Chapter One - Introduction

Over fifteen years ago, focusing on developing countries, the Food and Agriculture Organization of the United Nations established a program called “Forests, Trees and People.” The program was designed to promote a more effective role for forestry in rural development. Specifically, there was an interest in the contributions forests make to rural livelihood in developing countries through rural employment and income generation. Fisseha (1985) showed that small-scale forest-based enterprises (SSFBEs) have become an important source of employment for many rural dwellers in developing countries. In many cases, SSFBEs are second only to agriculture in terms of rural employment. As employment in the agriculture sector continues to decline, research suggests that more and more rural dwellers will seek out employment in small enterprises (FAO 1987). Urban dwellers, too, have come to depend on SSFBEs. The gathering, processing, consumption, and trade of forest products, especially non-timber forest products (NTFPs), such as honey, nuts, and medicines, can be a particularly important component of both rural and urban household subsistence and economies (FAO 1991). SSFBEs, created in response to market demands for NTFPs and other forest products, can constitute a significant portion of a rural families’ income. As a result, they have come to play an important role in the economy of developing nations and rural communities.

Employment and income gained from many of these enterprises tends to provide low returns and be partially subsistence-based. However, they do provide the poor with an important safety net and many enterprises do become profitable and increase in size. SSFBEs are also important because they reduce unemployment and are easily accessible
to rural economically disadvantaged women and other poor segments of society, when other more traditional livelihoods are unavailable (Chipeta 1995). NTFPs have drawn much attention in recent years for their contribution to enterprise development and income generation for rural forest dwellers (Wollenberg and Ingles 1998), SSFBEs have become the beneficiary of this increasing NTFP market importance. Not only do NTFPs play a major role in the success of SSFBEs, but also by teaming SSFBEs with NTFPs they show enormous potential for communities to conserve their forest, generate income, and better their standard of living (Chipeta 1995).

Scant attention has been paid to the importance of small-scale forest-based enterprises to rural households, particularly to women and to the poor. SSFBEs are not widely understood and have been difficult to study because of their small size, isolated locations and seasonal connection. Policy and research has often focused on much larger industries, often overlooking and neglecting such smaller operations. FAO (1991) reports that studies of SSFBEs are lacking. Also, there is very little quantitative data available on this type of enterprise. Most past research on the forest products that people harvest and use has been narrowly specific (Arnold 1999). As a result, this paper will seek to demonstrate the role of SSFBEs in contributing to the livelihood of rural communities through forest-based income generation.

In order to understand the importance of forest-based activities to people dependent on the forest and its resources, one must focus on the complexity of the situation that exists, which is best expressed in qualitative terms (Byron et al. 1997). To demonstrate this, I will first provide details on what small-scale forest-based enterprises are, beginning with
a brief background, and followed by characteristics in terms of size and types of SSFBES. I then examine the importance of NTFPs to rural communities and their economies. I also explore the growing significance of SSFBES in making forest conservation economically attractive, while at the same time alleviating urban and rural poverty. I then focus on the problems and policy issues that have emerged from SSFBE development, with some suggestions on how these enterprises might be made more successful. Finally, I end the paper with some general conclusions.
Chapter Two - The Small-Scale Forest-Based Enterprise

Characteristics

Small-scale forest-based enterprises are defined as enterprises that utilize any material or product occurring in forests, woodlands, or trees outside of forests and woodlands.

Many rural dwellers, and particularly the economically disadvantaged, earn a significant portion of their incomes from gathering, trading, processing and manufacturing forest-based products. For example, forest users gather such products as fuelwood, rattan, bamboo, fibers, medicines, gums and various foods. (See Table 1 for general composition of SSFBEs) Forests also lend themselves well to small scale rural processing and manufacturing enterprises. These types of enterprises use wood and non-wood products for furniture and implement-making; reeds and vines for handicraft, mat, and basket production; wood for the making of charcoal, seeds and nuts for production of certain oils; and bark for tannin processing. Fuelwood is also a very important forest product used for brewing beer, smoking meats, and making bricks (Falconer and Arnold 1989).

