



Assessment of the influence of institutional factors on management decisions by small farmers in the Amazon

Results of ForLive Working Programme 2



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Executive summary

Research objective and questions

This report presents a synthesis of the results of the Working Programme 2 of the research project 'Forest management by small farmers in the Amazon – an opportunity to enhance forest ecosystem stability and rural livelihood' (ForLive). The overall objective of this FORLIVE research project was to identify and analyse forest management strategies applied by small farmers in the Amazon in order to assess and value their local viability and possible contribution to the ecological stabilization of landscapes and rural livelihoods. This objective was addressed through a series of comparative case-studies on promising examples of smallholder forest management initiatives in the Brazilian, Bolivian, Ecuadorian and Peruvian Amazon. The project was based on the premise that although significant progress has been made in the attempt to adapt the concept of sustainable forest management to the circumstances and demands of small farmers in the Amazon, there are still many obstacles for its successful implementation. The externally defined management concepts often do not correspond adequately to the livelihood systems and competences of smallholders. Consequently, the needs, views and capacities of small farmers have to be included more adequately in assessments of sustainable forest management. The objective of the Working Programme 2 was to contribute to better understanding of the institutional basis of decisions of small farmers regarding forest use and management. The aims of this report are to present an overview of the general institutional processes and issues impacting on the development of smallholder forest management systems selected for the ForLive study, and to draw conclusions on the key institutional processes and factors impacting on smallholder forestry in the Amazon.

The following research questions were addressed by the WP2 research:

Basic research question: What type of organisational arrangements for smallholder forest management systems exist and how is their organisation related to different institutional arrangements and their dynamics?

Specific research questions:

1. What are the characteristics of the organisational arrangements for the selected ForLive cases of smallholder forest management?
2. What is the role of external institutions in developing smallholder forest management?
3. What is the nature of the local dynamics in the decision-making process regarding smallholder forest management?
4. What are the key processes and limiting factors for smallholder forest management in the Amazon?

In order to answer these questions, the WP2 research was organized in a series of related studies. In view of the fact that smallholder forest management systems are the main object of the ForLive study, the core research focused on assessing the institutional characteristics of the selected ForLive cases. Attention was given to the questions of how local institutions frame the smallholder management systems, and of how they are shaped by local processes of bricolage. These local processes were further analysed in a process of gradual contextualisation of the impacts of external conditions with special attention to the impacts of different regulatory frameworks for smallholder land management and of the change from government to governance arrangements.

Conceptual approach

The concept of institutions refers to a set of commonly accepted rules that govern activities of individuals or groups. These codes of conduct define practices, assign roles and guide interactions. In somewhat different terms, institutions can also be defined as multifaceted, durable social structures which are made up of symbolic rules, norms and cultural beliefs guiding human practices. Two types of institutions can be distinguished:

1. Formal institutions (or bureaucratic) based on official rules or even established by law.
2. Informal institutions (or socially embedded) in the form of unwritten codes and rules.

Often the terms institutions and organizations are considered as synonyms. But scientifically often a distinction is made between institutions as ‘the rules of the game’ people play, and organizations as a structured group of people bound together by some common purpose to achieve particular objectives. Consequently, the general definition of institutions as referring to codes of conduct structuring human actions and interactions must be differentiated from the much narrower interpretation of institutions as referring to established government policy organizations empowered with formulating and implementing norms on socio-economic and political activities and developments.

The research was based on four major scientific notions:

- The notion that the former governmental approach towards planning and regulating forest management has been changed towards a multi-actor and multi-level governance approach. This has resulted in a situation of normative pluriformity.
- The notion that the change from government control over forest to forest governance involves two contradictory tendencies: a process of decentralisation at the one hand, and a process of increased global standardization at the other hand.
- The notion that policy norms are not transferred in a linear process to local ‘beneficiaries’, but that interfaces between different policy and activity levels occur where the nature and meaning of policy decisions and norms are structurally adjusted to local conditions and codes of conduct.
- The notion that the smallholder management activities are at the one guided by institutional norms, but that at the other hand they have agency to adapt these norms to their own needs; this process is called institutional bricolage.

As a result of these dynamics the institutional arrangements for forest management are in transition. The earlier relatively simple institutional arrangements for governance of forests have been drastically altered and diversified, and it cannot be assumed that clearly-defined institutional regimes in the form an historically developed structured complex of related normative and regulatory norms for smallholder forest management exist. Past research on community-based forest management has often been based on the notion that it would be possible to identify robust institutional arrangements for effective management and hence to formulate a set of clearly-defined design criteria for stimulating further development. However, it is more realistic to characterize the institutional setting for smallholder forest management in the Amazon as being in a process of transformation and dynamic development rather than as being based on well-established and robust institutional regimes. Hence, the selected cases of promising smallholder forest management schemes can best be considered as real-life experiments in creating and adapting new institutional arrangements. Consequently, the WP2 research programme focused on analyzing the forces shaping the development of location-specific and often still evolving smallholder forest management systems operating at the intersection of local conditions and external institutional conditions rather than trying to identify parameters related to optimal institutional regimes.

Institutional characteristics of the ForLive cases

Diversity in smallholder forest management

Within the ForLive project 17 promising cases of smallholder forest management were selected by the local project partners. These cases illustrate that there is a considerable variation in smallholder forest management systems. For categorization of the different systems, in first instance the nature of the forest management system was considered. On the basis a pattern matching three basic categories of smallholder forest management were identified:

1. Forest extraction systems (for NTFPs and timber) in relatively large natural forest areas (> 100 ha).
2. Farm forestry consisting of either modified natural forests and/or secondary forests vegetations in medium-sized plots (10-50 ha).
3. Small-scale agroforestry systems up to a few hectares and fruit plantations.

In second instance, the institutional setting of the cases was characterized. The following institutional patterns were distinguished:

- *Type of management organisation:* The forest extraction systems are in most cases under communal management with some additional cases of cooperative management. In several cases the officially-designated communal forests are de facto divided in private plots. In contrast, all farm forestry and agroforestry systems are privately managed; in case of farm forestry the private managers are sometimes organized in cooperatives.
- *Socio-cultural background of the farmers:* The forest extraction systems tend to be under control of indigenous people, especially as it concerns timber production. Also peasants may be engaged in this activity, but this mostly concerns NTFPs. The farm forestry systems are more often under control of peasants and migrants. All three cultural groups can also be engaged in small-scale agroforestry and fruit tree cultivation.
- *Impact of external development organizations:* The agroforestry systems and to a lesser extend the on-farm forest modification systems are based on local initiatives. In contrast, the timber extraction systems are externally sponsored. The NTFP extraction systems are often based on local initiatives, but gradually receive increase external assistance in respect to local manufacturing and trade.

Three main local institutional conditions were found to impact on the local functioning of the different smallholder forest management systems:

- *The multi-resource and multi-enterprise approach of the forest managers*
Smallholder forest managers may be characterized as managers of forested landscapes consisting of a mosaic of forest lands, agroforestry and fruit production systems and agricultural fields rather than as timber managers. Non-timber forest products often play an important role in their forest resource system. In view of this nature of the smallholder forest management systems, it is important to frame sustainable forest management in the context of local resource use rather than only in the context of global norms on forest conservation and timber use.
- *The cultural backgrounds of the local communities, including degree of adherence to traditions or acceptance of modern innovations*
Culturally-inspired cognitive values play an important role in the choice of forest management systems. Indigenous people with a cultural background of forest-dwellers are inclined to focus on forest extraction systems coupled with small-scale agroforestry systems, whereas migrants focused on developing their legally or de-facto allotted new lands focus predominantly on the development and management of farm forestry and agroforestry

systems. The basic orientation of longer settled peasant farmers is intermediate between indigenous people and migrant farmer orientations.

There is also a tendency that indigenous people more often adhere to traditional practices in developing adapted management practices, whereas migrants more often follow professional norms on farm forest management as introduced by external organisations. Settled farmers hold an intermediate position in this development process of combining internally and externally induced innovations.

- *The prevalent system of land and forest tenure and social collaboration*

Large extraction forests of some thousands hectares used for combined NTFP and timber production often concern communally owned indigenous forest reserves, while smaller extraction plots are often privately managed, although they may be part of communal or cooperative forest management systems. Exclusive timber management either concerns smallholder permits to use state forests or externally-sponsored schemes for management of remaining forest plots on private farm lands. The modification of existing forests by enrichment with valuable local species as well as cultivation of mixed agroforestry and fruit plantations occurs on private farmlands.

These conditions may reinforce each other. For instance, the selection of management systems on the basis of cultural backgrounds is often positively influenced by the prevalent system of land and tree tenure. Recently specific laws have created the possibility for indigenous people to obtain legal control over their ancestral lands; often this concerns large tracks of forest lands. According to law, following tribal traditions of collaboration, these lands should be communally managed. In contrast, both for peasants and migrants land tenure security is basically provided by agrarian laws focused on individual landownership. This legal stipulation strengthens the relatively individualistic cultural orientations of these people.

Pluriform and dynamic institutional conditions

The smallholder forest management in the Amazon region is characterized by a situation of normative pluriformity and partly contradictory tendencies. At the one hand, different categories of smallholders (i.e. indigenous people, peasants and migrants) have different cultural-cognitive orientations in respect of what they consider as relevant forest management systems and different frames concerning relevant forest types and products. These experience-based normative orientations are at variance with the professional science-based forest management systems. Consequently, the local frames are often different than the frames used by professional foresters and policy makers. As a consequence of this normative pluriformity local forest managers may perceive the relevance of different forest production systems in a different manner than implied in the government policies.

At the other hand, with the ongoing process of modernity development in the Amazon region, the professional forest management systems are increasing in importance under the advent of requirements of modern society. As a result of the general socio-economic and political dynamics, it is not correct to conceive smallholder forest management as only involving traditional local frames. Most forest-based communities are by now incorporated in macro-level social and economic networks and in the ongoing process of modernization commercial activities are increasingly replacing former subsistence practices. Moreover, access to land and forest resources is increasingly government regulated. Moreover, international standards for forest conservation are gaining importance. These processes of modernization have a dual impact on the smallholder forest management systems. They stimulate smallholder forest management by legalizing access to forest lands and products for different categories of smallholders, thus enabling them to continue and further adapt their traditional forest management systems. But

alternatively, they also include the introduction of new standards for further specialized forms of forest management.

The combined effects of the pluriformity and dynamics in institutional conditions result in the development of location-specific rather than standardized smallholder forest management systems.

Role of external institutions

Diversity in external institutions

The smallholder organizations cannot not act autonomously in the sense that they can just decide by themselves how to arrange their forest production systems. The development of smallholder forest management is strongly impacted by external organizations. Their role is multiple:

- Government organizations identify the legal requirements concerning access to forest lands and resources.
- Government or semi-government organizations control whether the legal requirements are met.
- Various types of development organizations facilitate the development of the smallholder systems by providing information, technical assistance and incentives.
- Various types of commercial enterprises provide production investments and/or facilitate trade in the forest products.

Formal government regulations form one of the major external influences. Not only norms from the forestry regulatory frameworks are of relevance, but also norms from agrarian regulatory frameworks. These two frameworks are based on rather different principles:

- The forest regulatory systems are focused on regulating the conservation and sustainable management of forests through a system of legal principles in respect to access to forest lands and use of forest products. These legal requirements are backed up by systems of state control.
- The agrarian regulatory frameworks are much more focused on regulating agrarian development through a system of incentives/disincentives and market access.

The different management systems are related to different regulatory frameworks on land ownership and forest production. The natural forest extraction systems are strongly stimulated by laws on needs for sustainable timber management as well by laws legitimizing claims to ancestral lands of indigenous people. Under these last laws huge forest areas have come under control of indigenous people, and as a result of the policy of devolution in forest management they have become eligible for commercial timber exploitation. In addition, the traditions of NTFP extraction still continue. The farm forestry activities are partly also influenced by the present policies of devolution in forest management. But in addition, the regulatory frameworks on land titling based on the principle of proven land cultivation play an equally important role. In colonization areas farm forestry is stimulated by the laws on land titling stipulate that a part of the lands remain under forest. At the early stage of colonization tree exploitation is often a means for obtaining capital for investment in agricultural development.

In addition to regulation and control, external organizations also impact on smallholder forest management by facilitation and promotion activities. Increasingly, development organizations and forestry enterprises are involved in these activities.

Dealing with external institutions

In dealing with the different external institutions, smallholders are faced with several difficulties.

- *Contrasting tendencies of decentralization in management and control functions and increased formalization in basic forestry laws.*

An important reason for the increasing role of different organisations in shaping the smallholder forest management systems is the ongoing process of decentralisation in forest management decision-making. This trend is based on the belief that these decisions can best be made at a level where people are directly confronted by the impacts of their management decisions as well as the belief in forest justice in the sense of local communities (notably indigenous communities) having rights to forest lands (especially in case of former ancestral lands). However, the trend towards decentralisation is a complex one involving different dimensions. It involves multiple processes of bureaucratic deconcentration, delegation, privatization and devolution. Moreover, the trend is partly offset by a process of stronger regulation instead of deregulation; the trend towards standardization even extends to international level where a global forest regime is developing.

Although in many forest policies a strong plea for decentralization in forest governance is made, the reality of emerging governance networks is much more complex. The recent changes in the macro-institutional setting for forest management has resulted in a situation where the regulations on forest management have become more strict, while the organisational setting for stimulating and controlling smallholder forestry has become increasingly complex and pluriform. This demonstrates that in the process of decentralisation of the traditional government dominance in shaping the institutional conditions for forest use and conservation, strategic weaknesses occurred due to inadequate policy articulation as to how the process of decentralization relates to the calls for increased stimulation of and control over forest management. The contrasting tendencies of decentralization in management responsibility, increased regulation based on increasingly global-based standards, and increased involvement of NGOs and commercial enterprises often result in haphazardly developed location-specific governance arrangements rather than in standardized coherent arrangements.

- *Complex relations between endowments, entitlements and enablements*

As a result of these contrasting tendencies the formal endowments in the form of legal ownership to (forest) lands are not automatically transferred into entitlements to actually extract, use and sell the various forest resources. Legally three types of entitlements to forest lands can be distinguished:

- The rights to reclaim forest lands (hence allowing tree cutting) extraction systems (for NTFPs and timber) in relatively large natural forest areas (> 100 ha).
- The rights to extract forest products
- The obligation to conserve forests

However, these entitlements do not automatically mean that one is also entitled to officially trade in forest products. For instance, increasingly standards are coming into force that stipulate that only timber from legally approved forest management units with approved forest management plans may be traded on specified timber markets. This means, that trees cut while legally reclaiming agricultural lands can only be used for own use, but not officially sold. Moreover, there is often a difference in legal requirements between selling timber and non-timber forest products.

- *Contrasting institutional norms on which the external organizations base their activities*

In the process of transferring forest endowments into concrete entitlements and enablements for using and managing forest resources a variety of governmental, development and commercial organizations play a role. Each of these organizations base their activities on specific institutional norms, hence confronting smallholders with an array of institutional claims. An essential prerequisite for the development of smallholder forest management is that the smallholders are able to deal with this pluriform institutional setting.

Dynamics in institutional arrangements

The competing institutional frameworks stressing decentralization of decision-making and community involvement in forest management at the one hand, and increased standardization and professionalization at the other hand, illustrate how the different perspectives on optimal regimes for forest management result in a fuzzy actor network with different actors framing their activities on the basis of varied social and environmental norms. At the one hand this creates unresolved challenges to smallholder forest management. At the other hand they create room to maneuver, to experiment and thus to create space for social learning. These processes of social learning take place both at local level and at the level of external organizations.

At community-level local learning takes the form of processes of bricolage involving several local strategies for reacting on formal policy and legal frameworks for forest management on the basis of informal, but locally-embedded cognitive and socio-cultural institutions. Three major strategies can be distinguished:

1. Selective borrowing and rejection of institutional norms
2. Selective adaptation of institutional norms
3. Development of new institutional arrangements

These processes demonstrate that institutional impacts do not only concern the impact of formal regulations, but also the influence of social norms regarding moral obligations and traditional cultural beliefs. A smallholder farmer engaged in forest management is not just a rule follower, but a person doing what is best to him in his situation. For shaping his own specific forest management arrangements he uses his own agency for selection and/or adaptation from a range of either formal bureaucratic or more informal and socially-embedded codes of conduct regarding forest management and in doing so may create new institutional arrangements.

Key processes and limiting factors

Different categories of smallholder forest management with heterogeneous institutional settings

The concept of smallholder forest management is ill-defined and includes a variety of forest management systems ranging from natural forest extraction, farm forestry to agroforestry plantations. The different systems operate under quite variable institutional conditions. As demonstrated by the different institutional settings it is not possible to design uniform sets of robust institutional conditions for smallholder forest management. Rather, for improving institutional arrangements for smallholder forest management both the management-specific institutional context needs to be considered. Special attention needs to be given to the observation that not only forestry frameworks, but also agrarian frameworks impact on the manner in which smallholders are engaged in forest activities. More attention should be given to the respective roles of forestry legislation and agricultural development legislation and their effect on either stimulating or limiting specific forms of smallholder forest management.

Differentiated roles of external institutions and contradictory process of decentralization and standardization

It is often proposed that smallholder forest management is stimulated by the ongoing process of decentralisation in forestry decision making. However, this policy trend is counteracted by a process of international standardization of forest managed principles. Moreover, the process of decentralization involves several pathways related to the more specific processes of bureaucratic deconcentration, delegation, privatization and devolution. The different approaches towards decentralization are not planned in a structured and consistent manner and consequently a fuzzy process of change in formal institutions is taking place.

Local agency of smallholders in dealing with fuzzy and dynamic institutional conditions

The dynamics in institutional arrangements often results in a fuzzy actor network with different actors framing their activities on the basis of varied social and environmental norms. At the one hand this creates unresolved challenges to smallholder forest management. At the other hand they create room to maneuver, to experiment and thus to create space for social learning, notably also at local level. A smallholder farmer engaged in forest management should not be considered just as a follower of the rules introduced by government and development organizations, but rather as a person doing what is best to him in this situation. For shaping his own specific forest management arrangements he uses his own agency for selection and/or adaptation from a range of either formal bureaucratic or more informal and socially-embedded codes of conduct regarding forest management and in doing he creates location-specific institutional arrangements. As demonstrated by the different institutional features of the selected ForLive cases the processes of dynamic institutional ‘craftmanship’ or institutional bricolage are key factors in the development of smallholder forest management systems.

Main conclusions and recommendations

Conclusion on key processes and drivers impacting on the development of smallholder forest management	Recommendation
The increased attention for development of smallholder forest management in the Amazon is the result of recent policy changes stimulating community and smallholder involvement in forest management. The new policies have ushered a process of institutional transition which is still in progress.	In view of the ongoing dynamics, the development of smallholder forest management should be based on an experimental approach towards the creation of adaptive and flexible institutional arrangements rather than on the beliefs in the need to create pre-identified robust institutional regimes.
Smallholder forest management should not be considered as the outcome of a linear development process in which newly formulated forestry policies are transferred in a linear process to local ‘beneficiaries’. Rather, it should be recognized that during the process of implementing these policies they are adjusted to local realities. A major result of this process is the emergence of different types of smallholder forest management, each characterized by its specific institutional arrangements	In developing further development strategies for smallholder forest management specific attention should be given to: <ul style="list-style-type: none"> • The type of management type to be stimulated. • The specific type of local communities in respect to socio-cultural traditions
The development of smallholder forest management is based on a combination of two types of local cognitive institutions: at the one hand cultural traditions in respect to forests as living space and the importance of non-timber forest products play an important role, but at the other hand local visions and desires on joining processes of modernization and income earning.	In stimulating smallholder forest management a further balance must be sought in at the one hand incorporating local knowledge and traditional practices of forest use, but at the other hand educating local people in new practices for commercial timber production.

<p>In stimulating smallholder forest management there is often a tendency to base the approach on the international standards of combining forest conservation, poverty alleviation and social justice through formalization of access rights to and control over ancestral lands. As a result, much emphasis is given to the position of indigenous people and legal frameworks for forest conservation. This vision limits attention to the reality that smallholder forest management does not only concern indigenous people, but also peasants and migrants. For these local people agrarian frameworks are often as important in framing their management practices as the forestry frameworks</p>	<p>1. In stimulating smallholder forest management much more attention should be given towards the role of forest management as a component of integrated farming systems and the impact of agrarian legal frameworks. 2. For stimulating smallholder forest management a better policy articulation is needed in respect to mainstreaming forestry and agrarian legislation on land ownership, forest conservation, forest product trade, and rural development.</p>
<p>A key factor stimulating smallholder forest management is the present policy on decentralization and devolution in forest management. However, the various processes of bureaucratic deconcentration, delegation and privatization and devolution of former government activities and their relations are not systematically analyzed and these processes are progressing in a haphazard way. This limits the effectiveness of the decentralization process.</p>	<p>For further stimulation of smallholder forest management a clearer policy articulation is needed in respect for creating effective location-specific interactions between administrative decentralization and/or delegation in forest law enforcement, devolution of forest.</p>
<p>Simultaneously with the process of decentralization concerning forest management there is also ongoing a process of globalization of standards for forest management, which counteracts the results of the decentralization processes.</p>	<p>To stimulate smallholder forest management it is essential to further consider how the present tendency towards increased international forest regulations can be balanced by a process of development location-specific rather than generic forest management systems.</p>
<p>As a result of the contradictory and fuzzy processes of institutional dynamics impacting on smallholder forest management, in many studies the conclusion has been drawn that the development of smallholder forest management is characterized by many difficulties and remains an unsolved challenge. In an attempt to assess whether there is also 'another side of the coin' in this study also the opportunities for maneuvering, experimenting and social learning by both local and external organisations have been demonstrated.</p>	<p>In view of the multistakeholder networks impacting on the development of smallholder forest management, it is most promising to assess the options for development of smallholder forest management not on a 'state, market, greens or locals know best' perspective, but rather on a 'nobody knows best' perspective.</p>

Resumen Ejecutivo

Objetivos de la investigación

El presente informe es una síntesis de los resultados del Componente 2 del proyecto de investigación "Manejo forestal por pequeños productores de la Amazonía – una oportunidad para mejorar los Medios de Vida Rurales y la Estabilidad de los Ecosistemas Forestales" (ForLive). El objetivo general del proyecto fue identificar y analizar las estrategias de gestión aplicadas por los pequeños productores de la Amazonía para evaluar la viabilidad local y posible contribución a la estabilización ecológica del paisaje y medios de vida rurales. Este objetivo fue desarrollado a través de una serie de casos comparativos de prometedoras iniciativas de pequeños propietarios forestales en la Amazonía brasileña, bolivariana, ecuatoriana y peruana. El proyecto se basó en la premisa que, aunque se ha dado un significativo paso para adaptar el concepto de gestión forestal sostenible para las circunstancias y demandas de los pequeños productores de la Amazonía, todavía existen muchos obstáculos para su satisfactoria implementación. Los conceptos de gestión definidos externamente frecuentemente no corresponden adecuadamente a los medios de vida y competencias de los pequeños propietarios. Consecuentemente, las necesidades, opiniones y capacidades de los pequeños productores deben ser incluidas adecuadamente en la evaluación de la gestión sostenible. El objetivo del Componente 2 fue contribuir a un mejor entendimiento de los fundamentos institucionales de las decisiones de los pequeños productores en cuanto a gestión y uso forestal. Los objetivos de este informe son presentar un resumen general de los procesos institucionales y características que afectan al desarrollo de los sistemas de gestión forestal de pequeños productores seleccionados por el proyecto ForLive, y obtener conclusiones sobre los procesos institucionales y factores clave que impactan el manejo forestal de los pequeños productores de la Amazonía.

