village developed forest protection regulations in the past 3 years?	Key informant interview
20. Changes in forest resources (timber and forest land) of neighboring forests	Comparison of land quality on allocated and neighboring forest	Focus group meeting, key informant interview, direct observation
	Comparison of quantity and quality of timber products of allocated and neighboring forest	Focus group meeting, key informant interview, direct observation
	Changes in resources of neighboring forest between 99 and 02	Focus group meeting, key informant interview
21. Migrants	Number of migrants to the village and neighboring villages in the past 5 years	Key informant interview
22. Infrastructure construction	Quantity and types of infrastructure related to the allocated forests that have been constructed in the past 5 years	Key informant interview, direct observation
23. Extension support	Presence of extension project, contents of support, form of support, number of households covered	Key informant interview, direct observation
24. Changes in agricultural markets	Changes in price of major crops in the past 5 years	Focus group meeting
	Changes in the area of major crops in the past 5 years	Focus group meeting