Table 1: General Composition of SSFBEs in Selected Countries

<table>
<thead>
<tr>
<th>Type of Enterprise</th>
<th>Jamaica</th>
<th>Honduras</th>
<th>Zambia</th>
<th>Egypt</th>
<th>Sierra Leone</th>
<th>Bangladesh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpentry/Furniture</td>
<td>23.1</td>
<td>71.4</td>
<td>14.3</td>
<td>23.8</td>
<td>66.8</td>
<td>27.2</td>
</tr>
<tr>
<td>Woodcarving/Bamboo/Cane</td>
<td>12.5</td>
<td>0.2</td>
<td>11.9</td>
<td>--</td>
<td>5.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Basket/Mat/Hat Making</td>
<td>63.5</td>
<td>10.6</td>
<td>60.3</td>
<td>70.4</td>
<td>23.8</td>
<td>32.4</td>
</tr>
</tbody>
</table>

(Source: Fisseha 1987)
Kilby and Liedholm (1986), and Haggblade and Hazell (1989) have estimated that between 20 and 45 percent of full-time employment in rural areas of developing countries is nonfarm work. In addition, they have also estimated that from 30 to 50 percent of rural household income is earned from nonfarm work. Studies have shown that small-scale forest-based activities comprise a significant portion of the small enterprise sector in developing countries. According to Liedholm and Mead (1992), “around the world, three activities have consistently been identified as the most important categories of micro and small manufacturing enterprises: textiles and wearing apparel, food and beverages, and wood and forest products.” This holds true for countries both with and without significant forest resources (Liedholm and Mead 1992).

In general, SSFBEs are characterized as operations that are technologically simple, requiring limited skills and a small amount of capital. (see Table 2 for general characteristics of SSFBEs) They are typically located in a rural setting and rely heavily on labor contributed by the entrepreneur and his or her family and, as such, are typically very small in size. Enterprises seldom occur as unique, separate entities; entrepreneurs generally choose to operate their enterprises as supplements to other activities in which they participate, such as processing, service, or agricultural activities. SSFBEs are generally closely linked with agriculture and normally one cycle in the seasonal pattern of agricultural operations. There can be up to 50 employees, however average employment numbers range from two to four per enterprise. In over 50 percent of cases, enterprises are single-person, household operations (FAO 1987).
Enterprises that tend to be extremely small often involve processing non-wood raw materials, such as reeds and grasses used in the making of baskets and mats. These enterprises are predominantly household-based. Larger enterprises tend to focus on woodworking, and are more likely to involve machines and be organized on a workshop basis. Other enterprises involve both household and workshops (FAO 1987).

Despite the overlap in the household and workshop categories, it is important to recognize the distinction between enterprises that manufacture products from forest materials and enterprises that gather and sell forest products. This is important because of the difference in the economic role and potential of the different types of small-scale forest-based enterprise (Arnold 1994).
Gathering and Trading Enterprises

The gathering and sale of forest products can be an important economic activity for both the rural entrepreneur and the local, urban and export markets. This type of enterprise takes place in the periphery of the formal economy. Because gathering enterprises are sporadic and transitory in nature, much of the information regarding this type of activity is reflected in anecdotal accounts and case studies (FAO 1989).

The collection of forest products is a principal source of income for many forest-dwellers. In addition, many farmers tend to supplement their income through gathering enterprises, especially during off-peak agricultural seasons (Siebert and Belsky 1985). Loyalty to this type of activity is based on the alternatives available, labor availability, access to markets, and the availability of and demand for the particular forest product(s) gathered. Case studies suggest that the bulk of trade in gathered forest products is at the local level. Products are generally sold between households, in the village or at the market. Their sale has also contributed greatly to the support of urban populations and created complex structures of producers, transporters, wholesalers, and retailers—employing large numbers of people (Arnold 1994).

In Kumasi, Ghana, for example, the types of forest products gathered and sold at market generally include medicines, fuelwood, snails, canes, honey, fruit, chewstick logs, bushmeat, seeds, resins, and mushrooms. On an average day, there are approximately 70 rural suppliers bringing products to over 650 entrepreneurs in the city. The entrepreneurs
then sell the products in the city market. It was found that 68 percent of rural dwellers in the region received their income from forest-based activities (Falconer 1991).