Las siguientes preguntas fueron tratadas por Componente 2:

Pregunta básica: ¿Qué tipo de organización presentan los sistemas de manejo forestal de pequeños productores y cómo esta organización se relaciona con la configuración institucional y su dinámica?

Preguntas específicas:

1. ¿Cuáles son las características organizativas de los casos de manejo forestal por pequeños productores seleccionados por el proyecto ForLive?
2. ¿Cuál es el papel de las instituciones exteriores en el desarrollo de los sistemas de manejo forestal de los pequeños productores?
3. ¿Cuál es la naturaleza de la dinámica local en los procesos de toma de decisiones de acuerdo a la manejo forestal por pequeños productores?
4. ¿Cuáles son los procesos clave y factores limitantes en el manejo forestal por pequeños productores en la Amazonía?

Para responder estas preguntas, el Componente 2 se organizó de acuerdo a una serie de estudios relacionados. Teniendo en cuenta que los sistemas de manejo por pequeños productores son el principal objetivo del proyecto ForLive, la parte principal de la investigación se centró en la evaluación de las características institucionales de los casos seleccionados. Se dio bastante atención a las cuestiones de qué manera las instituciones locales afectan a los sistemas de manejo forestal de los pequeños productores y cómo son caracterizadas por los procesos locales de bricolage. Estos procesos locales fueron más profundamente analizados en un proceso de contextualización gradual de los impactos de las condiciones externas con especial atención a los impactos de los diferentes marcos regulatorios para la gestión de la tierra de los pequeños propietarios y al cambio desde gobierno a gobernanza.

Aproximación conceptual

El concepto de instituciones se refiere a un grupo de normas aceptadas colectivamente que gobiernan las actividades de los individuos o grupos. Estos códigos de conducta definen las prácticas, asigna roles y guía las interacciones. En otros términos, las instituciones pueden definirse como estructuras sociales perdurables y diversas compuestas por reglas simbólicas, normas y creencias culturales que guían las actividades humanas. Se pueden distinguir dos tipos de instituciones:

3. Instituciones formales (o burocráticas) basadas en normas oficiales o incluso establecidas por ley.
4. Instituciones informales (o arregados en la vida social) en forma de códigos y normas no escritas.

Frecuentemente los términos instituciones y organizaciones se consideran sinónimos. Científicamente existe una distinción entre instituciones como “las reglas del juego” y organizaciones como un grupo organizado de personas que se unen con un objetivo común para obtener determinados resultados. De tal forma, la definición general de instituciones como códigos de conducta que determinan las acciones e interacciones debe ser diferenciada de la más estricta interpretación de instituciones como organizaciones gubernamentales capaces de formular e implementar normas sobre actividades socioeconómicas, políticas y de desarrollo.

La investigación se basó en cuatro importantes nociones científicas:

- La forma convencional de gobierno unilateral respecto al planeamiento y regulación de la gestión forestal ha cambiado hacia una forma de gobernancia con diferentes actores y niveles. Esto ha supuesto el desarrollo de una situación de pluriformidad normativa.
- El cambio del control del Gobierno del bosque hacia una gobernancia del bosque implica dos tendencias contradictorias: por una parte un proceso de descentralización y por otra un proceso de incremento de estandarización global.
- Las políticas no se transfieren en un proceso lineal a los “beneficiarios” locales, sino que el cambio entre diferentes escalas políticas y prácticas ocurre donde la naturaleza y significado de las decisiones y normas políticas se ajustan estructuralmente a las condiciones y códigos de conducta locales.
- El manejo que llevan a cabo los pequeños propietarios está en parte guiado por las normas institucionales, aunque ellos también tienen la posibilidad de adaptar esas normas a sus propias necesidades; este proceso se denomina bricolage institucional.

Como resultado de esta dinámica, la configuración institucional de la gestión forestal está en continuo movimiento. La relativamente simple forma convencional de gobierno de los bosques ha sido drásticamente alterada y diversificada y por tanto no se puede asumir que existan regímenes institucionales claramente definidos con la forma de sistemas normativos complejos históricamente desarrollados para el manejo forestal de pequeños productores. La investigación previa en gestión forestal comunitaria ha mantenido que es posible identificar determinados aspectos institucionales para lograr una gestión eficaz y que por tanto formulando un grupo de criterios claramente definidos se puede estimular un mayor desarrollo. Sin embargo es más realístico caracterizar la configuración institucional del manejo forestal de pequeños propietarios en la Amazonía como un proceso de transformación y desarrollo dinámico y no como un proceso basado en un régimen institucional robusto y bien establecido. De esta manera, los casos seleccionados de prometedores pequeños productores pueden ser considerados de mejor manera como verdaderos procesos experimentales que crean y adaptan nuevas configuraciones institucionales. Consecuentemente, el Componente 2 se ha centrado en analizar las fuerzas que determinan el desarrollo local y a veces continuo de sistemas de manejo forestal por pequeños productores operando entre las condiciones locales e influencias institucionales externas más que intentando identificar parámetros relacionados con regímenes institucionales óptimos.

Características institucionales de los casos del proyecto ForLive

Diversidad en los sistemas de manejo forestal de los pequeños propietarios

Dentro del proyecto ForLive se seleccionaron 17 casos prometedores por los socios locales. Estos casos ilustran la considerable variación en sistemas de manejo forestal por pequeños productores. Para categorizar los distintos sistemas, en primer lugar la naturaleza del sistema de gestión forestal fue considerada. De acuerdo a un patrón tres categorías básicas fueron identificadas:

1. Sistemas de extracción forestal (para madera y productos no madereros) en áreas naturales relativamente grandes (> 100 ha).
2. Sistemas agrícolas forestales de bosque natural modificado y/o bosque secundario en parcelas de tamaño medio (10-50 ha).
3. Plantaciones agroforestales y de frutales a pequeña escala de unas pocas hectáreas

En un segundo lugar, se caracterizó la situación institucional distinguiendo los siguientes patrones institucionales:

- *Tipo de organización para la gestión:* los sistemas de extracción forestal están en la mayoría de los casos bajo gestión comunal con algunos casos bajo sistemas cooperativos. En algunos casos los bosques comunales oficialmente designados están divididos en parcelas privadas. Por el contrario, todos los sistemas agroforestales y sistemas agrícolas forestales son gestionados de forma privada; en el caso de los sistemas agrícolas forestales los gestores se organizan algunas veces en cooperativas.
- *Perfil sociocultural de los productores:* los sistemas de extracción forestal tienden a estar bajo control de las comunidades indígenas, especialmente si concierne la producción maderera. Los campesinos también se dedican a esta actividad aunque principalmente en relación a productos no madereros. Los sistemas agrícolas forestales suelen estar bajo control de los campesinos y emigrantes. Los tres grupos culturales se pueden dedicar a las plantaciones agroforestales y de árboles frutales a pequeña escala.
- *Impacto de las organizaciones externas de desarrollo:* las plantaciones agroforestales a pequeña escala y a una menor extensión los sistemas agrícolas forestales están basados en iniciativas locales. Por el contrario, los sistemas de extracción forestal están apoyados por entidades externas. Los sistemas de extracción de productos forestales no madereros (PFNM) se basan frecuentemente en iniciativas locales pero gradualmente están recibiendo una mayor ayuda externa respecto a manufacturación local y mercado.

Tres importantes condiciones institucionales en el ámbito local afectaron al funcionamiento local de los diferentes sistemas de manejo forestal por pequeños productores:

- *La elección de los gestores forestales de sistemas multi-recurso y multi-empresa*
Los gestores forestales de pequeñas propiedades se podrían caracterizar como gestores de áreas forestales que consisten en un mosaico de diferentes tipos de bosque, sistemas agroforestales y de cultivo de frutales, más que como gestores madereros. Los productos no madereros frecuentemente juegan un papel importante en sus sistemas. De acuerdo a esta naturaleza de los sistemas de manejo forestal por pequeños productores, es importante no solo caracterizar la gestión forestal sostenible en el contexto global de las normas en conservación de los bosques y la explotación maderera sino también en el contexto del uso local de los recursos.
- *El trasfondo cultural de las comunidades locales, incluyendo el grado de persistencia de tradiciones o la aceptación de innovaciones*
Los valores cognitivos culturales juegan un importante papel en la elección del sistema de manejo forestal. Las comunidades indígenas con tradición de recolectores se inclinan por los sistemas de extracción forestal combinados con plantaciones agroforestales a pequeña escala.

Por el contrario, los emigrantes, con un especial interés en el desarrollo de su legado o de hecho recién adquirida tierra, se centran principalmente en el desarrollo y manejo de sistemas agrícolas forestales y plantaciones agroforestales. La orientación de los campesinos ya establecidos es intermedia entre las comunidades indígenas y los emigrantes.

Existe también una tendencia entre las comunidades indígenas a adaptar el manejo según las prácticas tradicionales, mientras que los emigrantes suelen seguir reglas profesionales de gestión forestal introducidas por organizaciones externas. Los campesinos presentan una posición intermedia en este proceso de desarrollo combinando innovaciones tanto internas como externas.

- *El persistente sistema de propiedad de la tierra y el bosque y la colaboración social*
Las extensas masas de bosque de producción de varios miles de hectáreas explotadas para productos madereros y no madereros suelen darse en reservas forestales indígenas de propiedad comunal, mientras que parcelas de producción forestal menores suelen ser de propiedad privada aunque puedan ser parte de sistemas forestales comunales o cooperativos. La gestión exclusiva para extracción maderera se da tanto en bosques propiedad del estado pero con permisos para pequeños productores como en parcelas agrícolas privadas donde queda alguna masa forestal que es gestionada con el apoyo de organizaciones externas. La modificación de ya establecidos bosques mediante enriquecimiento con especies locales de especial valor, así como las plantaciones mixtas agroforestales y de frutales sucede en tierras privadas.

Estas condiciones podrían generar sinergia. Por ejemplo, de acuerdo al trasfondo cultural de la comunidad, el sistema tradicional de propiedad de la tierra y del árbol suele tener una influencia positiva en la selección del sistema de manejo. La normativa actual ha creado la posibilidad de que las comunidades indígenas puedan obtener el control sobre sus tierras, frecuentemente en referencia a grandes extensiones. De acuerdo a la normativa, siguiendo la tradición tribal de colaboración, estas tierras deben ser gestionadas comunalmente. Por el contrario, la seguridad en la propiedad de tanto los campesinos como emigrantes se basa en normativa agrícola centrada en la propiedad individual con lo que se fortalece la tradicional individualidad de estas comunidades.

La dinámica y diversidad en la configuración institucional

El manejo forestal de los pequeños productores de la Amazonía se caracteriza por una situación de diversidad normativa y tendencias contradictorias. Por una parte, distintos tipos de productores (ej. Comunidades indígenas, campesinos y emigrantes) tienen diferente predilección en el sistema de gestión forestal y distintos puntos de vista en referencia a los productos y bosques más relevantes. Estas predilecciones basadas en la experiencia difieren respecto a los sistemas de manejo profesionales. Consecuentemente los puntos de vista locales suelen ser diferentes que los de los ingenieros o del Gobierno. Como consecuencia de esta diversidad normativa los gestores forestales locales podrían percibir la importancia de distintos sistemas de producción forestal de una manera diferente que la sugerida por las políticas gubernamentales.

Por otra parte, con el actual proceso de desarrollo de la Amazonía, los sistemas de manejo forestal profesional están incrementando en importancia bajo el auspicio de los requerimientos de la sociedad moderna. Como resultado de la dinámica general socioeconómica y política no se debería sólo entender el manejo forestal por pequeños productores en el marco de las tradiciones locales. La mayoría de las comunidades forestales en la actualidad están incorporadas en amplias redes sociales y económicas y se están distanciando de las tradicionales formas de subsistencia a través de un proceso de modernización de sus actividades comerciales. Además, los estándares internacionales están ganando importancia. Este proceso de modernización tiene un doble impacto en los sistemas de manejo de los pequeños propietarios. Por un lado, estimula el manejo por pequeños productores legalizando el acceso a las tierras y productos forestales para las

distintas categorías de propietarios de forma que se permite que se continúe y adapten los sistemas de manejo tradicional. Sin embargo, esto también implica la introducción de nuevos estándares que requieren formas de especializadas de manejo forestal.

El efecto combinado de diversidad y dinámica de la configuración institucional genera un desarrollo local característico más que un sistema de manejo forestal estandarizado y general.

El papel de las instituciones externas

Diversidad en las instituciones externas

Las organizaciones de pequeños productores no pueden actuar de manera autónoma ya que no puede decidir por sí mismas cómo organizar sus sistemas de producción. El desarrollo de estos sistemas se ve afectado por organizaciones externas y su papel es múltiple:

- Las organizaciones gubernamentales identifican los requerimientos legales respecto al acceso a los recursos forestales.
- Las organizaciones gubernamentales y semi-gubernamentales controlan que los requerimientos legales se cumplan.
- Diversos tipos y de organizaciones pro desarrollo facilitan el desarrollo de los sistemas de los pequeños productores facilitando información, asistencia técnica e incentivos.
- Diversos tipos de firmas comerciales otorgan financiación para producción y/o facilitan el comercio de los productos forestales.

La regulación por parte del Gobierno es una de las influencias externas más importantes. No sólo las normas referentes al ámbito forestal son relevantes, sino también la legislación agraria. Estos dos ámbitos legislativos se basan en diferentes principios:

- La legislación forestal se centra en la regulación de la conservación y gestión sostenible de los bosques a través de la regulación del acceso a las tierras forestales y al uso de productos forestales. Estos requerimientos legales están respaldados por un control estatal.
- La legislación agraria se centra más en la regulación del desarrollo agrario a través de un sistema de incentivos y accesibilidad al mercado.

Los diferentes sistemas de manejo están relacionados con los distintos ámbitos legislativos para la propiedad y la producción forestal. Los sistemas de extracción maderera en bosques naturales se encuentran altamente potenciados por la legislación en gestión maderera sostenible y en la referente a la legitimización de los derechos ancestrales de los indígenas sobre sus tierras. Debido a estas leyes, grandes extensiones forestales han pasado a ser controladas por indígenas y como resultado de las políticas de descentralización en gestión forestal se ha permitido la posibilidad de su explotación comercial. Adicionalmente, se ha continuado con la extracción tradicional de productos forestales no madereros. Las actividades agrícolas forestales también se ven influenciadas por la presencia de políticas de descentralización en la gestión forestal. Del mismo modo, la legislación en la propiedad de la tierra basada en el cultivo continuado de la tierra ejerce también un importante papel. En áreas de colonización la legislación de la propiedad estimula las actividades agrícolas forestales ya que parte del área debe permanecer como zona forestal. Al inicio de la colonización, los beneficios obtenidos de la explotación maderera son utilizados para financiar el desarrollo agrícola.

Además de la regulación y control, las organizaciones externas afectan al manejo forestal de los pequeños productores a través de la facilitación y promoción. Las organizaciones pro desarrollo y las empresas madereras se encuentran cada vez más desarrollando este tipo de actividades.

Las relaciones con las instituciones externas

Los pequeños productores se enfrentan con diferentes dificultades al relacionarse con las distintas organizaciones externas.

- *La tendencia hacia la descentralización en actividades de control y gestión y el incremento de formalización en la legislación básica forestal.*

Una importante razón para el creciente papel de las ONGs en la configuración de los sistemas de manejo del bosque por pequeños productores es el actual proceso de descentralización en la toma de decisiones sobre el manejo del bosque. Esta tendencia se basa en la creencia de que estas decisiones pueden ser mejor tomadas en un nivel en el que las personas están directamente afectadas por los impactos de sus propias decisiones de manejo, así como también en la creencia de la justicia forestal, en el sentido de los derechos de las comunidades locales (en particular las comunidades indígenas) sobre determinadas tierras forestales (especialmente aquellas que son tierras ancestrales). Sin embargo, la tendencia hacia la descentralización es un complejo proceso que abarca diferentes dimensiones, tales como desconcentración burocrática, delegación, privatización y devolución. Por otra parte, la tendencia se ve en parte compensada por un proceso de mayor regulación en lugar de desregulación, esta tendencia hacia la estandarización se extiende incluso a nivel internacional donde se está desarrollando un régimen forestal global.

Aunque en muchos casos la política forestal tiende a la descentralización en la gobernanza forestal, la realidad referente a sus redes sociales es mucho más compleja. Los cambios recientes en la configuración macro institucional del manejo forestal ha desembocado en una situación donde la regulación es mucho más estricta, mientras que la configuración organizativa para estimular y controlar a los pequeños productores forestales ha incrementado en complejidad y pluriformidad. Esto demuestra que en el proceso de descentralización referente al uso y conservación forestal desde el esquema tradicional de gobierno, se producen ciertas debilidades estratégicas debido a una inadecuada articulación de cómo relacionar el proceso de descentralización con un incremento en la estimulación y control del manejo forestal. La combinación de la descentralización en la responsabilidad en la gestión, el incremento legislativo basado en estándares globales y el incremento de la participación de ONGs y empresas suele generar configuraciones de gobernanza diversas y definidas localmente que se contraponen a configuraciones más generales o estandarizadas.

- *Las complejas relaciones entre dotaciones (“endowments”), derechos (“entitlements”) y capacidades (“enablements”)*

Como resultado de esta combinación de tendencias, las dotaciones dadas en la forma de propiedad legal de las tierras forestales no son automáticamente transformadas en derechos para la extracción, uso y venta de recursos forestales. Legalmente se pueden distinguir tres tipos de derechos respecto a tierras forestales:

- El derecho a reclamar zonas forestales para actividades extractivas (incluyendo el permiso para cortar árboles) in áreas forestales relativamente extensas (>100 ha).
- El derecho a extraer productos forestales
- La obligación de conservar los bosques

Sin embargo estos derechos no significan automáticamente que también se otorgue el derecho a comercializar los productos forestales oficialmente. Por ejemplo, diversos estándares obligan a que la madera provenga de unidades de manejo forestal oficialmente aprobadas y con planes de manejo aprobados para ser comercializados en determinados mercados madereros. Esto significa

que árboles cortados en el proceso de reclamación legal de tierras agrícolas sólo pueden ser usados para consumo propio pero no oficialmente comercializados. Además suele haber cierta diferencia en requerimientos legales entre la venta de productos madereros y no madereros.

- *Normas institucionales opuestas en las que las organizaciones externas basan sus actividades*

En el proceso de transferencia de las dotaciones a derechos y permisos concretos para usar y gestionar los recursos forestales existe una gran variedad de organizaciones gubernamentales, pro desarrollo y comerciales que juegan su papel. Cada una de estas organizaciones basa sus actividades en normas institucionales específicas de forma que enfrentan a los pequeños productores con una gran variedad de reivindicaciones institucionales. Un prerequisite esencial para el desarrollo de los pequeños productores es que ellos mismos sean capaces de manejar esta diversa configuración institucional.

La dinámica de la configuración institucional

El régimen institucional que por una parte estresa la descentralización en la toma de decisiones y la participación de las comunidades en el manejo forestal y por otra parte el incremento de la estandarización y profesionalización, ilustra como las distintas perspectivas de lo que se debería considerar como sistemas óptimos para el manejo forestal a menudo resulta en una red confusa de actores con diferentes intereses que enmarcan sus actividades, sobre la base de diversas normas sociales y ambientales. Por una parte, esto crea retos no resueltos para los pequeños gestores forestales y por otra parte crea un espacio para maniobrar y experimentar, para el aprendizaje social, en particular a nivel local. Este proceso de aprendizaje social tiene lugar tanto a nivel local como al nivel de las organizaciones externas.

Al nivel de comunidad, el aprendizaje tiene lugar en el proceso de bricolaje del que forman parte distintas estrategias locales para reaccionar ante la legislación y políticas de gestión forestal, basadas en instituciones informales, locales, cognitivas y socioculturales. Tres tipos de estrategias mayoritarias se pueden distinguir:

4. Una toma o rechazo de normas institucionales de forma selectiva
5. Una adaptación selectiva de las normas institucionales.
6. Desarrollo de nuevas configuraciones institucionales.

Estos procesos demuestran que los impactos institucionales no sólo se refieren al efecto de las regulaciones formales, sino también a la influencia de las normas sociales respecto a obligaciones morales y creencias tradicionales. Un pequeño productor no simplemente sigue las normas, sino que hace lo que es mejor en su situación. Para concretar su manejo forestal, usa su propia "agencia" para la selección y/o adaptación de una serie de códigos de conducta formal o informal de manera que puede llegar a crear una nueva configuración institucional.

Procesos básicos y factores limitantes

Diferentes categorías de pequeños productores forestales con configuraciones institucionales heterogéneas

El concepto de pequeño productor forestal está pobremente definido e incluye una variedad de sistemas forestal que van desde sistemas extractivos madereros, agrícolas forestales a plantaciones agroforestales. Los diferentes sistemas operan bajo diversas condiciones institucionales. Debido a las diferentes configuraciones institucionales no es posible designar un grupo uniforme de condiciones institucionales robustas para los pequeños productores. Por lo tanto hay que considerar el contexto institucional específico de cada sistema para mejorar su configuración institucional. Una especial atención se tiene que otorgar a que no sólo el ámbito forestal, sino también el agrario impactan en la manera en que los pequeños productores ejecutan sus actividades forestales. Más atención se debe dar al papel que tiene la legislación forestal y de desarrollo agrícola y su efecto para estimular o limitar determinadas formas de manejo forestal para los pequeños productores.

El papel diferenciado de las instituciones externas y el proceso contradictorio de descentralización y estandarización

Se suele proponer que los sistemas de manejo forestal de pequeños productores se estimulan por el proceso de descentralización en la toma de decisiones en materia forestal. Sin embargo, esta tendencia política se ve equilibrada por un proceso de estandarización internacional de los principios de manejo forestal. Además el proceso de descentralización incluye diferentes caminos relacionados con procesos más específicos tales como desconcentración burocrática, delegación, privatización y devolución. Las diferentes aproximaciones hacia la descentralización no están planeadas de una forma estructurada y consistente y consecuentemente tiene lugar un proceso confuso de cambios en las instituciones formales.

La agencia local de los pequeños productores al tratar con unas condiciones institucionales confusas y dinámicas.

El dinamismo en la configuración institucional suele generar una red enmarañada de actores que basan sus actividades en una cierta variedad de normas sociales y ambientales. Por una parte, esto crea retos no resueltos para los pequeños gestores forestales y por otra parte, crea un espacio para maniobrar y experimentar, para el aprendizaje social, en particular a nivel local. Un pequeño productor no simplemente sigue las normas, sino que hace lo que es mejor en su situación. Para concretar su manejo forestal, usa su propia “agencia” para la selección y/o adaptación de una serie de códigos de conducta formal o informal de manera que puede llegar a crear una nueva configuración institucional. Como se ha demostrado por las diferentes características institucionales de los casos seleccionados en el proyecto ForLive, los procesos de dinámica institucional “artesanía” o bricolaje institucional son factores clave en el desarrollo de los sistemas de manejo forestal de los pequeños productores.

Principales conclusiones y recomendaciones

Conclusión de los procesos determinantes y factores que afectan el desarrollo del manejo forestal de los pequeños productores	Recomendación
<p>La mayor atención hacia el desarrollo del manejo forestal por pequeños productores en la Amazonia es el resultado de los recientes cambios en las políticas que estimulan la participación comunitaria y de pequeños productores en el manejo forestal. Las nuevas políticas han iniciado un proceso de transición institucional que todavía está en marcha.</p>	<p>En vista de la actual dinámica, el desarrollo del manejo forestal por pequeños productores debe basarse en un enfoque experimental para la creación y adaptación de arreglos institucionales flexibles, en lugar de creer necesario establecer robustos regímenes institucionales previamente determinados.</p>
<p>El manejo forestal por pequeños productores no debe considerarse como el resultado de un proceso lineal de desarrollo en el que recientes políticas forestales son formuladas y transferidos a los “beneficiarios” locales. Por el contrario, se debe reconocer que durante el proceso de aplicación de estas políticas hay un ajuste con las realidades locales. Un importante resultado de este proceso es la aparición de diferentes tipos de manejo forestal por pequeños productores, cada uno caracterizado un arreglo institucional específico.</p>	<p>En el establecimiento de nuevas estrategias de desarrollo para el manejo forestal por los pequeños productores debe prestarse especial atención a:</p> <ul style="list-style-type: none"> • El tipo de manejo que será impulsado. • El tipo específico de comunidades locales con respecto a sus tradiciones socioculturales.
<p>El desarrollo de el manejo forestal por los pequeños productores está basado en la combinación de dos tipos de instituciones cognitivas locales: por un lado, las tradiciones culturales que desempeñan un rol importante en lo que respecta a los bosques como espacio vital y la importancia de los productos forestales no madereros (PFNM), pero por otro lado, las visiones y deseos locales de incorporarse a los procesos de modernización y de generación de ingresos.</p>	<p>Si se desea estimular el manejo forestal por pequeños productores se debe buscar un equilibrio, por un lado incorporando conocimientos locales y prácticas tradicionales de uso forestal y por otro lado educando a la población local en las nuevas prácticas comerciales para la producción maderera.</p>
<p>En la búsqueda por estimular el manejo forestal por pequeños productores a menudo existe una tendencia a basar el enfoque en estándares internacionales que combinan la conservación de los bosques, la mitigación de la pobreza y la justicia social a través de la formalización de los derechos de acceso y control a las tierras ancestrales. Como resultado, hay demasiado énfasis en la posición de los pueblos indígenas y los marcos jurídicos para la conservación de los bosques. Esta visión es limitante ya que la realidad del manejo forestal por los pequeños productores no sólo afecta a los pueblos indígenas, sino también a los campesinos y los emigrantes. Para esta población local el ámbito legislativo agrario es, a menudo, tan importante en la elaboración de sus prácticas de manejo como el ámbito forestales.</p>	<ol style="list-style-type: none"> 1. Para el estímulo del manejo forestal por pequeños productores mucha más atención debe prestarse a el rol del manejo como un componente de los sistemas agrícolas integrados y el impacto del ámbito legislativo agrario. 2. Una mejor articulación de las políticas es necesaria en lo que respecta al establecimiento de la legislación forestal y agraria en la propiedad de la tierra, la conservación de los bosques, el comercio de productos forestales, y el desarrollo rural.

<p>Un factor clave para estimular el manejo forestal por los pequeños productores es la política actual sobre la descentralización y traspaso de responsabilidades en el manejo forestal. Sin embargo, los distintos procesos burocráticos de la desconcentración, delegación y privatización de las antiguas actividades del gobierno y sus relaciones, no están siendo analizadas sistemáticamente y estos procesos están avanzando de una forma azarosa. Esto limita la eficacia del proceso de descentralización.</p>	<p>Para el desarrollo del manejo forestal por pequeños productores se debe alcanzar una articulación política más clara, en lo que respecta a la creación de interacciones efectivas, específicas y localizadas entre la descentralización administrativa y/o la delegación en el control de la aplicación de la legislación forestal y la devolución de los bosques.</p>
<p>Simultáneamente con el proceso de descentralización en relación con el manejo forestal también hay en curso un proceso de globalización de las normas del mismo, lo que contrarresta los resultados de los procesos de descentralización.</p>	<p>Para estimular el manejo forestal por pequeños productores es esencial examinar más a fondo la forma en que la actual tendencia hacia una mayor reglamentación internacional sobre los bosques puede ser equilibrada por un proceso de desarrollo geográficamente específico en lugar de la copia sistemas genéricos de manejo forestal.</p>
<p>Como resultado de los contradictorios y confusos procesos institucionales que inciden en el manejo forestal por pequeños productores, en muchos estudios se ha llegado a la conclusión de que el desarrollo de estos manejos forestales está caracterizado por muchas dificultades y sigue siendo un problema sin resolver. En un intento de evaluar si también hay "otra cara de la moneda" en este estudio se han demostrado las posibilidades de maniobra, de experimentación y de aprendizaje social tanto de los locales, como de las organizaciones externas.</p>	<p>En vista del impacto de las redes de múltiples actores en el desarrollo del manejo forestal por los pequeños productores, es más prometedor abordar las opciones de desarrollo de estos manejos forestales desde una perspectiva de "nadie sabe más" que desde una perspectiva de "el Estado, el mercado, los "verdes" o los locales saben más".</p>

Part 1 Introduction

1. Aim and structure of the report

This report presents a synthesis of the results of the Working Programme 2 of the research project ‘Forest management by small farmers in the Amazon – an opportunity to enhance forest ecosystem stability and rural livelihood’ (ForLive). The overall objective of this FORLIVE research project was to identify and analyse forest management strategies applied by small farmers in the Amazon in order to assess and value their local viability and possible contribution to the ecological stabilization of landscapes and rural livelihoods. The objective of the Working Programme 2 was to contribute to better understanding of the institutional basis of decisions of small farmers regarding forest use and management. Hence, the aims of this final report are the following:

- To give an overview of the WP2 research programme, including the theoretical considerations guiding the reported studies.
- To present an overview of the general institutional processes and issues impacting on the development of smallholder forest management systems in the ForLive study region.
- To draw conclusions on the key institutional processes and factors impacting on smallholder forestry in the Amazon.

The report is structured as follows:

Part 1 gives an introduction to the general objectives of the Forlive programme and the specific objectives of Working Programme 2. It also provides a basic problem identification emphasizing the heterogeneous and dynamic institutional framework for smallholder forest management in the Amazon.

Part 2 describes the research approach. First the theoretical orientation of the studies is explained and next the research design consisting of comparative studies of the ForLive cases added with a series of specialized studies is indicated.

Part 3 presents an overview of the institutional characteristics of the selected smallholder forestry cases. These ForLive cases are characterized in respect to the type of forest management systems and their specific institutional conditions. Also the local opinions on the role of institutions on the functioning of the management systems is described.

Part 4 describes the role of external institutions on the functioning of the smallholder forest management systems giving attention to both regional/national and international actor networks. Attention is given to both legal frameworks and the role of promotional organizations.

Part 5 further elaborates the dynamics in institutional arrangements by given attention to both the agency of local actors to craft location-specific management constellations as well as the more general process of multi-level organisational learning.

Part 6 presents conclusions on the nature and dynamics of the institutional arrangements for smallholder forestry in the Amazon and summarizes the main institutional processes and factors impacting on the development of sustainable forest management by smallholders in the Amazon region.

2. Research context

In 2005, the research project ‘Forest management by small farmers in the Amazon – an opportunity to enhance forest ecosystem stability and rural livelihood’ (ForLive) was started with funding from the European Commission under the INCO Programme. The rationale for carrying

out this research was the observation, that during the past decade smallholder forestry has increased in significance in the Amazon basin, and that significant progress has been made in attempting to adapt the concept of sustainable forest management to the situation of the small farmers. However, there are still many obstacles that need to be overcome for smallholder forestry to be really effective in respect to both forest conservation and livelihood improvement. In many situations the concepts for small farmer forest management have been externally defined and do not correspond adequately to the livelihood systems and competences of the small farmers. There is a need for further incorporation of the needs, views and capacities of small farmers in the development of small farmer focused forest management strategies. Consequently, the main objective of the project was *'to identify and analyse forest use strategies applied by small farmers in the Amazon in order to assess and value their local viability and possible contribution to the ecological stabilization of landscapes and rural livelihoods'*. This objective was addressed through a series of comparative case-studies on promising examples of smallholder forest management initiatives in the Brazilian, Bolivian, Ecuadorian and Peruvian Amazon..

In order to address the general research objective, the project was organized in five Working Programmes, see Table 1. This report summarizes the results of the Working Programme 2.

Table 1 Working Programmes within the ForLive research project

<ol style="list-style-type: none"> 1. Identification and classification of forest management strategies relevant for small farmers 2. Impact of institutional frameworks on small farmer forest management strategies 3. Livelihood conditions and strategies of smallholder forest managers 4. Environment characteristics of smallholder forest management 5. Synthesis
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3. WP2 research objectives and questions

As stated in the original project document, the objectives of the Working Package 2 on institutional frameworks was to focus on the specific project objective of contributing to *better understanding of the past decisions of small farmers, especially the influence of the institutional framework, which resulted in current forest status and management decisions.*

This objective was further specified into two specific aims¹:

1. To make a comparative survey about the nature of local institutions which frame the different categories of existing forest management by small farmers.
2. To make a comparative survey of the external conditions which frame the different categories of existing forest management by small farmers.

It was also identified that the research should identify at the local level, the key drivers for pro-forest decisions as well as the most important impediments for the management of forests by small farmers.

¹ Two additional objectives were

1. In cooperation with WP3 to assess the impacts of institutional factors on local livelihoods.
2. To assist WP5 in drawing conclusions regarding indicator development for sustainable forest management by small farmers.

During the project the research objectives have been further elaborated. In the first place, it was considered that the objective of ‘understanding past decisions which result in current practices’ implies dynamic processes taking place. Moreover, it was noticed that there exist different types of smallholder forest management. Consequently the aim of Working Package was further clarified as concerning the gaining of *better understanding about the nature and significance of dynamic institutional arrangements on the organisation of smallholder forest management* with specific attention to

- Assess the nature and dynamics of local institutions framing different categories of smallholder forest management
- Assess the nature and dynamics of external condition framing different categories of smallholder forest management
- Assess the interaction between local institutional processes and external institutional dynamics
- Assess key institutional drivers and impediments to smallholder forestry development in the Amazon.

On the basis of these objectives and the theoretical considerations to be discussed in Chapter 4 this report will focus on the specific research questions detailed in Table 2.

Table 2 Research questions of ForLive Working Programme 2 to be addressed in this report

<p>Basic research question: What type of organisational arrangements for smallholder forest management systems exist and how is their organisation related to different institutional arrangements and their dynamics?</p>
<p>Specific research questions:</p> <ul style="list-style-type: none"> • What are the characteristics of the organisational arrangements for the selected ForLive cases of smallholder forest management? • What is the role of external institutions in developing smallholder forest management? • What is the nature of the local dynamics in the decision-making process regarding smallholder forest management? • What are the key drivers and limiting factors for smallholder forest management in the Amazon?

A second elaboration of the original research objectives concerned the recognition, that for understanding the nature and dynamics of external conditions framing different categories of smallholder forest management a good understanding of the formal legislative frameworks is needed. Consequently, it was decided to augment the studies on the selected Forlive cases at local level with a study about the legislative frameworks regarding smallholder forest management in the four Amazon countries covered by the ForLive project. This study was carried out by a specific research team of CIFOR ; the results are published separately (Sabogal et al, 2008).

Part 2 Research approach

4. Theoretical and conceptual considerations

4.1 Basic theoretical orientation

As described above, the aim of the WP2 research was basically to obtain a better understanding of the interaction between the decisions of small farmers regarding forest management and the institutional framework regarding smallholder forest management. The WP2 research was based on the theoretical consideration, that at the one hand the smallholder decisions are influenced by the institutional context defining the general norms for behaviour in the form of formal regulations or of informal, socially-embedded norms. But at the other hand, smallholders have the agency to select certain norms and reject others; this process of acceptance and rejection is based on both personal characteristics and the social-cultural context in which a smallholder is operating. At the interface between the institutional frameworks and smallholder agency smallholders may shape their own location-specific institutional arrangements for managing their forests.

This theoretical orientation was considered of special relevance in view of the ongoing process of institutional transformation in forest management. At the one hand, the former emphasis on governmental regimes is in a flux with increased attention being given to multi-actor and multi-level governance arrangements. At the other hand, the socio-cultural setting for smallholder forest management is divers as demonstrated by the presence of different small farmer categories consisting of indigenous people, settled farmers (*campesinos*) and recent migrants (*colonos*) respectively. Due to socio-economic and demographic developments, this setting is not static, but dynamic. Consequently, both the formal (external) and the informal (locally embedded) institutional conditions are in transformation. Due to this dynamic and complicated process, the various ForLive case can best be considered as examples of the different location-specific outcomes of transformation processes rather than as examples of a systematically planned and structured development process.

4.2 The concept of institutions

Basic concept and study approach

The concept of institutions refers to a set of commonly accepted rules that govern activities of individuals or groups. These codes of conduct define practices, assign roles and guide interactions. In somewhat different terms, institutions can also be defined as multifaceted, durable social structures which are made up of symbolic rules, norms and cultural beliefs guiding human practices. Thus, the concept of institutions refers to the constellation of normative interactions and processes that are at the basis of human activities. These social structures may be formal or informal, and consequently a distinction can be made between.

- Formal institutions (or bureaucratic) based on official rules or even established by law.
- Informal institutions (or socially embedded) in the form of unwritten codes and rules.

Often the terms institutions and organizations are considered as synonyms. But scientifically often a distinction is made between institutions as ‘the rules of the game’ people play, and organizations as a structured group of people bound together by some common purpose to achieve particular objectives (Scott, 2001). Consequently, the general definition of institutions as

referring to codes of conduct structuring human actions and interactions must be differentiated from the much narrower interpretation of institutions as referring to established government policy organizations empowered with formulating and implementing norms on socio-economic and political activities and developments.

For studying institutions, two approaches may be distinguished, i.e. a policy science approach and a more sociological approach. In the policy science approach the focus is often on formal institutional regimes in the sense of a set of principles, norms, rules, and decision-making procedures around which actor's expectations converge in a certain field of human activity. In such an approach it is often assumed that the decisions made by the formal government policy organizations are transferred in a linear process to local 'target groups'. However, many studies have indicated that such an assumption is not warranted, as local people may accept, reject or amend the policy norms on the basis of their own normative frameworks. Consequently, in transferring policy decisions interfaces situations do occur. Such interfaces have been described as 'points of intersection or linkage between different social systems, fields of social order where structural discontinuities in respect to preferred practices occur based upon differences of normative value and social interest' (Long and van der Ploeg, 1989). The occurrence of such interfaces demonstrates why sociologists often stress that human behavior is the outcome of a variety of institutional norms, which may coincide or contradict each other. Consequently, sociologists often advocate a more behavior-oriented approach in studying institutions focusing on pluriform institutional arrangements and stressing the interplay between various sets of codes of codes.

Institutional arrangements for forest management

Forest management may be defined as the process of making and implementing decisions about the use and maintenance of forest resources and the organization of the related activities (Duerr et al., 1979). The term thus refers not only to the technical activities for extracting and producing the desired products and services, but also the organization of all activities regarding the conservation and possible enhancement of the required forest resources and the controlled harvesting and distribution of forest products. Sustainable forest management requires four main categories of human practices:

1. Effective access to forest resources
2. Decision-making on objectives for forest management and its socio-technical organisation
3. Control over proper implementation of agreed management practices and distribution of benefits
4. Settlement of conflicts

The concept of institutional arrangements for forest management refers to the set of normative and regulative factors that set the stage for effective implementation of these practices. The various categories of activities are governed by different types of codes of conduct. Four main types of institutional frameworks are of importance:

- Regulatory codes regulating access to forest resources and controlled forest utilization
- Cognitive codes defining what are considered as legitimate forest types and management practices
- Socially-embedded codes regarding how to organise forest management and how to interact with different collaborators in management practices
- Economic codes concerning the organisation of input/output relations, including distribution of forest products/benefits.

4.3 Institutional arrangements for smallholder forest management

Regarding the setting of smallholder forest management a major characteristic is that smallholders are influenced in their forest management decisions by both formal arrangements on forest legislative and forest product trade, as well as informal community norms and values, including cultural cognitions. For instance, the legal access to forest resources is to a large extent based on government legislation, whereas the organization of the forest management practices is done at local level. Thus, in smallholder forest management, two levels of institutional arrangements may be discerned:

- Local community arrangements within the communities
- External arrangements regarding forestry development.

At each level the institutional arrangements involve each of the four institutional frameworks identified in Chapter 4.2, see Table 3.

Table 3 Different types of institutions of relevance to smallholder forest management

External institutional frameworks	<ol style="list-style-type: none"> 1. Regulatory institutions in form of legal frameworks <ol style="list-style-type: none"> a. Formal codes regarding access to forest resources b. Formal standards for forest management organisation c. Legal codes regarding trade in forest products d. Formal codes regarding control mechanisms and conflict resolution regarding forest management and trade 2. Cognitive institutions <ol style="list-style-type: none"> a. Formal norms on what constitutes forestry and sustainable forest management 3. Social institutions <ol style="list-style-type: none"> a. Codes of conduct in respect to facilitating forest management organisations through provision of knowledge and/or credit and technical assistance b. Codes on relevant development approaches 4. Economic institutions <ol style="list-style-type: none"> a. Norms on providing capital for investment b. Codes for trade in forest products
Local institutional frameworks	<ol style="list-style-type: none"> 1. Regulatory institutions <ol style="list-style-type: none"> a. Locally-embedded regulatory codes concerning access to forest resources and forest utilization by different categories of local people b. Local codes of conduct for adhering to legal frameworks 2. Cognitive institutions <ol style="list-style-type: none"> a. Norms for using forest products and services within framework of livelihoods b. Knowledge on locally-evolved management practices

	<ol style="list-style-type: none"> 3. Social institutions <ol style="list-style-type: none"> a. Cultural identity b. Norms for social collaboration and labour relations c. Trust in local leadership and external advisors d. Norms on adhering to traditional indigenous practices or to modern practices 4. Economic institutions <ol style="list-style-type: none"> a. Norms on balance between subsistence and commercial activities b. Norms on capital accumulation for investment in forest management
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In the ForLive project attention was given to all these different institutional frameworks. Specific attention was given to the following institutional aspects:

1. Local institutional arrangements
 - Local norms for forest management
 - Forms of local organization and cooperation
 - Land and tree tenure regulations
 - Forest management organisations
2. External arrangements
 - Forestry policies and regulations
 - Land tenure and ownership policies
 - Forest-related rural development policies and programmes
 - Marketing and manufacturing conditions

Specific characteristics of smallholder forest management

When considering the local institutions arrangements for smallholder forest management, a critical issue concerns the identification of the basic norms for forest use. For many professional foresters and policy makers forest management has a specific meaning as concerning the commercial production of timber in natural forests or timber plantations. For instance, the present international concern regarding the impact of commercial timber exploitation on tropical deforestation has resulted in much attention to the development of criteria and indicators for sustainable forest management in the sense of maintaining the ecological integrity of natural forests and limiting damage from timber logging. It is normally considered that such forest management should be carried out by an approved and specialized organization on legally-delineated forest estates. However, when considering smallholder forest management the notion of forest management needs to be reconsidered (Wiersum, 1996) and an empirical rather than normative interpretation of forest management should be used:

- Smallholder forest managers are often not specialized forest managers, but rather people engaged in multi-enterprise household activities including both agricultural cultivation and forest production. Consequently, as starting point for the ForLive project it was considered that the term small farmers (or smallholders) referred to local people who are engaged in small-scale farming activities as well as in forest use and management activities. Thus, the term smallholder did not specifically refer to the size of the forest area being managed.
- Forest management activities may not only concern commercial timber production, but a diverse array of forest products and services.