In South Asia, the collection of rattan, derived from the climbing palm, is an important source of income for many forest dwellers and farmers (IDRC 1980). Rattan production comes primarily from collecting households harvesting the rattan from the natural forest, and from rattan gardens (Arnold 1994). Siebert and Belsky (1985) report that rattan collection in the Philippines is an essential supplement to the income of many farming families, without which they would find it difficult to survive. Village intermediaries, who are often shopkeepers or merchants who provide goods to the collectors, purchase the rattan from the collectors. These intermediaries, in turn, sell the rattan to river business or boat operators, who then sell it to urban dwellers, who then sometimes act as exporters (Arnold 1994). Collectors and sellers are generally bound by long-term business relationships (Peluso 1986 and 1992).

In Brazil, the collection and sale of oil-processed from Babussa palm kernels provides a supplementary source of income for millions of poor tenant farmers during slow periods of the agricultural calendar, where money is generally in greater need. Women are primarily involved in the extraction of oil from the kernels. As an agricultural input, the palm also provides many valuable products in Brazil, such as charcoal, thatch, baskets and food (May et al. 1985).

Fuelwood is also a very important source of income for rural people, particularly women. In India, Agarwal and Deshingkar (1983) estimate that over two million people depend heavily on the fuelwood trade for income. In Sierra Leone, a study reported that income
earned from the sale of fuelwood is very small, yet critical in the off-peak agricultural season when food supplies were at their lowest (Kamara 1986).

Processing and Manufacturing Enterprises

Workers in small-scale forest-based processing and manufacturing enterprises make up a large number of those employed outside of the agricultural sector. Fisseha and Milimo (1986) estimated that in 1985 approximately 90,000 people were employed in forest-based processing in rural Zambia, and accounted for over one-third of all rural manufacturing employment in the country. In the Rufiji area of Tanzania, over 70 percent of those employed in craft activities were working in forest-based enterprises. Forest-based processing enterprises also account for nearly 16 percent of rural manufacturing in Honduras and up to 35 percent in Jamaica (FAO 1987). Page and Steel (1984) estimate that small-scale forest-based processing and manufacturing enterprises are the second largest industry in the entire continent of Africa. In Egypt, not typically known for its forest resources, the manufacturing of wood furniture was the third largest industry outside urban areas (Mead 1982).

Processing and manufacturing enterprises process and produce a wide range of material from the forest. They typically are very small in size, rely heavily on the entrepreneur and his or her family members for labor, have simple operations, low capital intensity, limited industrial and managerial skills, are seasonal, and typically are located in rural areas (Arnold et al. 1987). In his survey of six developing countries, Fisseha (1987) reported that the average size of an enterprise ranged from 1.7 to 3.8 persons. More than 50 percent of the enterprises surveyed were operated by one-person. Less than one
percent employed more than ten persons, of whom most were either the owner or a family member, and the remaining employees were characterized as informal apprentices. Wages earned from this type of enterprise are very low and work conditions are generally very poor.

SSFBEs producing nonwood raw materials, such as reeds and grasses, are traditionally very small; activities such as mat and basket-making are primarily centered in a household and done by hand (FAO 1987). This type of enterprise consists of a great deal of family participation as well as “learn as you go” experience. The entrepreneur may have proficiency in craft skills, but often has little or no marketing or management training. Employees, too, are generally without any training whatsoever, either in craft or management. Very few enterprises utilize powered machinery, instead relying on the use of hand tools to produce their product. Specialization of a particular product is rare. They are generally made to order or in small batches. The availability of work and level of income is based on the agricultural season. The low level of production does not lend itself well to the sharpening of skills; the cost of such training is also a significant obstacle to gaining additional skills (Arnold et al. 1987).

Small-scale processing and manufacturing enterprises can bring important skills into a rural area. In addition, the employment and income that they produce can conserve scarce managerial skills, promote indigenous entrepreneurial capabilities, and channel into industry capital that otherwise would not be available for investment in this sector (Page and Steel 1984). Liedholm and Mead (1987) report that some SSFBE activities can be at least as efficient as their large scale counterparts in the use of capital and other
resources. These enterprises have the advantage of being able to access scattered pockets of forest resources that might otherwise go to waste (Arnold 1994).