In respect to this second point, when considering the history of forest management by local people in the Amazon region it is clear that their norms for the use and maintenance of forests were traditionally not primarily related to commercial timber. Rather the traditional Indian inhabitants of the Amazon region focused forest management on the controlled exploitation and stimulated regeneration of different food producing trees (e.g. fruit trees and palm trees such as *Bactris gasipaes* from which flour can be produced). This resulted in the creation of enriched forests in the form of complex agroforests such as forest gardens (e.g. Mann, 2005; Miller and Nair, 2005). Consequently, the historic forest management practices resulted in the transformation of low productive forests into more or less anthropogenically modified and enriched forests.

These forest-based food production systems pre-dated the agricultural crop production systems in open fields. The now common forms of shifting cultivation or swidden agriculture only widely developed after the introduction of iron by colonists (Mann, 2005). In many cases the shifting cultivation practices do not only involve temporary growing of agricultural crops on the temporary swidden fields, but also the management of useful tree species in the fallow vegetation developing after the cropping period. The fallow vegetation often consists of an enriched forest vegetation rather than a natural secondary forest vegetation (Padoch and Pinedo-Vasquez, 1996). Thus, the indigenous traditions of enriching forest vegetations by tree cultivation have gradually been adapted to include fallow fields. The impact of the forest enrichment practices is demonstrated by a recent estimate of the INPA researcher Clement (quoted in Mann, 2005) that over 50% of the 138 domesticated species from the Amazon region consist of tree species.

The use of forests for commercial timber production is the most recent development in the history of Amazon forest exploitation and management. For many smallholders such timber production is complimentary to rather than replaces the more traditional forms of forest use and management. Smallholder farmers normally combine agricultural activities and different types of forest production activities from the various phases in Amazon forest resource use. Smallholder livelihoods are not based on a specialization strategy focused on commercial forest production, but on a diversification strategy involving intricate combinations of what conventionally are known as agricultural and forestry practices. Consequently, the smallholder forest management systems in the Amazon have on a long history of forest use and management; this history has resulted in a variety of smallholder forest management systems rather than commercial timber production only. Thus, important cognitive differences between professional foresters and smallholders on what constitutes forestry occur.

4.4 Trends regarding institutional arrangements for forest management

Traditional institutional setting

As indicated above, when considering the role of institutions on smallholder forest management, not only local institutions are of importance, but also external institutions. The traditional framing of forest management does not only concern the type of forests and forest products, but also the organisational setting. Thus, in the Amazon region up till around the 1980s, forests were conceived of as public goods located in predominantly isolated forest areas, and forest management was based on state ownership, management authority and control over forest resources coupled with contractual arrangements with commercial enterprises on forest exploitation. The development of forest areas was considered as a government-driven process. It focused on a relatively simple institutional arrangement of extension of state authority and need to incorporate forests in the national economy with development policies favoring infrastructure

development and replacement of forests by more financially-lucrative forms of land use. These policies resulted in financial investments and land speculation by external commercial interests as well as migration of disadvantaged people to the forest frontier areas. As a consequence, many of the traditional local and often informal institutions of indigenous people, based on local culture, kinship and tradition were overruled by more formal institutions in the form of government legislation and bureaucratic action as well as rules regarding commercial interactions.

Decentralization in forest management

During the last two decades, this formal institutionalization of forestry in the Amazon region has drastically changed (Perz, 2002; Scholz, 2005) in a process scientifically referred to as a change from government to governance². As a result of the opening up of the Amazon region in many areas the incipient forest frontier area has been transferred in an established forest frontier area, where either autochthonous or immigrant smallholders live in a mosaic landscape of forests and agricultural areas. Due to infrastructural development marketing networks have been greatly extended into these areas with a gradual concomitant change from exploitation contracts to investment and marketing arrangements. Also there has been an emergence of civil society (non-governmental) development organizations. As a result of these combined processes, the former isolated forest areas have now been incorporated in various socio-political and commercial networks and local people are confronted with a multitude of external institutional influences.

The advent of such organizations has been greatly stimulated by government policies of decentralization. These decentralization policies include various kinds of policy changes (Mayers and Bass, 1999):

- A process of deconcentration (or administrative decentralization) of government policy from central to local level;
- A process of delegation from authority from a government service to a semi-public or non-governmental organization;
- A process of privatization from the public sector to commercial organizations;
- A process of devolution of forest management authority from state authority to local communities;
- A process of deregulation by ceasing certain kinds of regulations.

At the same time, there also has been a trend towards increasing importance of global governance arrangements. The Amazon has been increasingly subjected to international conventions and agreements on environmental and development issues, and international organizations are providing development assistance in these fields. Their activities are often based on the international norms on environment and development. Thus, the process of decentralization of management responsibility may be counteracted by a process of recentralization of regulatory power (Ribot et al., 2006).

These different types of forest governance practices are often subject to different forms of decentralization. The different trends are often stimulated by global standards. For instance, globally calls are made for both devolution of forest management responsibility and decentralization of forest management control, but also for stricter management and control standards. These global standards are often the starting point for international development projects, even when they are carried-out through non-governmental organizations.

² This change in the set of regulatory processes, mechanisms and organizations for influencing the conservation and management of the natural environment also occurred in other regions (Lemos and Agrawal, 2006; Agrawal et al., 2008).

Globalisation: the trend towards international forestry regimes

In addition to the trend in decentralisation, the Amazon forests have also been subjected towards a second trend in institutional reform, i.e. a trend towards globalization. Due to this process of globalization, the Amazon forests have been increasingly subjected to international norms on environmental and development issues. The norms were developed in response to the growing international concern about the need to better conserve and use forests; this concern is based on three major global issues:

- Environmental concerns about global environmental problems and need for environmental and biodiversity conservation,
- Economic concerns about just international economic relations and international trade,
- Social concerns about good governance, social justice, and fulfillment of basic human needs.

In response to these concerns, gradually there is developing an international forestry regime focused on stimulating improved forest conservation and use (Humphreys, 1999). This regime includes several international agreements in respect to the need to conserve forests, to increase community involvement in forest management and to prevent (illegal) trade in timber and endangered plant and animal species. In addition to these intergovernmental arrangements, as a result of the growing importance of civil society organizations, at global level also several agreements on forest governance have been formulated, e.g. in respect to certification of sustainable forest management.

The simultaneously occurring processes of decentralization and globalization have been indicated with the term glocalization. In the Amazon region this glocalization process consists of three major trends:

- The gradual opening up of the Amazon region and its incorporation in government and marketing networks
- The gradual change from government to governance policy arrangements including growing influence of both regional, national and international civil society organisations
- The gradual development of international treaties for the preservation of the Amazon forests and international assistance in achieving this goal using international standards

As a result of these developments the earlier relatively simple institutional arrangements for forest management have been drastically altered and diversified. This process of institutional transformation is still ongoing.

Conclusion: Increasing normative pluriformity regarding optimal institutions for forest management

As a result of the process of glocalization involving a varied set of institutional reforms in forestry, not only the amount of actor categories which are recognized as having a stake in forest governance has increased, but also the perspectives on which basic principles should guide forest management. This normative pluriformity concerns both the question what basic approach provides the best capacity for forest governance and what type of knowledge can best be used for developing sustainable forest management (Table 4).

Table 4 Different perspectives on optimal institutional regimes for forest management (after Lebel et al., 2004)

Perspective	Optimal institutional regime	Knowledge basis
State knows best	State sovereignty: State ownership, legislation and monitoring & control Limited influence by other institutions	Scientific knowledge generated by organization of the state
Market knows best	Market relations based on supply/demand principles sort out most efficient way to use forest lands and products. Trade and investments by different organizations stimulated by harmonization and transparency in transactions	Scientific knowledge about producers (as profit maximizers) and consumers (as utility maximizers)
Greens know best	Collective international action in formulating basic principles of forest conservation and sustainability Inter-governmental collaboration and vertical institutional interplay in implementing these principles.	Scientific knowledge regarding global environmental threats such as deforestation and loss of biodiversity
Locals know best	Local forest users are in the best position to manage forests for the required products and services, as at local level use impacts are directly experienced and trade-offs best understood. External institutions can assist local communities on the basis of subsidiarity and polycentric institutional arrangements	Local knowledge as traditionally evolved and embedded in social practices
Nobody knows best	Participatory, cross-scale (vertical and horizontal interplay) and adaptive institutional arrangements based on balancing pluriform and multi-level interests	Pluralistic knowledge systems with reflexive analysis of scientific knowledge and validation of local knowledge systems

The core ForLive programme on institutional issues was based on the premise that the institutional arrangements for forest management are in transition. Consequently, the present examples of promising smallholder forest management schemes can best be considered as real-life experiments in creating and adapting new institutional arrangements. In this process different stakeholders adhering to different perspectives are involved. Consequently, the research had an empirical approach following the perspective of ‘nobody knows best’.

4.5 Human agency in transforming institutions

Local transformation of forestry institutions

Although the term institutions refer to commonly accepted rules and norms, this does not mean that they are static. Although institutions provide boundaries for human practices, humans have the ability to reshape and transform institutions. The agency theory attributes to the individual actor his/her own capacity to process social experience and to devise ways of coping with life

based on knowledgeability and capability. Thus, it is considered that local people are not simple end-of-the line actors implementing policy decisions as decided at higher organisational levels, but rather as active participants in the ongoing transformation process. As a result of such human agency, in the process of implementing policy decisions interfaces occur in the form of 'critical points of intersection or linkage between different social systems and fields of social order' characterized by 'structural discontinuities, based upon differences in normative value and social interest' (Long and van der Ploeg, 1989).

The concept of **institutional bricolage** (Clever, 2002) further elaborates the notion of interfaces. The concept refers to an actor-inspired process of changing institutional arrangements through selective use and adaptation of internal and/or external institutional norms for behavior and practice. Thus, it calls attention to the process in which human practices are based upon the gradual adaptation of existing or newly evolving institutionalized codes of conduct. The concept is based on the consideration that actor's decision-making processes and practices are guided by institutional norms, but that actors have the ability to analyse and react to the situations which confront them. It defines the relationship between the actor and institutions as a process of the actor using certain aspects of institutions and a social network, whereby institutions provide boundaries and opportunities for the available choices of the actor. Consequently, the concept of bricolage emphasizes that institutional norms are not static but evolve in time; they are continuously being shaped and reshaped.

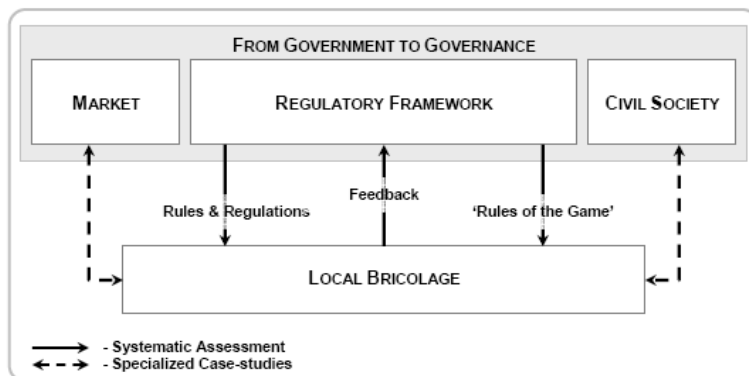


Figure 2: Relations between local and external institutions

4.6 Conceptual framework for study

As a result of diversity in smallholder forest management systems and the gradual change from government to governance policy arrangements, the earlier relatively simple institutional arrangements for governance of forests have been drastically altered and diversified. As a result of the ongoing processes of institutional transformation it cannot be assumed that clearly-defined institutional regimes in the form an historically developed structured complex of related normative and regulatory norms for smallholder forest management exist. Past research on community-based forest management (e.g. Becker and Ostrom, 1995; McKean, 2000) has often been based on the notion that it would be possible to identify robust institutional arrangements for effective management and hence to formulate a set of clearly-defined design criteria for stimulating further development. However, as discussed, it is more realistic to characterize the

institutional setting for smallholder forest management in the Amazon as being in a process of transformation and dynamic development rather than as being based on well-established and robust institutional regimes. Hence, rather than trying to identify parameters related to optimal institutional regimes this study will focus on analyzing the forces shaping the development of location-specific and often still evolving smallholder forest management systems operating at the intersection of local conditions and external institutional conditions. It will assess the complex of cultural, normative, and regulatory norms underlying smallholder forest management practices and try to identify the major processes impacting on the selected ForLive cases³.

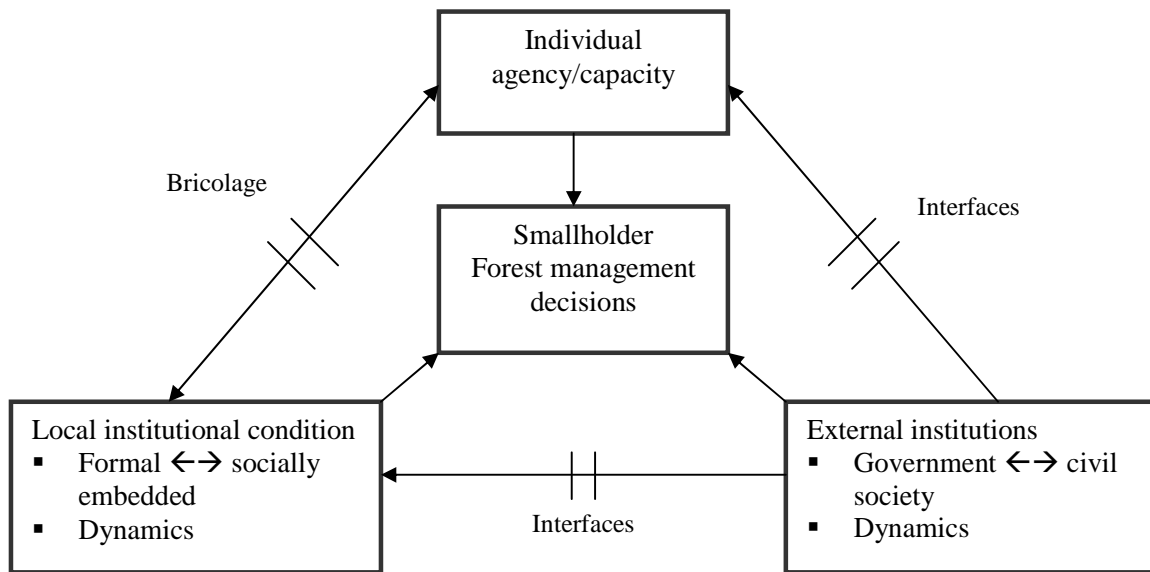


Figure 3 Conceptual framework for the core studies on institutional issues⁴

³ Theoretically, this approach is grounded in the neoinstitutional approach in sociology which focus on understanding the interplay of different institutional frameworks in shaping codes of conduct for empirical practices (Scott, 2001).

⁴ In addition to these core studies on institutional processes, several auxiliary studies based on more normative frameworks were also performed. In this report only the results of the core studies are reported.

5. Research design and methods

5.1 Research design

On the basis of the theoretical considerations discussed in Chapter 4, the research objective of *'contributing to better understanding of the past decisions of small farmers, especially the influence of the institutional framework, which resulted in current forest status and management decisions'*

was operationalized into the basic research question

'what type of organisational arrangements for smallholder forest management systems exist and how is their organisation related to different institutional arrangements and their dynamics'.

This general question was further elaborated in four specific research questions:

- What are the characteristics of the organisational arrangements for the selected ForLive cases of smallholder forest management?
- What is the role of external institutions in developing smallholder forest management?
- What is the nature of the local dynamics in the decision-making process regarding smallholder forest management?
- What are the key drivers and limiting factors for smallholder forest management in the Amazon?

The relations between these questions were structured as follows. In view of the fact that smallholder forest management systems are the main object of the ForLive study, the core WP2 research focused primarily on the local organisation of these systems and on the questions of how they relate to both local conditions and perceptions on institutional impacts, and of how they are shaped by local processes of bricolage. These local processes were further analysed in a process of gradual contextualisation of the impacts of external conditions. In view of the fact, that in national forest policies increasing attention is given towards formal recognition of smallholder forest management systems, the regulatory framework for smallholder forest management was given special attention. Regarding the dynamics in these regulatory frameworks attention was also given to the general process from government to governance arrangements.

In addition to the above general considerations, the research design was further elaborated on the basis of more operational considerations:

- In order to get a thorough understanding of the institutional setting of the selected ForLive cases which form the core research object of the ForLive project, two types of data are of relevance, i.e. comparative data and data on location-specific processes. Consequently, two types of studies were planned. In the first place, a comparative study of baseline information from all cases was made. Additionally, more detailed studies in selected Forlive cases took place. The comparative study provided a general overview of the main institutional characteristics of the ForLive cases, and the detailed studies complemented this information by providing a more thorough analysis of the location-specific processes.
- As the ForLive cases were purposefully selected in view of their promising nature, they demonstrate the range of options for smallholder forest management in the Amazon, they do not form a representative sample of the different smallholder forest management systems. In order to obtain a more systematic overview of institutional conditions

- impacting on smallholder forest management a detailed study was added on community forest enterprises in Bolivia.
- The national and regional regulatory frameworks significantly impact on smallholder forest management systems. Consequently a detailed study on these regulatory frameworks was made.
 - Auxiliary studies on specific institutional processes both within ForLive cases and in other smallholder forest management systems enables a more thorough understanding of the impacts of specific institutional processes and could serve as a means of further verification of the results of the more generally oriented studies. These auxiliary studies partly consisted of affiliated studies which were not funded by the ForLive programme.

On the basis of these considerations, the research was organized in a series of related studies:

1. General analysis and comparison of local institutional setting of the ForLive cases
2. Detailed analysis of institutional conditions and processes in selected ForLive cases
3. Detailed comparative analysis of institutional conditions of indigenous forest enterprises in Bolivia
4. Analysis of regulatory framework on forest management by smallholders
5. Auxiliary process studies on impacts of external institutions on smallholder forest management.

Table 4 provides a further overview of the various types of studies and the researchers involved; an overview of the various study reports is provided in Annex 1. This report focuses specifically on the findings of the first three research activities. The results of the fourth activity (analysis of regulatory framework) is reported in a companion report. The results of the auxiliary studies are not incorporated in this report on preliminary research findings.

5.2 Research methods

Selection of ForLive cases and smallholder respondents

Within the Amazon region, the concept of smallholder forest management is still ill-defined. Consequently, the ForLive research had an explorative character and at the start of the ForLive programme the type and scale of the forest management activities could not be defined *a-priori*. Consequently, an empirical approach in selecting promising cases of smallholder forest management was followed. First a general overview of smallholder forest management schemes in the four study countries was made. On the basis of that overview the local project partners were requested to select promising cases of smallholder forest management for further study. Thus, the selected cases are based on local expertise and experience rather than a systematic and randomized selection of specific types of smallholder forest management systems. In total 17 cases were selected. In view of the small number of cases as well as their expert-based selection the cases cannot be considered as a representative sample that can be subjected to comparative statistical testing. Rather, the cases provide an overview of a range of smallholder forest management and the conditions under which they operate.

For the institutional studies in all 17 cases baseline data on their institutional setting was collected. In order to be able to better understand the nature of the institutional dynamics, in 9 cases (8 ForLive cases and one affiliated case selected by the local research partner) more detailed studies on the local institutional processes were carried out; these cases were purposefully selected to reflect the range of management systems and conditions.

Table 4 Overview of the overall WP2 research programme

Research activity	Specific studies	Researchers
1. Analysis of local institutional setting of ForLive cases	Base-line description and comparative analysis of institutional setting of ForLive cases	WP2 coordination team with assistance of field assistants
2. Detailed analysis of institutional conditions and processes in selected ForLive cases	Studies in 8 ForLive cases (Brasil 1, Bolivia 3, Ecuador 3, Peru 1) and one affiliated case in Ecuador	PhD study Jessica de Koning MSc studies Chantal van Ham, Doenja Kuiper, Martha Chaves
	Study on relations between livelihood strategies and institutional arrangements in ForLive cases	Study Oscar Llanque
3. Analysis of community forest enterprises as example of smallholder forest management	Comparative study on institutional arrangements in 67 CFEs in Bolivia with special attention to transaction costs	PhD study Charlotte Benneker
4. Analysis of regulatory framework on forest management by smallholders	Inventory of national legislation of relevance to smallholder forest management in the four ForLive countries	Cesar Sabogal, Pablo Pacheco and Enrique Ibarra (CIFOR Brazil)
5. Auxiliary process studies on impacts of external institutions on smallholder forest management		
a. General	Comparative study in all countries Case-study in Brazil	PhD study Gabriel Medina PhD study Jes Weigelt,
b. impact of legislation	Case-studies in Brasil (1), Bolivia (2), Peru (1) and Ecuador (1)	MSc studies and Wouter van der Velde BSc studies Erick Ivan Icochea Davila and Laura van Vuurde
c. Impact of markets	Case-studies in Bolivia (2) and Brazil (2)	MSc studies Sonia Ortiz Camargo, Deryck Pantojas Martins Christina Moreno de Alboran Gonzalez
d. Impact of development organizations	Case-studies in Bolivia and Peru	MSc studies Tina Depzinski, Brechtje de Bruin

The selected ForLive cases consisted of both communally-managed and privately-managed forest systems. Within each case key persons involved in the management system were selected for data collection; this information was further triangulated by data collection from neighboring households and through focus group meetings. The validity and credibility of the data from each case was further checked by discussions with other members of the ForLive research team working in the case community and by organizing at the end of a field research period a debriefing cum discussion meeting with the local ForLive partner.

Methods for base-line data collection and analysis in the ForLive cases

In view of the explorative nature of the ForLive case-studies as well as the focus on understanding processes, within each ForLive case a multi-method approach to data collection combining both qualitative and more quantitative methods was used. Initially, using both individual and group interviews as well as direct field observations, for each case a baseline description documenting the selected production systems and their management organization as well as basic community features was made. For collecting further information on institutional issues, two rounds of more specific data collection were made. First, using a participative group research approach for each case a Venn diagram illustrating the institutional setting of the case was prepared. The information derived from this exercise was used for the preparation of a follow-up questionnaire survey amongst 36 households divided over the different ForLive cases.

For data analysis an inductive approach was used in which data were organized in categories and analyzed in respect to relationships and processes. Thus, data analysis was focused on gaining a better understanding of key institutional factors and processes and their impact on the activities of smallholder forest managers rather than statistically enumerating significant institutional parameters for successful smallholder forest management.