As noted above, processing enterprises are dependent on the cyclical demand for agricultural labor, the seasonality of the forest products, and rural purchasing power. A successful enterprise is one that is able to respond to market conditions. SSFBEs must concentrate on areas in the market where factory produced products are non-competitive. Low cost basic furniture items for sale below the price range of factory products, as well as high quality handicraft pieces are two such examples. Another strategy is for the entrepreneur to specialize in a particular product or process in order to be able to sustain production (FAO 1989).

**NTFP Enterprises**

Forests have provided rural communities with food, medicine and fibers, and income from their trade for thousands of years. In comparison, trade in timber and pulp has, within the past few hundred years, overshadowed non-timber forest products. Non-timber forest products have attracted much attention over the years for their potential to help sustain forests. This is because they extend the range of benefits of the forest and because local people living near the resource can manage gathering and processing enterprises. A larger portion of the income generated is able to be returned to the local people who manage the resource (Taylor 1999). Ultimately, the income generated from NTFP enterprises provides entrepreneurs and other forest users with the motivation to preserve and manage the very resource from which they sustain their livelihood.
NTFP-based enterprises are especially small, tend to have the lowest entry barriers to new entrepreneurs, and are in most cases the most numerous type of enterprise—far more numerous than wood-based enterprises. Put another way, NTFPs collected, traded and processed by small enterprises are generally “produced by the masses, rather than being mass-produced” (Chipeta 1995). NTFP enterprises differ from gathering and processing enterprises only where wood is involved. For the purposes of this paper, discussion of small-scale forest-based enterprise will refer predominantly to non-timber forest product enterprises.

Patterns of Growth Affecting SSFBEs

Regardless of the type of forest-based enterprise, many enterprises that start out very small may need to grow in order to remain efficient as the conditions of operation change. Characteristics which promote competitive operation of small forest-based activities, include:

- Factors that support local production, such as dispersed raw materials.
- High transportation costs
- Small markets, such as handicraft production
- Factors where subcontracting is more efficient than integrated operations
- Factors where, due to the nature of the forest product, mass production is not possible

The sheer number of SSFBEs in existence reflects the scope of rural demand for forest products, and the scattered locations of these enterprises and markets across sizable areas with poor transport infrastructure (Arnold et al. 1987).
However, as conditions change, such as improvements in rural roads and incomes, the competitiveness of SSFBEs will be affected. Chuta (1987) notes that it must be recognized that the typically small size of SSFBEs makes it very difficult to analyze them, especially the smallest enterprises. FAO (1987) suggests that to be able to identify viable and competitive SSFBEs, which have the potential for future growth, the following criteria must be used:

- Demand potential for a particular forest product must be good
- Technology must be available that allows for low production costs
- Labor productivity must be capable of increasing
- Management capabilities must be good
- Raw materials used must be available for the foreseeable future

The most important of the above criteria, and the only one external to the actual enterprise, is the “demand potential” for the particular forest product being gathered, processed or sold. The second most important criterion is the ability to achieve low production costs, which in turn depends on good management.

The popularity and rise in the number of SSFBEs can be seen throughout the developing world. As rural income rises, spending diversifies from food items to more material goods. In this case, SSFBE growth causes a departure from low return activities, as wages increase, to higher return activities such as services. As rural livelihood improves, SSFBEs based in manufacturing reorient themselves from being household based to being workshop based. Workshop enterprises are generally located in rural towns and villages. Growth in SSFBEs in economically depressed areas is generally a result of the
loss of employment in the agriculture sector (Haggblade and Hazell 1989, Haggblade and Liedholm 1990). When farming has little to offer in terms of income generation, SSFBEs are the next step to improving rural standard of living.

In a survey of six African counties – Botswana, Kenya, Lesotho, Malawi, Swaziland, and Zimbabwe – Arnold (1995) found that above average growth rates tend to be found in enterprises that are young, and those that begin very small. The enterprises that were located in commercial areas were more likely to have higher growth rates than were their household counterparts. Arnold also found that SSFBEs headed by females were less likely to grow as rapidly as those headed by males.