Methods for data collection and analysis in detailed process studies

In order to gain a further insight in the nature and dynamics of institutional processes, within 8 ForLive cases detailed studies were carried out. These studies mostly consisted of detailed qualitative data collection through a combination of in-depth and semi-structured interviews with both individual key respondents and groups. Careful attention was given to checking and triangulating information by using techniques of saturation sampling and participant observations. The information was analyzed by content and domain analysis as well as successive approximation⁵.

Methods for data collection and analysis in specialized study on community forestry enterprises

In order to be able to judge the relevance and reliability of the information of the ForLive cases, a more specialized study on community forest enterprises in Bolivia was incorporated in the WP2 programme. Although this study concerned only one of the four countries and one of the smallholder forest management systems involved in the Forlive study, its results enable to put the findings of the explorative ForLive cases in a more general perspective. This study involved a representative sample of 67 community forest enterprises. Data were obtained in two rounds of semi structured interviewing of community leaders and enterprise managers coupled with open interviews with state employees, NGO personnel and timber buyers. Data were triangulated by participant observations during community meetings and social events and document study. Data were analyzed by a number of statistical tests for data comparison and regression analysis⁶.

⁵ For further information see the MSc theses by Van Ham, Chaves and Kuiper (Annex 2)

⁶ For further information see the PhD dissertation by Benneker (Annex 2)

Integration and further validation of research findings

After completion of the various separate study the results were further synthesized. For this integrative analysis a further content and domain analysis of the results of specific studies was made followed by a final checking for patterns between different smallholder forest management systems and institutional factors and processes. In addition, the results of the case studies were cross-checked and compared with the results of the separate ForLive study on regulatory frameworks. A final check on the credibility of the findings was made by discussing the results as published in a Working Paper with preliminary results with fellow researchers on institutional dynamics in forestry and forestry development in the Amazon.

Part 3 Institutional characteristics of the ForLive cases

6. Categories of smallholder forest management

Amongst the selected ForLive cases there was found to exist much variation in the characteristics regarding both forest types and management organization. An overview of the basic characteristics of the ForLive cases is given in Annex 2. Of the 17 selected cases, 16 concerned forests areas under private or community control; one case concerned an official (extractive) reserve. As this last case can better be characterized as an example of co-management rather than of smallholder management, this case has not been included in the following analysis.

For further categorization of the different systems, first the nature of the forest management system was considered. On the basis a pattern matching three basic categories of smallholder forest management were identified:

4. Forest extraction systems (for NTFPs and timber) in relatively large natural forest areas (> 100 ha).
5. Farm forestry consisting of either modified natural forests and/or secondary forests vegetations in medium-sized plots (10-50 ha)
6. Small-scale agroforestry systems up to a few hectares and fruit plantations.

The main characteristics of the three categories of smallholder forest management are specified in Table 5. The classification in Table 5 reflects the major promising forest management system. In several cases the smallholders were engaged in several forest management systems, for an example see Figure 4. In many cases small-scale agroforestry systems (e.g. in the form of tree-dominated homegardens) supplemented the forest extraction or farm forestry systems. The fact that the forest management systems do not only concern timber management, but that also non-timber forest products play an important role, reflects the historic background of smallholder forest managed summarized in Chapter 4.3. This illustrates that smallholder forest management systems should not simply be considered as scaled-down versions of professional forestry systems based on scientific management principles, but that they may have their own specific characteristics.

Table 5 Smallholder forest production systems represented in the ForLive programme

Basic category	Further sub-division	Characteristics
Forest extraction system (n=5)	Combined timber and NTFP extraction from natural forests	Mostly communal forests of thousands hectares
	Extraction of non-timber forest products from natural forests	Often privately-managed plots (100-200 ha) in communal or cooperative forests
Farm forestry system (n=7)	Timber extraction from natural forests	Private farm forests (10-50 ha)
	Modification of natural forests by enrichment with native species	Private plantations (2-50 ha) of valuable species (balsa, native palms, camu-camu)
Small-scale agroforestry and fruittree plantations (n=4)		Private mixed plantations (of few ha), including fruit species and homegardens

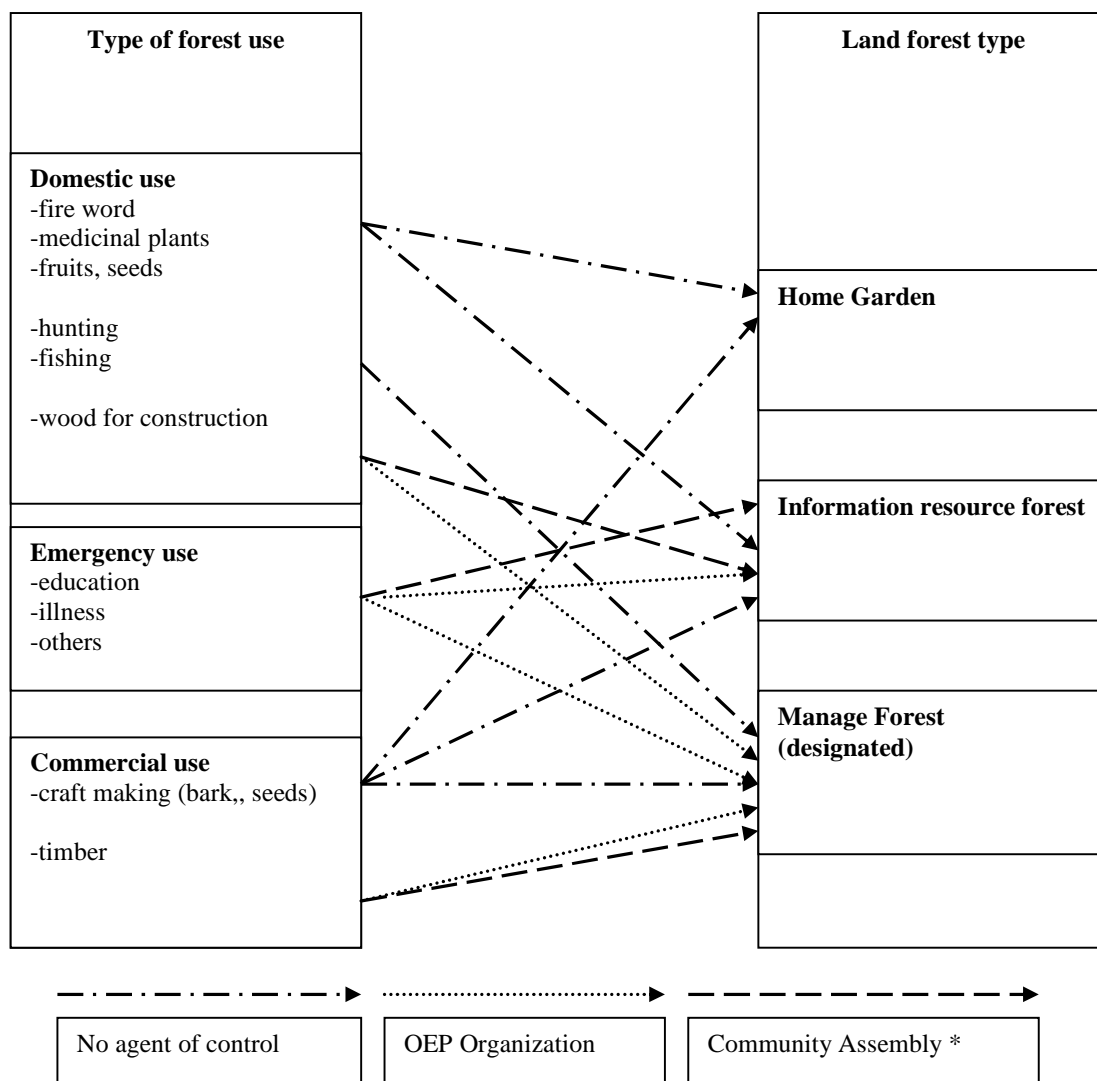


Figure 4 Multipurpose forest use in different land-use zones in Calleria, Peru (NB in this community the OEP formed a selected ForLive case)

A second characteristic of the smallholder forestry systems demonstrating their specific character, is the fact that the smallholders complement their forest management systems with agricultural cultivation and often also animal husbandry. Thus, the managers are engaged in multi-enterprise household activities and forest management is only a part-time activity complementing other household activities. This issue is further elaborated in the report of Working Programme 3 on livelihoods.

The different categories of smallholder forest management systems do not only differ in respect to the nature and size of the forests and the types of forest products being produced, but also in respect to their institutional setting. Table 6 illustrates the different institutional conditions found in the various cases. In view of the selection procedure for the ForLive cases the distribution of

Table 6 Main institutional conditions of the ForLive cases

Institutional condition	Characteristic	No. of ForLive cases
Socio-cultural setting	Organized by indigenous people	5
	Organized by established farmers (<i>campesinos</i>)	4
	Organized by recent migrants (<i>colonos</i>)	8
Management organisation	Communal management	4
	Private management with membership of cooperative	6
	Private management	7
Assistance by external development organisation	With assistance	15
	Without assistance	2
Direct assistance from international development organisation		2

different conditions over the various cases cannot be considered to reflect the average conditions regarding smallholder forest management in the Amazon. Rather, the variety of conditions reflects the range of institutional conditions under which smallholder forest management occurs. In view of the background of the local research partners who selected the cases it is not surprising that the number of cases with assistance by external development organizations is very high. In the more representative study on community forest enterprises in Bolivia it was found that about 40% of all studied cases did not receive external assistance; it was estimated that due to the lack of a clear registration system the actual number of unassisted enterprises would probably be even higher.

Although there is considerable variation in the institutional setting of the ForLive cases, it is possible to discern some institutional patterns (Table 7):

- A pattern related to the type of management organisation: The forest extraction systems are in most cases under communal management with some additional cases of cooperative management. In several cases the officially-designated communal forests are de facto divided in private plots. In contrast, all farm forestry and agroforestry systems are privately managed; in case of farm forestry the private managers are sometimes organized in cooperatives.
- A pattern related to the socio-cultural background of the farmers: The forest extraction systems tend to be under control of indigenous people, especially as it concerns timber production. Also peasants may be engaged in this activity, but this mostly concerns NTFPs. The farm forestry systems are more often under control of peasants and migrants. All three cultural groups can also be engaged in small-scale agroforestry and fruit tree cultivation.
- A pattern related to the impact of external development organizations: Notably the agroforestry systems and to a lesser extend the on-farm forest modification systems are based on local initiatives. In contrast, notably the timber extraction systems are externally sponsored. The NTFP extraction systems are often based on local initiatives, but gradually receive increase external assistance notably in respect to local manufacturing and trade.

Table 7 Basic institutional arrangements of different types of smallholder forest management

Forest production system	Combined timber and NTFP extraction from natural forests	Extraction of non-timber forest products from natural forests	Farm forestry in the form of timber extraction from natural forests	Farm forestry in the form of modification of natural forests through enrichment with native species	(Agro)forestry and fruit plantation
Socio-cultural background of farmers	Indigenous people	Indigenous people and some campesinos	Mostly campesinos or migrants, occasionally also indigenous people	Mostly campesinos, some migrants	Both indigenous people, campesinos and migrants
Management setting	Communal management	Communal or cooperative management	Private management, sometimes in cooperative schemes	Private management	Private management
Main impact of legislative frameworks	Legislation regarding indigenous land domain and commercial timber production	Legislation regarding land titling and commercial timber production	Legislation regarding private land titling and timber production	Legislation regarding private land titling and forest reclamation	Enabled by legislation on forest reclamation
Initiative	Combination of local custom and external sponsoring	Mostly local initiative with external assistance for enterprise development	Sponsored by forestry organizations and timber enterprises	Often local initiative with subsequent external assistance	Mostly local initiatives

As indicated in Table 7, the different management systems are partly related to different regulatory frameworks on land ownership and forest production; this will be further elaborated in Chapter 11. The natural forest extraction systems are strongly stimulated by laws on needs for sustainable timber management as well by laws legitimizing claims to ancestral lands of indigenous people. Under these last laws huge forest areas have come under control of indigenous people, and as a result of the policy of devolution in forest management they have become eligible for commercial timber exploitation. In addition, the traditions of NTFP extraction still continue. The farm forestry activities are partly also influenced by the present policies of devolution in forest management. But in addition, the regulatory frameworks on land titling based on the principle of proven land cultivation play an equally important role. In colonization areas farm forestry is stimulated by the laws on land titling stipulate that a part of the lands remain under forest. At the early stage of colonization tree exploitation is often a means for obtaining capital for investment in agricultural development.

7. Local actor networks for smallholder forest management

When considering the local actor networks for smallholder forest management two levels of social interaction may be distinguished:

- The forest management organization
- The more general actor networks at community level impacting on the social behavior of forest managers.

As indicated by the earlier presented basic characteristics of the different smallholder forestry systems, in respect to management organization there is a distinction between privately (or at household level) managed forests and communally managed forests. These two categories are a first approximation only. Within forest management systems formally registered as a communal enterprise, individual farmers may in fact possess informally-assigned private forest plots and manage these on individual basis. In contrast, several individually managed forestry systems are organized within a cooperative setting.

These data indicate that many smallholder forest management systems are not just organized on individual basis, but that they are embedded in social networks. These social networks do not only involve membership of communal or cooperative organizations, but also interactions with more general community organizations and with authorities, acting as the representatives of the state bureaucratic system. As illustrated by Table 8 giving an example of one of the ForLive cases the forest management organisations are embedded in other local networks, and consequently the local codes of conduct for smallholder forest management do not only include cognitive and organisational aspects, but also socio-cultural aspects such a moral codes on community collaboration, accepted leadership roles and cultural norms on community identity. As demonstrated by the formal bureaucratic role of the community authorities and the presence of the AIDER technician the local actor networks are not autonomous, but they are linked to external organizations. This institutional aspects is elaborated in Chapter 10.

Table 8. Network of local actors related to the ForLive case in the community Callería (Peru)

Actor	Description	Relation with Callería's FM
Active members of the forest management organization OEP	Community members that are interested on working with their forest	In charge of the forest management and wood enterprise. They are the main decision makers of FM
Participants of general community assembly	Attendance of more than half of the total community members	They vote to make decisions about many community issues including most important communal forest issues. The OEP has to keep them informed about forestry activities and always have their consent in big decisions
Community Authorities	They have been elected by community members. They are in charge of resolving problems, convene and lead the general assemblies, give advice for decision-making, keep the community organized, and represent the community outside	They are much involved in all discussions about FM decisions, some are part of the OEP and their signature has to be in all contracts representing the community's approval.

Church	Specifically Evangelical Church, it has been with the community for 40 years. Much involved in all community activities and it is the spiritual and moral guidance for the majority of community members. It enhance values and norms.	The current pastor it's a member of the OEP. It enhance values of protection and good use of forest. Frequently asks for donations or participation of all community members in church activities
Teachers board	Are paid by the government and usually are outsiders, they come from other places and return each week.	The primary school director is part of the OEP. The teachers give advice when needed in the general community assemblies, their word is well respected.
Medical Post	They have a permanent nurse (unique in his kind as a shipibo professional in nursery) and their own small medical post constructed by themselves because of government lack of support.	Occasionally the nurse asks for wood from the communal forest to fix the medical post
Individual families and their members	Some families are very influential inside the community, with several members as leaders and authorities. Also every family is consider sacred and, providing and protecting family members are well followed values by the whole community	Occasionally individuals ask for wood to sell and provide money in misfortune situations.
AIDER's Technician	Technician working for AIDER to guide and help in forest management activities within the community. He is an outsider (not community member) but is a shipibo with a technician diploma that stays for at least 20 days per moth at the community.	Keeps OEP organized, advises in every aspect of FM and certification, gives training to OEP members. Maintains AIDER inform in all these aspects.

8. Local perceptions on institutional norms for forest management

A further insight into the role of institutions on the local forest management systems was obtained from a survey on the question of how the local people perceived the role of different types of codes and norms in practicing various land-use activities. As illustrated in Table 9, land-use activities such as shifting cultivation are highly influenced by cultural traditions and examples set by community leadership and other community members, and the expectation of economic gains only play a minor role. It is interesting that considering forest management in general, the opinions do not reflect very normative influences.

Table 9 Opinions on the influence of different institutional norms for engaging in different land-use activities

Land-use activity	Cultural traditions	Positive impact of (group of) community leaders	Positive impact of other community people	Economic gain
Shifting cultivation	High	High	High	Low
Hunting and fishing	Medium	High	Low	Low
Livestock keeping	Medium	Medium	Medium/low	High
Forest management	Medium	Medium	Medium	Medium

Table 10 Opinions on the influence of different institutional norms as motivation for different types of forest-related production systems

Production system	Cultural traditions	Positive impact of (group of) community leaders	Positive impact of other community people	Economic gain
Non-timber forest product extraction	High	High	High	High
Garden production	High	Medium	Medium	Medium/low
Timber production for own use	High	Medium	Medium	Low
Commercial timber production	Low	Low	High	High
Tree plantation	Low	Low	Medium	Medium
Fruit-based agroforestry cultivation	Low	Low	Medium	Medium
Timber-based agroforestry cultivation	Low	Low	Low	Medium

Table 11 Scores on the six strongest expressed motivation factors for specific production systems

Production system	Motivational factor	Score
Non-timber forest production extraction	Economic advantage	85
	Positive example of other community people	57
	Positive impact of (group of) community leaders	23
Garden production	Tradition	83
Plantation establishment	Promotion by non-governmental organisations	57
Forest management	Government promotion	46

This result, however, should be interpreted with care. As illustrated in Table 10 various forest-related production systems are highly influenced by different institutional norms. Both non-timber forest production extraction and to a lesser extent forest/tree gardening systems are considered to be highly impacted by norms associated with cultural traditions and adherence to community identity. Timber production scores low in this respect, but is impacted by its economic potential especially in forest extraction systems. Also examples set by other community members may stimulate people to initiate these new activities. However, as illustrated in Table 11, forest management is not directly interpreted as referring to any of these production system, but rather as an activity promoted by the government to conserve forests. It is interesting to note, that these opinions correspond with the role of own initiative versus external sponsorship observed in the different ForLive cases (Table 7).

These data illustrate that the different forest production systems are subject to different local value systems. Some are considered as representing traditional lifestyles and community identity, whilst other are considered as representing new options for gaining an income and being involved in modernization processes. They also illustrate the great value attached to non-timber forest

products and the notion that forest management concerns a external and government initiated novel activity.

9. Conclusion

As demonstrated by our analysis of the ForLive cases, at local level there are three major institutional factors impacting on the local functioning of smallholder forest management systems:

- The multi-resource and multi-enterprise approach of the forest managers
- The cultural backgrounds of the local communities, including degree of adherence to traditions or acceptance of modern innovations
- The prevalent system of land and forest tenure and social collaboration

Regarding the multi-resource and multi-enterprise approach, smallholder forest managers may be characterized as managers of forested landscapes consisting of a mosaic of forest lands, agroforestry and fruit production systems and agricultural fields rather than as timber managers. Non-timber forest products often play an important role in their forest resource system. In view of this nature of the smallholder forest management systems, it is important to frame sustainable forest management in the context of local resource use (Redford & Padoch, 1992) rather than only in the context of global norms on forest conservation and timber use. It is interesting to note that recent research in the Amazon forest frontier areas (Perz, 2004; Summers et al., 2004) suggests that diversification of smallholder income by engaging in a combination of agricultural and forestry activities has a positive impact on both forest conservation and poverty alleviation.

Regarding the cultural background of the communities, our data show that culturally-inspired cognitive values play an important role in the choice of forest management systems. Indigenous people with a cultural background of forest-dwellers are inclined to focus on forest extraction systems coupled with small-scale agroforestry systems, whereas migrants focused on developing their legally or de-facto allotted new lands focus predominantly on the development and management of farm forestry and agroforestry systems. The basic orientation of longer settled peasant farmers is intermediate between indigenous people and migrant farmer orientations.

Coincidentally, there is a tendency that indigenous people more often adhere to traditional practices in developing adapted management practices, whereas migrants more often follow professional norms on farm forest management as introduced by external organisations. Settled farmers hold an intermediate position in this development process of combining internally and externally induced innovations.

Regarding the impact of tenure aspects, the following general trends can be identified. Large extraction forests of some thousands hectares used for combined NTFP and timber production often concern communally owned indigenous forest reserves, while smaller extraction plots are often privately managed, although they may be part of communal or cooperative forest management systems. Exclusive timber management either concerns smallholder permits to use state forests or externally-sponsored schemes for management of remaining forest plots on private farm lands. The modification of existing forests by enrichment with valuable local species as well as cultivation of mixed agroforestry and fruit plantations occurs on private farmlands.

The selection for different management systems on the basis of cultural backgrounds is often positively influenced by the prevalent system of land and tree tenure. Recently specific laws have created the possibility for indigenous people to obtain legal control over their ancestral lands;

often this concerns large tracks of forest lands. According to law, following tribal traditions of collaboration, these lands should be communally managed. In contrast, both for peasants and migrants land tenure security is basically provided by agrarian laws focused on individual landownership. This legal stipulation strengthens the relatively individualistic cultural orientations of these people⁷

Thus, the ForLive cases illustrate that there is a considerable variation in smallholder forest management systems. Several of the systems are based on traditional cultural-cognitive institutions which differ among the three major categories of smallholders, i.e. indigenous people, peasants and migrants. The various forest management based on such cultural-cognitive systems often are based on a different framing of relevant forest types and products than the frames used by professional foresters and policy makers. As a consequence of this normative pluriformity local forest managers may perceive the relevance of different forest production systems in a different manner than implied in the government policies.

However, due to the general socio-economic and political dynamics, it is not correct to conceive smallholder forest management as only involving adaptation of cultural transitions. Most forest-based communities are by now incorporated in macro-level social and economic networks and in the ongoing process of modernization commercial activities are increasingly replacing former subsistence practices. Moreover, access to land and forest resources is increasingly government regulated. Moreover, international standards for forest conservation are gaining importance.

These processes of modernization have a dual impact on the smallholder forest management systems. At the one hand, they stimulate smallholder forest management by legalizing access to forest lands and products for different categories of smallholders, thus enabling them to continue and further adapt their traditional forest management systems. At the other hand, they also include the introduction of new standards for further specialized forms of forest management.