Godoy et al. (1992) found that the use of inferior goods by poor households is likely to decrease as income rises. Rural markets will be severely affected as improved roads encourage increased transport of cheaper goods to more remote markets. Conversely, this improvement may positively affect SSFBEs by providing them with cheaper transport to previously unaffordable and distant markets. SSFBEs, which generate low returns, will eventually be abandoned as more lucrative employment opportunities make themselves available, or as labor and raw material costs increase—all of which reduces competitive advantage.
Chapter Three - The Importance of SSFBEs to People and Rural Livelihoods

Employment Issues

SSFBEs have made a very important contribution to rural communities in developing countries due to the employment of large numbers of rural people. (See Table 3) The number of people employed in SSFBEs is not high in relation to the entire rural population; however, employment in SSFBEs is second to agriculture in terms of number of rural people employed. When rural people have few remaining options in their area to earn an income during seasonally slow periods, these people, particularly the poor, look to SSFBEs to supplement their income (FAO 1989).

For example, many studies have been undertaken in India to measure the effects of SSFBEs on rural economies. For many rural areas in India, the income earned from this type of activity is an integral part of the local economy. In Manipur state, it has been estimated that nearly 90 percent of the state’s population relies on money generated from forest products. Over 234,000 women in this region are involved in the collection of forest products. Similarly, in other parts of the country, during the dry season, millions are employed in the collection of tendu leaves. The leaves are used in the making of rough cigarettes, which is itself a chief income generating household processing enterprise for nearly 3 million people. Over 30 million people are thought to be involved SSFBE activities throughout India (Cecelski 1984).
Table 3: Rural Livelihood Connections to the Forest

<table>
<thead>
<tr>
<th>Forest Contributions</th>
<th>Change in Forest Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income Generation</strong></td>
<td></td>
</tr>
<tr>
<td>Forests aid in the diversification of the rural agrarian household economy; they help in providing counter-seasonal sources of income and are incomes sources during difficult times.</td>
<td>As rural use patterns are commercialized, low-input low-return activities, such as SSFBEs, can grow. Some SSFBEs are replaced by factory alternatives; others do not become profitable and are abandoned as the cost of labor increases. Gathered raw materials can often be displaced by synthetic substitutes.</td>
</tr>
<tr>
<td>Many forest products are easy to access; SSFBEs require little capital and skill, are predominantly small, available to local markets, sometimes part-time, fill income gap, very important in coping strategies of poor and especially important to women.</td>
<td>Higher return activities are likely to prosper, especially those serving urban and rural markets. An increasing number of processing and trading enterprises will tend to become centered in rural centers and urban areas.</td>
</tr>
<tr>
<td>SSFBEs can provide full-time and high return activities, but usually require high skill or capital in rural as well as urban markets.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Arnold 2001

**Income Contribution**

Rural households throughout the developing world are often involved in more than one income generating activity. Most forest-based enterprises are run from a household at the same time as other activities. In Zambia, for example, 64 percent of SSFBE operators who had previously worked in farming were found to be farming and operating their
enterprises, at the same time. 30 percent of those entrepreneurs were also found to be operating other small enterprises. Of those entrepreneurs where SSFBEs were their primary income generator, 65 percent also worked other activities, such as farming (Fisseha and Milimo 1986).

For those households unable to find multiple activities to generate income, the SSFBE may be the primary source, if not the only source of income. This was the case in the Amazon of Brazil where the tapping of rubber was the only source of income until recently. Many hunting communities depend solely on the sale of forest produce for their livelihood. In most cases, however, farm households generally engage in SSFBE activity on a part-time basis when food from farming is scarce. Siebert and Belsky (1985) found that 73 percent of Philippine households could earn enough money from farming to subsist. All the households collected forest products to generate supplementary income; over half of the forest products collected was rattan. Income earned from rattan collection was more than that of farming or timber production.

Kamara (1986) reports similar findings. In Sierra Leone, rural people gather and sell fuelwood to supplement their incomes during off-peak farming season. The money earned from the sale of fuelwood is also important in that it was the first income earned from clearing land for rice production, thus providing the needed cash when food supplies were very low. Kamara found that fuelwood sales fluctuated based on labor needs for agricultural production. Seasonality makes it difficult for SSFBEs to even out the fluctuations because of a lack of working capital or manpower for productive input.
The seasonality of SSFBEs often leads to time during the year when demand exceeds their capacity to supply (Arnold et al. 1987).