In conclusion, smallholder forest management in the Amazon region is characterized by a situation of normative pluriformity and partly contradictory tendencies. At the one hand, different categories of smallholders have different orientations in respect of what they consider as relevant forest management systems. These experience-based normative orientations are at variance with the professional science-based forest management systems. At the other hand, with the ongoing process of modernity development in the Amazon region, the professional forest management systems are increasing in importance under the advent of requirements of modern society. As demonstrated by the ForLive cases, this situation results in the development of location-specific rather than standardized smallholder forest management systems.

⁷ For a further discussion on livelihood strategies of the various categories of smallholder forest managers see the report of ForLive Working Group 3

Part 4 Role of external institutions

10. Nature of external actor networks

As mentioned in Chapter 7 it cannot be assumed that smallholder forest management organizations act autonomously in the sense of being able to decide by themselves how to arrange their forest production systems. As an example of the social network in which most ForLive cases were incorporated⁸, in Figure 4 the local network of the Calleria case presented in Table 8 is extended to include the national and even international actors.

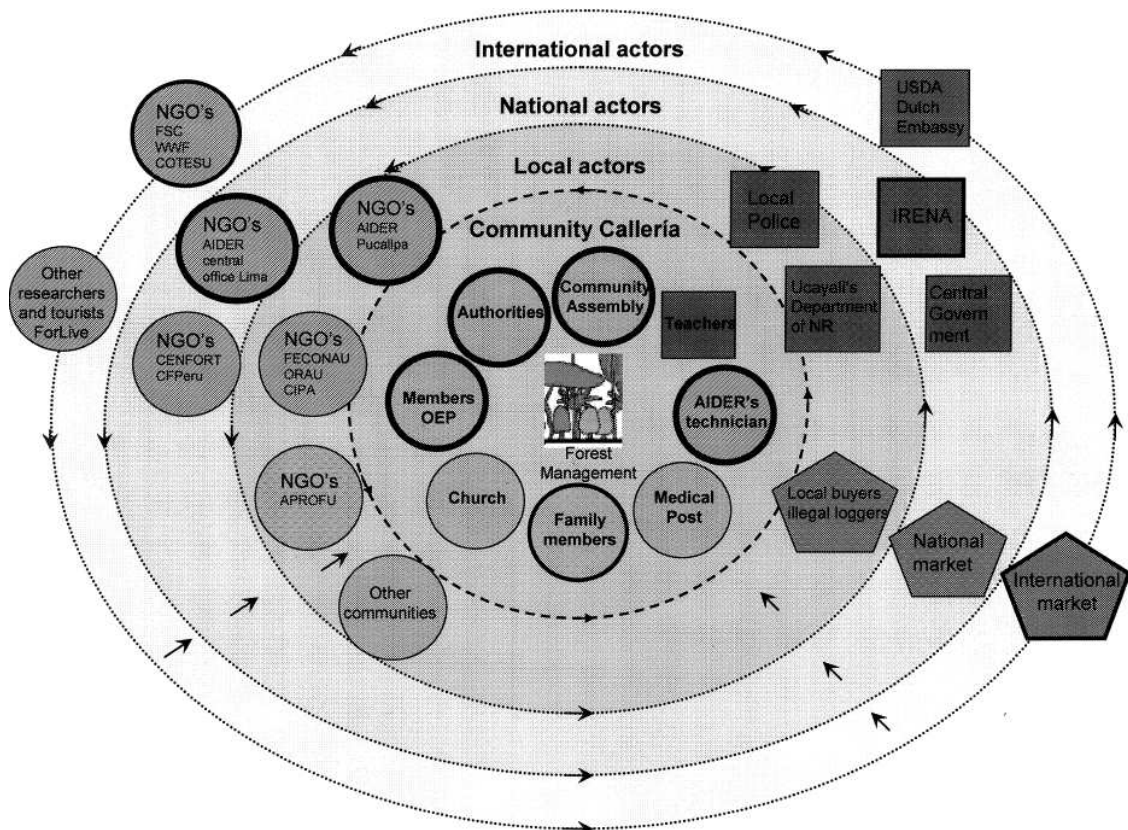


Figure 5 Actor network of the ForLive case of Calleria, Peru

As further illustrated in Figure 6, the role of various actors in this network are different. In the figure five types of abilities to influences the functioning of a smallholder forest management organization are indicated (El-Ansary and Stern, 1972):

- Coercive: ability to mediate punishment for non-compliance with rules and regulations

⁸ This case concerns one of the two cases with direct assistance from international development organizations in implementing international standards for timber certification.

- Expert: ability to provide provision of special knowledge or expertise
- Reward: ability to mediate rewards for carrying out certain practices
- Referent: ability to identify with external actors
- Legitimate: ability to prescribe behavior of smallholders

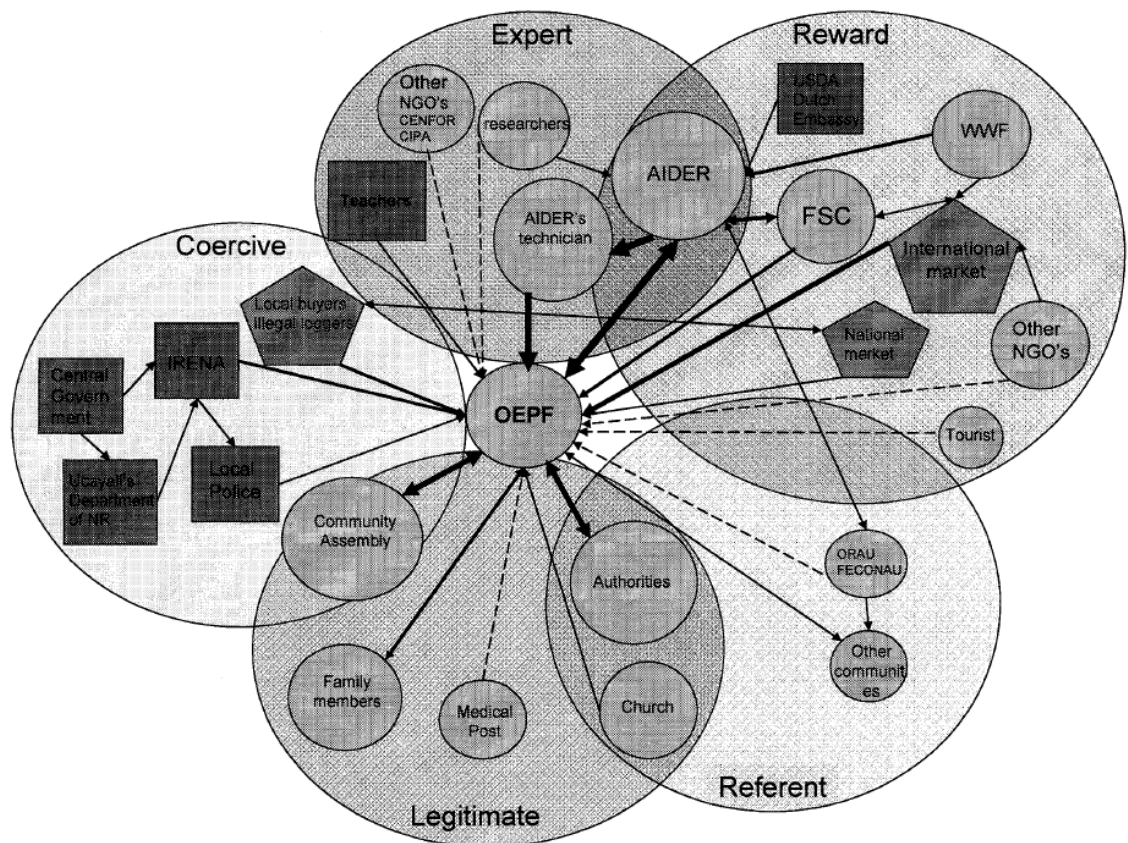


Figure 6 Impact of different external actors on smallholder forest management in the ForLive case Calleria, Peru

A second example of the social networks surrounding smallholder forest management is given in Table 12. In this Table both the visions and objectives of the various organizations are indicated, as well as their actual practices. Table 13 further specifies in what kind of the legally-defined forest management activities the various organisations are involved.

Table 12. Variation in visions, objectives and activities of different forest management development organisations, Morona Santiago region, Ecuador

Organization	Vision, objectives and support for forest management
Government	
Instituto para el Ecodesarrollo Regional Amazónico (ECORAE)	<p>Vision: be a leader organization, transparent and participative, promoting the sustainable development of the Ecuadorian Amazon; to strengthen the integration in the country and the Amazon region in a competitive and decentralized framework.</p> <p>Mission: Support the sustainable development of the Ecuadorian Amazon Network in line with the Master Plan for Eco-development, technical-economic cooperation, inter-institutional coordination and monitoring and evaluation systems</p> <p>Objectives: Socio-cultural dimension: improve the livelihood conditions of the Amazon population. Economic dimension: improve the development of economic sectors. Environmental dimension: maintain the ecosystem equilibrium. Political institutional dimension- strengthen the institutional and legislative structure of the region facilitate interaction between public and private institutions and communities perform studies, action plans and prioritize resource development objectives</p> <p>Activities: Management of water basins, conservation of primary forest, reforestation of green areas with tree species for wood production.</p>
Ministry for Environment – Quito	<p>Vision: the sustainable management of natural resources.</p> <p>Objectives: reduce deforestation, valuation of natural resources, protecting biodiversity, institutional strengthening.</p> <p>Activities: Now it is providing norms and standards, regulates and focuses on the application of the regulations. Formerly it was assistance and training (implementing) now the provincial councils and municipalities have this task.</p>
Ministry for Agriculture	<p>Vision: to have producers that can provide products of good quality, improve their income and permanence in the rural areas, as many people leave for example to the U.S. Their cultivates should provide them with sufficient income.</p> <p>Activities: We do not provide services with respect to forest management. All the activities have to be sustainable. We do work on agroforestry, the combination of cultivates and a quantity of trees above them. In pastures, protecting trees with economic importance.</p>
Development organisations	
Fundacion Servicio Forestal Amazonico (SFA)	<p>Vision: to be the leading organization in offering services in the Amazon region by the year 2010 with autonomy and to have enough financial resources to sustain the administrative part of the office.</p> <p>Objective: to provide support in the realization of plans and programmes for forest management.</p> <p>Activities: Realization of plans/programs for forest exploitation as a permit to use the forest sustainably; to help with the commercialization of wood in an economically, socially and ecologically balanced way by offering products and services, technical assistance, research and training, all with a focus on the resources for forest management.</p>
Jatun Sacha	<p>Vision: Promote forest management in projects. Support conservation, influencing policy and technical decision making at the state level.</p> <p>Objective: to be a leader in the country for forest issues.</p> <p>Activities: Elaboration of local projects, support and strengthening of projects, technical training and consulting in the implementation of the laws and regulations. Providing</p>

	technical information for the regulations.
Corporacion de Manejo Forestal Sustentable (COMAFORS)	<p>Vision: to stimulate and contribute with the acceptance of laws and mechanisms that benefit sustainable forest management.</p> <p>Objectives: stimulate and promote the creation and reform of laws for the development of sustainable forest management; to promote the formulation and implementation of instruments for management for the forest sector; elaborate on, provide knowledge, manage and finance projects.</p> <p>Activities: technical assistance in sustainable forest management and agroforestry, forest, environment and human development training. Training and workshops about forest management. Support with the development of forest management plans.</p>
Programa Sur Development project implemented by consortium of NGOs (CARE, Jatun Sacha, Ecolex, Arco Iris, FIPSE FICSH and EcoCiencia)	<p>Objective: increase the livelihood conditions of the population in the Southern border area of Ecuador in the provinces of Morona Santiago and Loja with focus on.</p> <ul style="list-style-type: none"> • Forest management : to support the Ministry for Environment with the application of the forest regulations related to the management of native forests • Management of protected areas: to define the actual state of use, management and conservation of the protected forest Cutucú. • Political and legal aspects: to secure property rights of ancestral land of indigenous communities <p>Activities: economic valuation of forests, forest assessment and elaboration of forest management plans for farms, supporting farmers with the application of forest regulations, environmental assessments, biodiversity studies and elaboration of integral management plans.</p>
GTZ German development assistance organisation	<p>Vision: Strengthening organizations is the basis working on a national and local level.</p> <p>Activities: Valuation of environmental services, creating conditions for the people for conversation such as forums and technical assistance, more than financial assistance. Providing workshops about forest management. Technological information such as about the marco guia or cable aereo, training the farmers. More local organizations, such as the SFA, forums, training and work on the forest policy by GTZ can contribute.</p>
Commercial association	
SA Arboriente	<p>Vision is to develop plantations and forests for production.</p> <p>Objective: production of wood with profit orientation</p> <p>Activities: Elaboration of forest management plans, with technical assistance to achieve the license for exploitation. A forest nursery to offer plants for reforestation.</p>

Table 13. Involvement of various organizations in various types of legally-identified forest management activities (Morona Santiago region, Ecuador)

Organization	Information	Technical Assistance	Control	Monitoring	Feedback
Ministry of Environment	Low	Low	Low	Low	Low
Jatun Sacha	High	High	N.a.	N.a.	N.a.
PSUR	High	High	N.a.	N.a.	N.a.
SFA	High	High	High	High	High
ECORAE	High	High	N.a.	N.a.	N.a.
Comafors	High	High	N.a.	N.a.	N.a.
SA Arboriente	High	High	N.a.	N.a.	N.a.
GTZ	High	High	N.a.	High	High

A third example of the pluriform institutional setting of smallholder forest management is provided in Table 14, which specifies the various types of contractual agreements between community forest enterprises in Bolivia and various external organisations.

Table 14 Differentiation in contractual agreements between the community forest enterprises in Bolivia and various categories of external organisations.

Subjects	Forest service	Timber buyers	NGOs
Objective	<ul style="list-style-type: none"> • Sustainable forest management • Timber production • Equal distribution benefits forest resources 	<ul style="list-style-type: none"> • Access to timber • Financial gains from timber trade 	<ul style="list-style-type: none"> • Establishment land rights • Improved living conditions • Sustainable forest management
Type of partners	<ul style="list-style-type: none"> • National, local and regional offices 	<ul style="list-style-type: none"> • Timber industry • Local sawmills • Intermediaries 	<ul style="list-style-type: none"> • Human (indigenous) rights based NGOs • Environmental NGOs
Product exchanged	<ul style="list-style-type: none"> • Authorization for commercial timber exploitation 	<ul style="list-style-type: none"> • Credit • Timber • Harvesting equipment • Professional services 	<ul style="list-style-type: none"> • Gifts / credit • Technical assistance • Organizational assistance • Training • Exchange of experiences
Document agreement	<ul style="list-style-type: none"> • Approved FMP / logging plan 	<ul style="list-style-type: none"> • Contracts 	<ul style="list-style-type: none"> • Agreement, minutes of meetings, reports
Duration of agreement	<ul style="list-style-type: none"> • In principal minimal 20 years. 	<ul style="list-style-type: none"> • Ranges between short term on the spot timber sale to long term (20 year) agreements 	<ul style="list-style-type: none"> • Between general long term (>30 years) and specific short term (< 2 years) agreements
Clarity of rights and obligations	<ul style="list-style-type: none"> • Rights and obligations CFEs legally clear • Rights and obligations forest service not specified and generally unclear 	<ul style="list-style-type: none"> • Both specific and general contracts. • Most contracts approved by forest service • Some contracts drawn up by lawyers and registered by notaries 	<ul style="list-style-type: none"> • Mostly general agreements with umbrella organizations not with specific CFEs. • Rights and obligations mutually unclear.
Compliance mechanism	<ul style="list-style-type: none"> • Control through forest engineers • Monitoring of plans, reports, transportation permits and field visits • Use of authority 	<ul style="list-style-type: none"> • Informal mechanisms mainly • Legal enforcement theoretically possible but never applied in practice 	<ul style="list-style-type: none"> • Informal mechanisms only • No formal mechanisms possible

All these examples demonstrate at the one hand the great importance of external organizations on the functioning of smallholder forest management systems, but at the other hand the ad-hoc nature of the networks and the pluralistic institutional norms guiding the activities of the various organisations.

11. Role of legal frameworks

As indicated in Chapter 5 within the framework of the ForLive project a specialized study on the regulatory frameworks for smallholder forest management in Bolivia, Brazil, Ecuador and Peru was made. The results of this study are reported in a separate Working Paper⁹. Annex 3 summarizes the preliminary results and conclusions. Additional information on the role of legal frameworks in shaping smallholder forest management was obtained from the local-level focused studies. The two types of information supplemented and validated each other. In the following overview, major characteristics of the legal frameworks impacting on the activities of smallholders will be summarized. As demonstrated in the separate Working Paper between the four countries included in the ForLive study several differences in the legal framework of relevance to smallholder forestry exist. These country specific conditions will not be further highlighted in this report. Rather attention will be focused on the identification of more generic structural issues in relation to the impact of the legal frameworks on the different categories of smallholder forest management.

Contrasts between forestry and agrarian regulatory frameworks

In considering the role of legal frameworks on smallholder forest management often only the forestry legislation is considered. However, as already indicated in Chapter x, not only the forestry regulatory frameworks, but also the agrarian regulatory frameworks impact on farmer decision-making. These two regulatory frameworks are based on rather different principles (cf Fay and Michon, 2005):

- The forest regulatory systems are focused on regulating the conservation and sustainable management of forests through a system of legal principles in respect to access to forest lands and use of forest products. These legal requirements are backed up by systems of state control.
- The agrarian regulatory frameworks are much more focused on regulating agrarian development through a system of incentives/disincentives and market access.

Whereas the forest regulatory system is characterized by a relatively high level of restrictive state regulation on forest use, the agrarian regulatory system is based much more on the principle of freedom of choice of agrarian land-use by the landowners. This differentiation is based on the understanding that forests provide essential environmental services and that these have a public good nature hence requiring state control. It is also based on a strict distinction between agrarian lands and forest lands.

The presence of these two contrasting regulatory frameworks is one of the regulatory inconsistencies smallholders are faced with. As discussed in Chapter 6 smallholders are engaged in multi-enterprise farming activities including both agriculture and forestry. In these multi-enterprise activities they are confronted by both the agrarian and forestry regulatory frameworks. Although these frameworks are distinct, they partly overlap and there are several agrarian regulations which impact on forest¹⁰. Examples of agrarian regulations influencing smallholder forestry activities are:

- The regulations stipulating that farmers must prove that they have been cultivating lands for a number of years in order to gain formal landownership rights
- The regulations on controlled deforestation and fire control in establishing agricultural fields.

⁹ Give title

¹⁰ Also in Mexico it has been observed that community forest management systems are not only impacted by forest policy, but also by agrarian policy as well as entrepreneurial organizations (Bray et al., 2006)

- The regulations that in colonization areas a certain percentage of the allotted lands (often 50%) should remain under forests.
- The regulations that allow temporary small-scale timber cutting as a means to receive monetary incomes to be invested in developing new land-use technologies.

Hence, in carrying out specific forestry activities, farmers may selectively choose on what type of regulatory framework the activities are based. This selective use was illustrated in the ForLive studies:

- Farmers basing agroforestry development primarily on the principles embodied in agrarian regulatory frameworks in respect to freedom in choosing tree-based land-use systems and relating to what they consider as agricultural development organizations.
- Farmers basing their timber extraction on agrarian regulations regarding reclamation of agricultural lands rather than on forestry regulations.
- Farmers freely selling non-timber forest products on the basis of the principles of the agrarian regulatory frameworks of free trade in agrarian products, but having to sell timber under the principles of the forestry regulatory framework regarding legally-produced timber.

Pluriform and inconsistent frameworks for forest management

A second inconsistency smallholders are faced with concerns the often inadequate policy articulation in respect to balancing the various requirements in the regulative frameworks for forestry. This is caused by the fact that these frameworks often incorporate both technical and social norms. For instance, the basic forestry law in Bolivia involves three basic issues:

- Regulations on access to land and forest resources
- Technical requirements on preparation of forest management plan
- Socio-economic requirements concerning distribution of benefits

Whereas the access regulations are based on the principles of devolution in forest management, the technical and socio-economic requirements are in contradiction with such devolution and emphasize government authority. The technical requirements are based on the norms for scientific forestry and include provisions such as the preparation of an official forest management plan, including data from a formal tree inventory and identification of the logging system; this plan must be approved by a professional forester. And the socio-economic requirements concerns policy concerns such as prevention of misallocation of forest profits, prevention of misallocation of forest production areas on designated agricultural lands, and prevention of economic failure of local management organizations. This demonstrates a required level of specialized professional competence, which is unrelated to the traditional competencies of smallholders in carrying out their multi-enterprise farming practices.

This discrepancy in stimulating devolution in forest management at the one hand, but prescribing the need to apply specialized professional skills in managing forests is partly recognized and several trials for simplification of the requirements are tried out. These trials include the following adjustments:

- Preparation of simplified forest management for small farm forestry plots (Usually under 200 ha)
- Temporary allowance for timber cutting without forest management plans in order to gain income for preparation of formal management plans.

Although these simplifications are understandable adjustments to the legislative frameworks, they cause a proliferation of regulations (Table 15). Moreover, the various regulations which have been formulated as temporary measures cause that smallholders can legally harvest timber from

Table 15 Categories of forest users and the regulations that apply to them for using forests on private/communal property

Land category	Category user group	Existing regulations
Private property	<ul style="list-style-type: none"> Farmer associations Individual farmers 	<ul style="list-style-type: none"> Forest management regulations for concessions and private properties > 200 ha. Forest management regulations for areas < 200 ha.
Communal property	<ul style="list-style-type: none"> Legally recognized indigenous communities 	<ul style="list-style-type: none"> Forest management regulations for TCOs (traditional indigenous territories)
Private and communal property	<ul style="list-style-type: none"> All land owners 	<ul style="list-style-type: none"> 3 ha logging plans Regulation for deforestation and controlled burning

other areas than the areas covered by formal forest management plans. Obviously, this does not stimulate the development of such formal plans.

Fuzzy process of decentralization

As demonstrated by the contrasting effects between the process of devolution in forest management, but strengthening of forestry legislation, the process of decentralization is often implemented in an inconsistent manner and there is a lack of systematic consideration of how the various dimensions of decentralization are related (Table 16). In the first place, regarding the decentralization process simultaneously a process of deconcentration to lower levels government bureaucracy, delegation to semi-public organizations (e.g. the Forest Intendencia in Bolivia) and devolution to community groups takes place. But as also noted in several other studies (e.g. Ribot et al., 2006) this process of decentralization is obstructed by a strengthening of the regulatory frameworks notably in respect to standards for forest management. This strengthening of legal standards even extends to international levels.