Rural people have come to depend on SSFBEs in times of emergency or crop failure. When times are bad, they tend to engage in some type of gathering, selling, or processing of available forest products (Arnold 1994). In describing the role of the forests and their dependents, Falconer (1991) says it best: “The greatest function that forests serve to those living near them is as a buffer—both environmentally and economically. They provide products and opportunities for income earning at times when other options fail.” This is particularly true for women who are head of households and have little time to be away from their home.

Role of Gender

Women traditionally rely on forest products to meet their basic household needs, from firewood, to food, to medicine. The gathering and processing of forest products for market is often done in conjunction with other activities. Much of the work can be done in or near their home, allowing them to perform other tasks at the same time, such as caring for children, fetching water, and other routine activities and household chores. And, since women traditionally have fed, clothed and cared for the family, they tend to rely more heavily on the income generated from SSFBEs (Falconer and Arnold 1989).

In many countries, women play a dominant role as owners and employees in SSFBEs. Many Zambian women are owners of SSFBEs where the making of brooms, bamboo processing and rope and twine making are involved. They are rarely involved in
carpentry or furniture making enterprises, as such enterprises tend to be run by men. In Jamaica, too, many women own SSFBEs—nearly 32 percent of enterprises (FAO 1987). Kamara (1986) reports that nearly 80 percent of urban fuelwood sellers are women, while Buch and Bhatt (1980) report that 70 percent of women in Gujarat state in India collect fuelwood for sale more than 25 days out of the year. Most of the income earned from the sale of fuelwood is used for subsistence purposes, such as for buying food to feed the family.

As described above, women play an important role as enterprise owners and employees in most developing countries. They are, however, generally concentrated in particular enterprise activities. Women tend to be involved in the gathering and trading of forest products, while men generally control the processing of forest products. Yet, women tend to dominate the labor-intensive process of producing such products as mats and baskets, as well as of selling of those products. Women also market processed forest-based food products, such as beer made with forest fruits. They also dominate the collection and sale of fuelwood, except where great distances to markets are involved. The household nature, low-return, seasonality and amount of labor involved in many SSFBEs make them susceptible to changes in market prices and costs. Women obviously are the most affected (Arnold 1994).

**Rural Household Food Security**

The income a rural household earns from its SSFBE contributes significantly to that household’s food security. Money earned from an SSFBE is often invested in tangible assets, such as livestock or land. In other words, SSFBEs provide households the means
to invest in their future, giving them an opportunity to raise their standard of living. One of the most important attributes of an SSFBE is that it provides a direct benefit(s) to the operating household.

Engel et al. (1985) report that nearly 20 percent of Sierra Leonean farmers interviewed said they considered SSFBEs to be more important than farming. In some developing countries, SSFBEs have taken over as the chief income generating activity. Hunters in Peru are reported to earn much more than agricultural laborers. A single Ghanaian grasscutter earns more than twice the minimum wage in rural areas, and many more times that in Accra, the capital (Asibey 1987).

Income earned from a SSFBE is particularly important to the rural poor. The poorer segments of a community have traditionally been able to easily utilize the resources of nearby forests for food, fuel and other forest products. They also tend to rely more heavily on the forest to generate income and to satisfy basic needs, than does the higher income segments of a community. The poor also tend to operate more SSFBEs because of their need for little capital investment compared to other income-generating activities (FAO 1989). Kilby and Liedholm (1986) have observed in Korea, Taiwan, Sierra Leone, and Nigeria that the poorest and most landless households relied the most heavily on SSFBEs for income. In the Philippines, too, Siebert and Belsky (1985) report that poorer families depend on SSFBEs for their regular income, while higher income families depend on SSFBEs only during emergency situations.

Women and the poor generally rely on SSFBEs as a source of income for their household food security. Studies suggest that household nutrition may suffer if women’s incomes
are negatively affected. Conversely, the products produced from SSFBEs often benefit household needs, which then allows for income to be spent on other needs, such as food. Returns from SSFBE labor are often very low and, as a result, market fluctuations or collapse can have a noticeable affect on household food security (FAO 1989).