In the second place, several major issues regarding smallholder forestry development are not considered anymore as a government responsibility and have been taken over by either NGOs or commercial firms. This *de-facto* privatization specifically concerns the facilitation of improved management practices by providing knowledge and investment capital as well as by stimulating enterprise development in selling commercial forest products.

This fuzzy process of decentralization often creates a lack of transparency and clear accountability in the development of the heavily regulated natural forest extraction systems and timber-oriented farm forestry systems.

Insufficient implementation

As a result of the often inconsistent regulatory frameworks coupled with the fuzzy process of decentralization, it is not surprising that several weaknesses in the implementation of the various regulatory frameworks occur. For a further description of these weaknesses reference is made to the CIFOR report.

Table 16 Main decentralization processes in Amazon forest governance

Main management development activity	Deconcentration from state to local authority	Delegation to semi-public organisations	Privatization to private management enterprises	Devolution to community-level management organisations
Formulation basic rules for forest management and control	Remains state responsibility, Increased role of global standards		Third party certification	Only in case of small-scale agroforestry development
Implementation of control practices	Administrative decentralization to lower administrative levels	Delegation to semi-public organisations		
Solving legal conflicts				De-facto incorporation of socially-embedded practices
Stimulation of management practices			De-facto transferred to NGOs	
Stimulation of enterprise development			De-facto transferred to NGOs or Investment contracts with timber enterprises	

Differentiation of impact of legal frameworks on different types of smallholder forest management systems

The above sketched structural difficulties which arise during the present era of institutional transformation in forest governance, specifically impact on the development of commercial timber production systems managed by smallholders. These systems are conceived as falling under the forest regulatory system characterized by the norms that commercial timber production must be arranged according to scientific principles incorporating globally recognized quality standards for management and bureaucratic control mechanisms. In the case of farm forestry, efforts are underway to simplify the bureaucratic requirements, but most of these efforts are still of an experimental nature.

The situation in respect to the development of agroforestry systems is quite different. As already described in Chapter 6, this development is more based on agrarian than forestry regulatory frameworks as well as private initiative. This is also the case for the development of the farm forestry systems in the form of modified forests enriched by (native) fruit species.

12. Promotional roles of different categories of external organisations

Different categories of facilitating organizations

In addition to their legislative and controlling tasks, several government organizations are also involved in facilitating the development of smallholder forest management. However, within the process of decentralization and bureaucratic reorganizations these tasks often have not the first

priority, and increasingly the facilitation of smallholder forest management is taken over by non-governmental development organizations. As illustrated in Table 17 the smallholders have the experience that the promotional activities of the governmental services are mainly focused on issues regarding forest management with additional attention for the establishment of timber plantations and extraction of non-timber forest products. Also non-governmental development organizations are considered to be engaged in these promotional activities. But in addition, they also give focused attention to stimulating agroforestry development. Both government and non-government organizations are considered to give hardly any development assistance to the more traditional and mostly subsistence oriented forest use activities such as collection of timber for own use, shifting cultivation or hunting and fishing.

Table 17 Opinions on the influence of support by government and non-government organizations on different local production systems

Production and management system	Government promotion	Promotion by non-governmental organisations
Forest management	High	High
Plantation establishment	Medium	High
Forest product extraction	Medium	Medium
Fruit-based agroforestry	Low	High
Timber-based agroforestry	Low	High
Garden production	Low	Medium
Commercial timber production	Low	Medium
Timber production for own use	Low	Low
Shifting cultivation	Low	Low
Hunting & fishing	Low	Low

Smallholders are not only assisted by government services and development organizations, but also by commercial firms. This is especially the case for the systems for timber extraction from natural forests requiring investments in the preparation of management plans as well as in equipment for logging. As illustrated in Table x both NGOs and timber enterprises may finance these activities. In the studies on community forest enterprises in Bolivia it was noted, that when the first community forestry enterprises started, the first efforts were financed by NGOs. But with the further development of these CFEs increasingly the investment funds were obtained from commercial firms (Figure 6).

Table 18 Means of financing the management plan and logging activities of community forestry enterprises in Bolivia

#	Financing management plan		Financing logging activities
1	NGO	NGO pays and elaborates management plan with varied input from CFE	Initial financial assistance from NGO later on private enterprises only
2a	Private enterprises	Enterprise pays and elaborates management plan	Private enterprises
2b	Private enterprises	Enterprise gives advance payment to CFE to elaborate management plan	Private enterprises

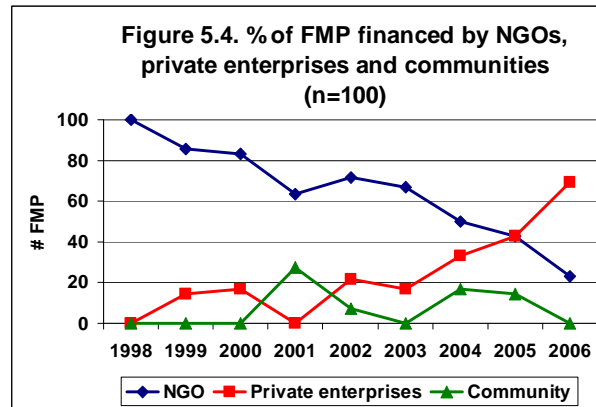


Figure 7. Historic trends in financial assistance to community forestry enterprises in Bolivia

Role of international organisations

As illustrated by the two ForLive the external promotion may not only be provided by NGO from within the country, but also by international NGOs. In these cases the promotion was based not only on the requirement of meeting the national legal standards for forest management, but also on meeting the international requirements on international timber trade, e.g. by meeting the international standards for timber certification. As many of the local NGOs are at least partly dependent on international assistance for carrying out their activities, in several of the ForLive cases they also tended to focus on the need to meet international standards on timber production in order to gain access to international markets. This emphasis was less strong in the case of NTFP production. In general most activities to promote commercial NTFP production were focused on meeting the needs and requirements of local rather than international markets. Only in the case of Brazil nut production initiatives have been undertaken to certify it on the basis of international forest production standards.

13. Conclusion

As illustrated by the above data, the development of smallholder forest management is strongly impacted by external organizations. Their role is multiple:

- Government organizations identify the legal requirements concerning access to forest lands and resources
- Government or semi-government organizations control whether the legal requirements are met
- Various types of development organizations facilitate the development of the smallholder systems by providing information, technical assistance and incentives
- Various types of commercial enterprises provide production investments and/or facilitate trade in the forest products.

In dealing with these different actors, smallholders are faced with several difficulties:

- Contrasting tendencies of decentralization in management and control functions and increased formalization in basic forestry laws.
- Complex relations between endowments, entitlements and enablements
- Contrasting institutional norms on which the external organizations base their activities

Although in many forest policies a strong plea for decentralization in forest governance is made, the reality of emerging governance networks is much more complex. The recent changes in the macro-institutional setting for forest management has resulted in a situation where the regulations on forest management have become more strict, while the organisational setting for stimulating and controlling smallholder forestry has become increasingly complex and pluriform. This demonstrates that in the process of decentralisation of the traditional government dominance in shaping the institutional conditions for forest use and conservation, strategic weaknesses occurred due to inadequate policy articulation as to how the process of decentralization relates to the calls for increased stimulation of and control over forest management. The contrasting tendencies of decentralization in management responsibility, increased regulation based on increasingly global-based standards, and increased involvement of NGOs and commercial enterprises often result in haphazardly developed location-specific governance arrangements rather than in standardized coherent arrangements.

As a result of these contrasting tendencies the formal endowments in the form of legal ownership to (forest) lands are not automatically transferred into entitlements to actually extract, use and sell the various forest resources¹¹. Figure 8 illustrates the variety of entitlements. Legally three types of entitlements to forest lands can be distinguished:

- The rights to reclaim forest lands (hence allowing tree cutting)
- The rights to extract forest products
- The right (or rather obligation) to conserve forests

However, these entitlements do not automatically mean that one is also entitled to officially trade in forest products. For instance, increasingly standards are coming into force that stipulate that only timber from legally approved forest management units with approved forest management plans may be traded on specified timber markets. This means, that trees cut while legally reclaiming agricultural lands can only be used for own use, but not officially sold. Moreover, there is often a difference in legal requirements between selling timber and non-timber forest products.

In the process of transferring forest endowments into concrete entitlements towards actually using forest resources and enabling smallholders to do so a variety of development and organizations play a role. Each of these organizations base their activities on specific institutional norms, hence confronting smallholders with an array of institutional claims. An essential prerequisite for the development of smallholder forest management is that the smallholders are able to deal with this pluriform institutional setting.

¹¹ For a further discussion on the concepts of endowments and entitlements see Leach et al. (1999) and Ribot & Peluso (2003). The term enablements is added for indicating that being entitled does not yet mean that one is able to profit from the entitlements, e.g. due to a lack of capital or knowledge.

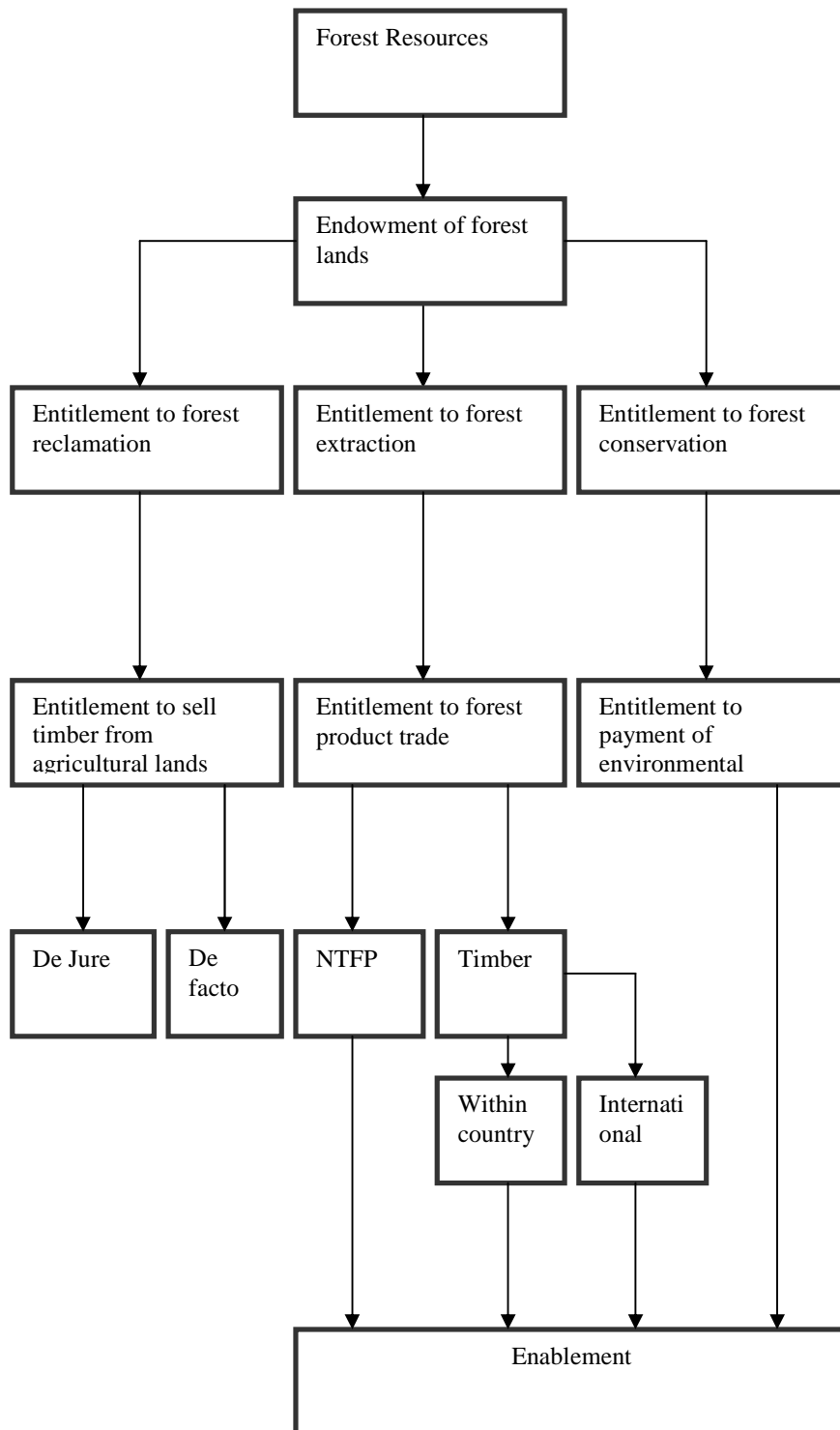


Figure 8 Endowments, entitlements and enablements in smallholder forest management

Part 5 Dynamics in institutional arrangements

14. Local dynamics in crafting forest management arrangements

In the past, it has often been assumed that the formal institutional framework like rules and regulations forms the main instrument to influence decisions regarding natural resource management. This assumption had as corollary the idea that behavioral changes towards a more sustainable use of resources will be achieved through political reforms. Whereas in the traditional situation of government control over forest resources such a notion might have been defensible, in the newly emerged trend towards governance rather than government control over forest resources. Moreover, as demonstrated above, local people are not just following the formalized institutions, their decisions are the result of a mixture of bureaucratic laws and agreements versus embedded social norms, and cultural believes.

As a result of their agency local people may follow various strategies when confronted by the normative pluriformity regarding forest management:

- They may selective borrow from amongst the various institutional norms from various institutional regimes or reject certain norms
- They may gradually adapt the existing institutional norms
- They may merging different institutional norms in a new institutional arrangement.

The following examples provide illustrations of these local processes.

Selective borrowing and rejection of institutional norms

This process can be illustrated by the ForLive case involving a migrant farmer, whose principle livelihood activity concerns animal husbandry. The socio-cultural norms in respect to their desirable way of living as a cattle farmer coupled with their identity of transferring forest lands with more economic lucrative forms of land-use are quite in contrast to the formal rules for forest management. However, when confronted with the good economic gains to be expected from the cultivation and manufacturing of native palms, on own initiative an silvopastoral system was developed consisting of widely-spaced palm plantation allowing grazing. He was assisted by a local NGO in developing this system. Thus, this case demonstrates at the one hand the rejection of formal forest management policies as basically concerning natural forest conservation and timber production, and at the other hand the selective borrowing of norms for maintaining valuable tree species in a strongly modified open rather than closed forest system.

Another example concerns the possibility for farmers to select from different legal arrangements for tree cutting (for further details see Chapter 10). At the one hand, within the framework of forest management often different types of management systems are recognized. At the other hand, within the framework of formal regulations on clearing agricultural fields (e.g. in colonization areas) farmers may also legally cut trees on the basis of an approved 'deforestation plan'. Obviously, such contrasting legislation offers farmers the opportunity for strategic selection of the laws which bring with it lowest costs. Table 19 illustrates how farmers in the Morona Santiago region of Ecuador selective used different types of legal arrangements for timber cutting. This example also collaborate earlier reported findings that indigenous people are more actively involved in forest extraction activities than migrants; these livelihood strategies of this last category of local people is predominantly oriented at opening up and cultivating agricultural lands.

Table 19 Local compliance with forest regulations (data from Morona Santiago province, Ecuador)

	Colonos (migrants)	Shuar (indigenous people)
Number of farmers interviewed	16	16
Farmers with forest management plans	2	1
Farmers who sell wood without a forest management plan	3	12
No commercial exploitation of wood (forests used for own use and conservation as family patrimony)	11	3

Selective adaptation of institutional norms

This process can be illustrated by the developments in several of the ForLive cases on forest extraction by indigenous communities. These communities have on one hand an identity as forest dependent indigenous communities with a traditional, mostly subsistence-based livelihood strategy, and, on the other, the relatively modern need for making an income to pay for, for example, health, or educational services. This results in situation in which these communities make various claims on traditional and modern when dealing with external influence from agencies. The content of these claims is highly dependent on the situation. As far as the situation deals with state interference regarding land titles, timber extraction and more, indigenous communities draw upon their socially embedded rights as the traditional inhabitants of these lands and reject the – in their eyes- meddling of the state. These claims are then presented as untouchable and nonnegotiable. However, in the case of an NGO offering them a possible source of income, they quickly draw upon their newly discovered identity as ‘money makers’. Suddenly the nonnegotiable claims on traditions are not that untouchable.

This example demonstrates that in response to modernization processes including the advent of a monetary economy, the framing of what is traditional changes. Tradition as an institutional influence on decision making is, due to the changes in time, is borrowed from and applied to various situations. As a result, the meaning of what is traditional for indigenous communities become blurred and the concept leaks meaning. We see this in the fact that the meaning of “traditional rights” in indigenous communities is explained differently by individuals, traditions are lost, and local knowledge slowly loses its importance.

Developing new institutional arrangements

This process is demonstrated by the crafting of different institutional networks by the indigenous forest management enterprises. As demonstrated in Figure 7 when in the late 1990 the development of community forestry enterprises started in Bolivia, it were only NGOs which facilitated this development. But as forestry enterprises realized that they increasingly became dependent upon community forests for obtaining timber, they also started to cooperate with local communities; this provided opportunities for local communities to decide which of the external facilitators provided best investment and trading options. And when some community forestry enterprises were successful, they could made use of their own capital in funding further forest management.

15. Organisational learning

The fuzzy and dynamic institutional conditions do not only provide opportunities for local processes of bricolage, but also for organisational learning at the level of the various external organizations impacting on smallholder forest management. Although the ForLive research

mainly focused on assessing local level processes rather than processes at the level of the external organizations, still several examples of organisational learning were recorded.

The first example concerns the opinions of the personnel of the Superintendencia Forestal in Bolivia. This semi-public organization was set up to approve the forest management practices of the community forest enterprises. At first, the professionals in this control organization were skeptical of the abilities of the communities to manage their forests and reacted critical on the plans. But gradually they experienced positive developments and started to facilitate rather than criticize the plans.

A second example concerns the activities of a non-governmental development organization studied in one of the affiliated studies. Although the mission and vision of this development organization regarding the need to strengthen the capacities of local people and local organizations by providing education on the planning of local development projects did not change over a 7-year period, the practical development activities were regularly adapted to reflect newly emerging issues. As demonstrated in Figure 9, at first much attention was given to the development of social and political capital, next attention became more focused on issues concerning human and economic capital, and still later social and political capital issues again received attention. These changes in emphasis reflected the ongoing process of adapting activities to emerging issues and organisational learning about critical issues in development.

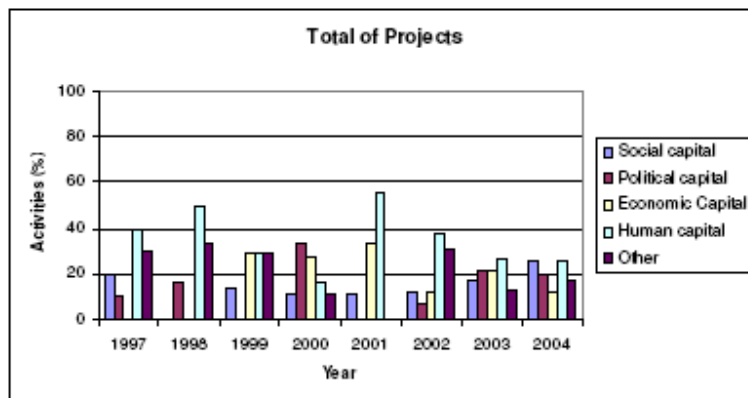


Figure 9 Dynamics in the focus on different development activities by a NGO

A third example concerning organisational learning concerns the process of international standardization. In one of the ForLive cases a simplified approach towards the management of smallholder management as developed within the international FSC system for certification of sustainable forest management was tried out. This approach is based on the emerging understanding that the prevailing systems for auditing sustainable forest management focused on timber production by industrial forestry enterprises need to be adapted to reflect the conditions of smaller-scale community-based and farm forestry systems.

16. Conclusion

Competing institutional frameworks stressing decentralization of decision-making and community involvement in forest management at the one hand, and increased standardization and professionalization at the other hand illustrate how the different perspectives on optimal regimes for forest management result in a fuzzy actor network with different actors framing their activities

on the basis of varied social and environmental norms. At the one hand this creates unresolved challenges to smallholder forest management (Pokorny and Johnson, 2008). At the other hand they create room to maneuver, to experiment and thus to create space for social learning. These processes of social learning take place both at local level and at the level of external organizations.

At the local level such local learning takes the form of processes of bricolage involving several smallholder strategies for reacting on formal policy and legal frameworks for forest management on the basis of various informal, but locally-embedded cognitive and socio-cultural institutions. These processes demonstrate that institutional influence is not just the influence of formal regulations, but also the influence of social norms based on moral obligations and cultural beliefs based on traditions. In this context, a smallholder farmer engaged in forest management is not just a rule follower, it is a person doing what is best to him in this situation. For shaping his own specific forest management arrangements he uses his own agency for selection and/or adaptation from a range of either formal bureaucratic or more informal and socially-embedded codes of conduct regarding forest management and in doing so may create new institutional arrangements.

Part 6 General conclusion

17. Heterogeneous and dynamic institutions

Different categories of smallholder forest management with heterogeneous institutional settings

The concept of smallholder forest management is ill-defined and includes a variety of forest management systems ranging from natural forest extraction, farm forestry to agroforestry plantations. The different systems operate under quite variable institutional conditions; Table 20 gives a summary of the ideal-typical arrangements for the three smallholder forest management types. As demonstrated by the different institutional settings it is not possible to design uniform sets of robust institutional conditions for smallholder forest management. Rather, for improving institutional arrangements for smallholder forest management both the management-specific institutional context needs to be considered. Special attention needs to be given to the observation that not only forestry frameworks, but also agrarian frameworks impact on the manner in which smallholders are engaged in forest activities. More attention should be given to the respective roles of forestry legislation and agricultural development legislation and their effect on either stimulating or limiting specific forms of smallholder forest management.

Table 20. Ideal-typical institutional arrangements for different types of smallholder forest management in the Amazon region

	Local institutional context	External institutional context
1. Natural forest extraction		
Regulatory framework	Using forest tenure regulations as means to gain ownership over 'ancestral' lands Formal regulations on community-ownership sometimes adapted to <i>de-facto</i> division in individual plots	Forestry regulatory framework Trend towards international standardization stressing both need for development of community forestry and need for formalizing forest land demarcation and management procedures
Cognitive framework	Traditional focus on non-timber forest products adapted to include commercial timber production	Forestry as scientific approach towards commercial timber production
Social institutional framework	At the one hand adhering to traditional forest-based socio-cultural practices At the other hand joining options for modernization	Devolution of forest management activities to local communities Bureaucratic deconcentration Delegation/privatization of extension and technical assistance to forest-focused and social movement organizations
Economic institutional framework	Seizing of modernization trends towards income generation Trend towards socio-economic stratification	Investment and operation funding mainly supplied by commercial timber enterprises or development organizations

2. Farm forestry		
Regulatory framework	Selection between forest management regulations or forest reclamation regulations	Combination of forestry regulatory framework and frameworks on agrarian landownership
Cognitive framework	Farm forestry as component in multi-enterprise farming system based Forest production as concerning not only timber, but also NTFP production	Forestry as scientific approach to be adapted to smallholder management conditions
Social institutional framework	Private access and control to forest lands Sometimes added by production cooperatives	Privatisation in forest management Bureaucratic deconcentration in management control Delegation/privatization of extension and technical assistance to both forest- and agrarian-focused organisations
Economic institutional framework	Additional income to agricultural production Forest-based income to be used for investment in farming development	Investment and operation funding mainly supplied by development organizations
3. Small-scale agroforestry		
Regulatory framework	Making use of agrarian regulations focused on regulating agrarian development	Not specified
Cognitive framework	Continuation of traditional non-timber forest uses Integrated land-use practices	Need for agrarian diversification and incorporation of indigenous knowledge in agrarian development
Social institutional framework	Local initiatives by individual actors	Facilitation by social movement and agroforestry development organisations
Economic institutional framework	Gradual incorporation in economic networks	Development of original subsistence-based activities into commercial production

Differentiated roles of external institutions and contradictory process of decentralization and standardization

It is often proposed that smallholder forest management is stimulated by the ongoing process of decentralisation in forestry decision making. However, this policy trend is counteracted by a process of international standardization of forest managed principles. Moreover, the process of decentralization involves several pathways related to the more specific processes of bureaucratic deconcentration, delegation, privatization and devolution. These different approaches towards decentralization are not planned in a structured and consistent manner and consequently a fuzzy process of change in formal institutions is taking place.

Local agency of smallholders in dealing with fuzzy and dynamic institutional conditions

The dynamics in institutional arrangements often results in a fuzzy actor network with different actors framing their activities on the basis of varied social and environmental norms. At the one hand this creates unresolved challenges to smallholder forest management (Pokorny and Johnson, 2008). At the other hand they create room to maneuver, to experiment and thus to create space for social learning, notably also at local level. A smallholder farmer engaged in forest management should not be considered just as a follower of the rules introduced by government and development organizations, but rather as a person doing what is best to him in this situation. For shaping his own specific forest management arrangements he uses his own agency for selection and/or adaptation from a range of either formal bureaucratic or more informal and socially-embedded codes of conduct regarding forest management and in doing he creates location-specific institutional arrangements. The various examples of processes of dynamic institutional ‘craftmanship’ or institutional bricolage illustrate the relevance of considering this process as a key factor in the development of smallholder forest management systems.

17. Main conclusions and recommendations on the development of institutional frameworks for smallholder forest management

On the basis of the above research findings of considerations, seven main conclusions on key processes and drivers in respect to the development of smallholder forest management in the Amazon region were identified (Table 21). Each of these conclusions forms the basis for related recommendations on the further development of smallholder forest management.

Table 21 Main conclusions and recommendations

Conclusion on key processes and drivers impacting on the development of smallholder forest management	Recommendation
The increased attention for development of smallholder forest management in the Amazon is the result of recent policy changes stimulating community and smallholder involvement in forest management. The new policies have ushered a process of institutional transition which is still in progress.	In view of the ongoing dynamics, the development of smallholder forest management should be based on an experimental approach towards the creation of adaptive and flexible institutional arrangements rather than on the beliefs in the need to create pre-identified robust institutional regimes.
Smallholder forest management should not be considered as the outcome of a linear development process in which newly formulated forestry policies are transferred in a linear process to local ‘beneficiaries’. Rather, it should be recognized that during the process of implementing these policies they are adjusted to local realities. A major result of this process is the emergence of different types of smallholder forest management, each characterized by its specific institutional arrangements	In developing further development strategies for smallholder forest management specific attention should be given to: <ul style="list-style-type: none"> • The type of management type to be stimulated. • The specific type of local communities in respect to socio-cultural traditions
The development of smallholder forest management is based on a combination of two types of local cognitive institutions: at the one hand cultural traditions in respect to forests as living space and the importance of non-timber forest products play an important role, but at the other hand local visions and desires on joining processes of modernization and income earning.	In stimulating smallholder forest management a further balance must be sought in at the one hand incorporating local knowledge and traditional practices of forest use, but at the other hand educating local people in new practices for commercial timber production.

<p>In stimulating smallholder forest management there is often a tendency to base the approach on the international standards of combining forest conservation, poverty alleviation and social justice through formalization of access rights to and control over ancestral lands. As a result, much emphasis is given to the position of indigenous people and legal frameworks for forest conservation. This vision limits attention to the reality that smallholder forest management does not only concern indigenous people, but also peasants and migrants. For these local people agrarian frameworks are often as important in framing their management practices as the forestry frameworks</p>	<p>1. In stimulating smallholder forest management much more attention should be given towards the role of forest management as a component of integrated farming systems and the impact of agrarian legal frameworks. 2. For stimulating smallholder forest management a better policy articulation is needed in respect to mainstreaming forestry and agrarian legislation on land ownership, forest conservation, forest product trade, and rural development.</p>
<p>A key factor stimulating smallholder forest management is the present policy on decentralization and devolution in forest management. However, the various processes of bureaucratic deconcentration, delegation and privatization and devolution of former government activities and their relations are not systematically analyzed and these processes are progressing in a haphazard way. This limits the effectiveness of the decentralization process.</p>	<p>For further stimulation of smallholder forest management a clearer policy articulation is needed in respect for creating effective location-specific interactions between administrative decentralization and/or delegation in forest law enforcement, devolution of forest.</p>
<p>Simultaneously with the process of decentralization concerning forest management there is also ongoing a process of globalization of standards for forest management, which counteracts the results of the decentralization processes.</p>	<p>To stimulate smallholder forest management it is essential to further consider how the present tendency towards increased international forest regulations can be balanced by a process of development location-specific rather than generic forest management systems.</p>
<p>As a result of the contradictory and fuzzy processes of institutional dynamics impacting on smallholder forest management, in many studies the conclusion has been drawn that the development of smallholder forest management is characterized by many difficulties and remains an unsolved challenge. In an attempt to assess whether there is also 'another side of the coin' in this study also the opportunities for maneuvering, experimenting and social learning by both local and external organisations have been demonstrated.</p>	<p>In view of the multistakeholder networks impacting on the development of smallholder forest management, it is most promising to assess the options for development of smallholder forest management not on a 'state, market, greens or locals know best' perspective, but rather on a 'nobody knows best' perspective.</p>

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Annex 1: WP2 baseline characterization ForLive cases

Name community/ Producer unit	Socio-cultural setting	Forest conditions	Forest tenure conditions	Innovative forest management activity	Forest management organization	Community organization/ producers organization related to forest activity	Own initiative/ externally sponsored	Inter-national assistance
12 de Octubre (Bolivia) Forestry and agroforestry association	Peasants (Campesino)	Primary forests Agroforestry plots	Communal (3600 ha and 16.378 ha claimed) Private agroforestry plots	Selective NTFP (incl. Brazil nut) extraction and timber Additional agroforestry	'El Verdum' Forestry and Agroforestry Association		IPHAE assisted	none
Buen Destino (Bolivia) Indigenous community	Indigenous	Primary forests with some secondary forests	Communal (6-8000 ha)	NTFP and Brazil nut extraction	Individual management	Community organization: TCO (no communal forest organization)	Own initiative (individual commercialization of crops)	Swiss mission (but no relation with forest)
Buen Futuro (Bolivia) Producer Garcia	Migrant (In peasant community)	Primary and secondary forests	Individual plots in collective forest (180 ha) and agroforestry plantations	Brazil nut extraction and agroforestry	Individual management	Producers org: External peasant cooperation CAIC	IPHAE assisted CIPCA assisted	(none)

Name community/ Producer unit	Socio-cultural setting	Forest conditions	Forest tenure conditions	Innovative forest management activity	Forest management organization	Community organization/ producers organization related to forest activity	Own initiative/ externally sponsored	Inter-national assistance
Palmira (Bolivia) Producer Beyuma	Peasant Campesino	Mostly secondary forests Agroforestry & fruit plantations	Private rights on collective forest resources Private agroforestry plots	Agroforestry systems and small scale collection of Brazil nut	Individual management	(none)	IPHAE assisted	(none)
RESEX Cajari (Brasil) Extractive reserve	Indigenous	Primary forest	Almost 500.000 ha of state owned extractive reserve with individual user rights	NTFP extraction (Brazil nut, palm heart)	Located within federal conservation unit	Producers cooperatives (ESTEX-CA) or association (COMARU)	National Council of Traditional Populations (CNTP/IBAMA)	WWF Worldbank
Majari (Brasil) Porto de Moz community	Migrants	Mostly degraded (logged-over) varzea (flood-plain) forest	Communal forest area (9.100 ha) with additional individual plots (50-100 ha), land titles are often not present	Selective timber extraction (& subsistence forest product extraction and fishing)	Individual management	No formal organization, but producer mobilization through church, prefecture and workers' union	External assistance from church organizations	(none)

Medicilândia (Brasil)	Migrants	Primary and secondary forest	Individual land title (60% of inhabitants)	Small-scale timber & NTFP extraction, mixed tree plantations	Individual management	Rural Workers' Union	External assistance Fundação Viver Produzir Preservar and Rural Workers' Union	
PAE Equador (Brasil) Community	Peasants Campesino	Primary and secondary forest (7000 ha of which 1000 ha under management plan)	Communal forest land with additional 10ha private plots	Traditional Brazil nut and rubber extraction, selective timber production	Community forest management – APPAESE and COOPERFLO RESTA Cooperative	Xapuri Rural Workers Union	Government assisted: Acre State Government	Inter-american Development Bank - IDB
El Eden, Pajanac (Ecuador) Producer Sandu	Indigenous	Balsa plantation (3.5 ha), natural forests (19 ha)	Individual plot rights on communal lands	Selective timber extraction and balsa plantations, hunting	Individual management	Traditional forms of labour cooperation	SFA assisted	(none)

APPAC (Ecuador) Producer Pisango	Migrant	Mostly secondary forest, some primary forest	Private (10 ha primary, 38 ha secondary)	Secondary forest exploitation focused on timber from Pigue	Individual management	(none)	SFA assisted	(none)
Chinimbimi (Ecuador) Producer Campoverde	Migrant	Very degraded (secondary) forest, palm plantation	Private lands (30-100 ha)	Native palm cultivation and manufacturing	Individual management	'Los Laureles' - agroforestry association	SFA assisted	USAID/ CARE
Wachmas (Ecuador) Producer Kumpanan	Indigenous	Primary forests	Individual use rights (45 ha natural forest) on communal lands	Selective timber extraction with low intensity management (4 ha)	Individual management	Traditional forms of labour cooperation	SFA assisted	none
La Quinta Cooperativa (Ecuador) Producer Lojano Punin	Migrant	Secondary forests	Individual farm (15 ha forest)	Selective timber extraction with low intensity management (5 ha)	Individual management	Traditional forms of labour cooperation	SFA assisted	(none)
Calleria (Peru) Indigenous community	Indigenous	Primary forest	Communal (3650 ha)	Selective timber extraction with management plan	Communal METSABARI Productive Economic Organisation	Communal METSABARI Productive Economic Organisation	AIDER assisted	FSC (certified timber)

Campo Verde (Peru) Producer Luis Tuesta	Migrant	Degraded forest with pastures	Private (100 ha)	Apiculture, pisciculture, turtle breeding combined with NTFP (Mauritia) extraction	Individual management	Apiculture: regional beekeepers network	Own initiative	(none)
Curimana, Padre Abad (Peru) Producer Luis Alba	Migrant	Mainly secondary, some primary forest	Private (37 ha)	Selective timber extraction, honey production, oil palm plantations	Forest Managers Association - Amabosque	Forest Managers Association - Amabosque	Own initiative and state assistance – National forestry chambers	Financial support of Holland
Yarinacocha district, (Peru) Producer Villegas	Migrant	Plantation	Private (3 ha)	NTFP (camu camu) production and manufacturing	Private	Informal network with other Camu-Camu producers	Own initiative with external technical assistance	(none)

Annex 2 List of research reports

PhD dissertations

- C. Benneker (2008) Between state, market and NGOs, how Community Forest Enterprises (CFEs) in lowlands of Bolivia deal with institutions. Dissertation Wageningen University.
- J. de Koning (in preparation) Institutional influence on small farmers decisions regarding the use and management in the Amazon region. Dissertation Wageningen University
- G. Medina (2008) Structural restrictions faced by traditional Amazonian communities for improving their livelihoods through forest management in negotiations with external stakeholders. Dissertation Albert-Ludwigs Universität Freiburg.
- J. Weigelt (in preparation) Reforming access. On the political economy of pro-poor institutional change in the Brazilian Amazon. Dissertation Humboldt University Berlin.

MSc and BSc thesis based on ForLive financed studies

- M.C. Chaves Villegas (2008) Indigenous community forestry: a study of influence and decision-makers. MSc thesis, Wageningen University.
- T. Depzinski (2007) Eligible local partners of development organisations. Criteria of development organizations for selecting local partners: a study in the Peruvian Amazon. MSc thesis Georg-August University, Goettingen
- C. van Ham (2007) Opinions on the implementation of the forest legislation by smallholders in the Ecuadorian Amazon. MSc thesis, Wageningen University.
- D. Kuiper (2009) Riverdwellers in the Brazilian Amazon: victims or villains? MSc thesis, Wageningen University.
- S. Ortiz Camargo (2007) Potenzial von Märkten für Waldprodukte von Kleinbauern. Ein Fallbeispiel aus Riberalta, Bolivien. MSc thesis, Albert-Ludwigs Universität Freiburg.

Affiliated MSc and BSc not financed by ForLive

- M. de Bruin (2006) Actividades, cambios y influencias. CEADES and the community forest enterprises in Guarayos, Bolivia. An overview of the activities, changes and influences. MSc thesis, Wageningen University
- L. van Heeswijk (2007) Decentralization on forest management in lowland Bolivia: the 'reality' of decentralization processes and the possibilities for local communities. BSc thesis, Wageningen University
- Ricardo Reguera (2008) Discourses on forest certification in indigenous forest enterprises in Bolivia. MSc thesis, Wageningen University
- W. van der Velde (2006) The interface between the New Forest Law and Chiquitano life-world. Community-based commercial forestry in Bolivia, province Velasco. MSc thesis, Wageningen University
- R. de Wolf (2005) Internal transaction costs of indigenous community enterprises in TCO Tacana, Bolivia. MSc thesis, Wageningen University

Annex 3

Comparative analysis of legal frameworks for smallholder forest management in the Amazon regions of Bolivia, Brazil, Ecuador and Peru: Some preliminary results and conclusions

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Within the framework of the ForLive Working Package on Institutions in 2007 a study was initiated to compare the legal frameworks for smallholder forest Management in Bolivia, Brazil, Ecuador and Peru. The objectives were (1) to identify and compare the legal frameworks impacting on smallholder forest management, (2) to evaluate the implications of those legal frameworks on either stimulating or restricting smallholder forest management, and (3) to formulate recommendations for improvement and/or harmonization of those legal frameworks.

The study aimed to contribute towards the improvement of valid legal instruments which are adjusted to the reality and diversity of local actors as well as to the opportunities for more effective and fair implementation of legal norms in the four countries. The final aim of the study was to contribute towards a pragmatic discussion about how legal regulations can assist the smallholders to use their forest more efficient and thus contribute towards a more effective forest sector.

The first phase of research consisted of a review of the various legal frameworks at both regional and country level as well as of additional information in the form of publications, reports and journal articles. Next, in each country a series of consultations were organized with different types of actors ranking from experts to smallholders. Finally, a series of workshops were organized to present and discuss the preliminary results of the study in each country. These meetings were attended by smallholder producers and independent professionals as well as representatives of smallholder producer organisations, government services, commercial enterprises, NGOs and research and development organisations, and universities.

In this note the first results of the comparative analysis will be presented. It will focus on some of the major common trends that were identified.

Diversity in smallholder forest managers

There is a variety of legal concepts and terms associated with smallholder forest management; these vary between and within countries. The term has often a cultural connotation. The study identified that the legislation often concerns specific groups of actors in the form of either smallholder agricultural producers, household agricultural enterprises of established or immigrant farmers, specific groups of the population such as ribereños, traditional communities engaged in forest extraction, or native communities of indigenous people. Each country has its own interpretation. For instance, in Bolivia on the basis of both agrarian and forestry laws five categories of smallholder producers are recognized: communities of established farmers (campesinos) and small immigrant landholders, indigenous villages or communities, communities of traditional forest-product gatherers, and legally recognized social associations. Whereas in Brazil, legally different forms of land-use are recognized depending on the type of producers (farm households, forest extractors and other traditional communities, but excluding indigenous communities) and type of government responsibility (federal state or provincial state). In Ecuador, smallholders include farmers with 20 to 70 hectares of land or indigenous groups. And in Peru characteristics for identifying smallholder forest managers included factors such as type of locality and legal regulations from the forestry law regarding forest access. A differentiation is made between indigenous communities, small-scale forest extractors and smallholders farmers. In

conclusion, this study identified that the term smallholder forest managers refers to any social groups or local actors which are legally recognized as having forest use rights. The only exception are the indigenous communities in Brazil, which are subject to a their own specific legal framework.

Diversity in forest management.

There exist a variety of smallholder forest management categories depending on the type of actor; nevertheless the present legal norms try to represent and homogenise this great diversity. The management categories range from individual management systems to communal and cooperative management systems; these different categories are partly the result of legal norms and partly of social movements. The majority of management types is focused on low-intensity and selective timber extraction. The activities generally include timber sales in the form of standing trees or sawn logs.

Access rights to forest land.

The main prerequisite for being able to legally engage in forest management is access to forest lands. There are various possibilities for formalizing such access; some are based on considerations regarding agricultural development and other on considerations on the need for conservation. The regulations often fail to recognize the diverse local conditions and may exclude specific actor categories (for instance in Peru the riverside dwellers (ribereños) are not recognized). The process of access regulation is characterized by bureaucratic procedures, delays in administrative procedures and high costs, and the requirements regarding management plans often create difficulties for the local producers to follow the legal management requirements.

Content of the legal norms

There is a strong tendency that the norms for forest management are based on the conditions of commercial timber enterprises. These norms are often difficult to implement by the majority of smallholder producers. Moreover, the legal requirements do not incorporate traditional knowledge and practices that are mainly focused on the production of non-timber forest products. The norms are not well-adjusted to the realities, needs and capacities of the different groups of local producers (for instance, this is demonstrated by the fact that the local communities in the Bolivian Amazon take little notice of the formal forestry laws) The prohibition of chainsaw logging to produce sawn logs in the forests (as usually practised in Bolivia and Peru) forms an example of a legal norm that limits options for smallholder producers. Moreover, the legal formulation of offences and delicts is sometimes not clear and limits the correct and effective application of these regulations. Moreover, usually conflicts occur as a result of a lack of coherence between the forestry legislation and other sectoral legislation, notably in respect to the agrarian legislation and mineral and oil extraction legislation.

Simplification of legal norms

In order to reduce the bureaucratic procedures that limit smallholder forest management several countries have tried to simplify the legal norms. Examples are the simplified forest management initiated in Ecuador, and the identification of three levels of management intensity for indigenous communities in Peru. These efforts at differentiation and simplification are important, but they also open the opportunity that the 'elites' in the timber sector appropriate the benefits intended for smallholders. The results of the efforts at legal simplification depend on the market structure, as these influence whether the local forest producers can maintain the legal *status quo* legally assigned to smallholders.

Application of the legal norms

In general, the forestry legislation in the four countries is dispersed and not systematic and locally not well founded. The smallholder actors have little knowledge of the legislation, and do hardly participate in legal discussions as a result of the complicated legal language and poor knowledge of the legal norms. There mostly exist a relation of dependency between local forest managers and professional foresters facilitating or controlling smallholder forest Management. These foresters often do not perform in a responsible manner. Moreover, the professional quality of the regulatory organisations is often low, they do not receive adequate training and/or salaries or are regularly transferred. Governments provide limited funds for monitoring. Most monitoring and control activities are focused on the fulfilment of the requirements of the forest management plan rather than on the control of illegal activities which compete with approved forest management activities. As a result of administrative decentralisation there is a trend towards concentration of the control activities at regional level, but with little transfer of resources to accomplish this task.

Policies in respect to extension and promotion

The recognition of the importance of devolution of forest management to local actors is at present often more a matter of discourse than of practice. There is a lack of government action in respect to systematic formulation and implementation of devolution policies for instance in respect to capacity building, technical assistance, provision of information, credit and financial facilities and provision of tax reliefs.

Some proposals for improvement

On the basis of the study it is possible to identify various country-specific suggestions to solve the different identified problems. Here we only mention a series of more general recommendations:

- Adaptation of legal frameworks by better balancing legal and local norms in a participative process combining technical and empirical knowledge.
- Stimulation of a participative process of definitions of social, legal and institutional requirements for smallholder forest management.
- Promotion of locally-adapted forest Management plans
- Promotion of different forms of social control on forest management activities
- Creating more flexibility in the application of legal norms by clearer definition and operationalization of those norms
- Improvement of the capacity of decentralised government institutions to control offenses and enforce sanctions
- Development of local capacity in respect to both organisational, managerial, technical and financial issues, for instance by training of community promoters
- Strengthen the negotiation capacity of local actors in respect to the formulation, implementation, monitoring of management plans and the maintenance of contractual agreements with timber sellers and enterprises
- Improving provision of information on legal norms and administrative requirements regarding forest management by different categories of smallholders.