**Urban SSFBEs**

While this paper focuses primarily on rural SSFBEs, it is important to note that a substantial number of urban households also depend on SSFBEs and forest products to meet some part of their basic needs, such as construction, energy, nutrition, and medicine. The contribution of forest products to urban households tends to decrease as income increases. Many poor urban families depend at least on wood for fuel and SSFBEs to provide it. For the many urban dwellers living in slum or marginalized areas, firewood collection continues to be one of the few options available for them to generate income. The importance of forest products and SSFBEs is demonstrated by evidence that an increase in urban poverty briefly increases the demand for low cost forest products, which would generally have been displaced in urban markets. Another important link between urban households and the forest is the influence of urban markets on trade in forest products. Arnold and Bird (1999) have found that expanding and growing forest product activities are more likely to be found where per capita incomes are rising and where there is a growing demand from rural and urban markets.
Chapter Four - Poverty Alleviation and Forest Conservation

Rural forest dwellers depend on the forest for both subsistence and income generation needs. These people can generally be characterized as poor, making them depend more heavily on forest products for their livelihood. This brief chapter provides evidence that forests, trees and the small enterprises, which evolved from them, can help alleviate the poverty of rural communities by providing commercial opportunities and employment to the poor. At the same time, the income earned from SSFBEs provides an incentive for forest dwellers to manage their resources more effectively. In other words, SSFBEs can also promote forest conservation in addition to reducing poverty.

Table 4: How Do Trees and Forests Help Poor People?

| Subsistence goods: Fruits, edible leaves, roots, rope, fodder, mushrooms, medicines, honey fuelwood |
| SSFBE sales: All of the above, as well as arts and crafts, timber, and non-timber forest products |
| Indirect benefits: Other land use; cultural, social and spiritual sites; environmental services, such as watershed protection and forest conservation |

Source: El-Lakany 2001

The world’s population continues to grow as the world becomes more globalized.

Natural forests are in decline worldwide. Demands on the forest are increasing. El-Lakany (2001) reports that approximately 1.6 billion people rely heavily on forest resources for their livelihood. Obviously, forest resources are an important and vital contributor to rural livelihoods in developing countries. If a rural community’s access to the forest were cut off, one can assume the people of the community would suffer a decline in their standard of living. Access to the forest and its resources enable poor rural
households to diversify the livelihood base, establishing a safety net, thus reducing exposure to risk (Arnold 1999). From this, one can assume there might be a potential linkage between the “need” of a people for forest products and a willingness, on their part, to participate in the management of their forest and its resources.

**Table 5: Trees and Forest: A Source of Livelihood for Many People**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>1.2 billion people living in developing countries depend on trees and forests to generate food and income</td>
</tr>
<tr>
<td>-</td>
<td>350 million people living in, or next to, dense forests rely on them for subsistence and income</td>
</tr>
<tr>
<td>-</td>
<td>60 million indigenous forest peoples of Latin America, Southeast Asia, and West Africa depend heavily on forests and their products</td>
</tr>
</tbody>
</table>

Source: World Bank 2001

In addition to commercial loggers and others competing for the use of the forest, forest users have often been accused of being responsible for the degradation of the forest. With that thought in mind, Fisher (2000) notes, it has been increasingly recognized that meeting the needs of local people may be necessary in order to effectively conserve the forest. He suggests that this can be addressed by creating alternative sources of income through the management of forest products or focusing on the sustainable use of forest products.

Forests are difficult to sustain given such outside pressures as logging or wage employment. Rural communities living in or near the forest are in a better position to be able to manage and sustain their resources as common property than outside industry. Communities need to be protected against forest industry and encroachment from other groups. Community management is only possible if there is adequate government
recognition and support for local user group rights. (Arnold 1999). Positive policy approaches towards SSFBEs and local management of forests contribute to forest conservation and allow the forest to continue to provide the forest products needed to generate income for poor rural communities.

The theory that income generation from SSFBEs can provide a positive incentive for sustainable use of the forest, thus contributing to its conservation, is called an incentives approach. In Asia, for example, this approach is be used in many situations. The Indian Joint Forest Management (JFM) program has put considerable importance on income generation through the production of non-timber forest products. JFM is meant to encourage rural dwellers to participate in government forest conservation activities.

There are also SSFBE activities, promoted by The World Conservation Union (IUCN), in Lao PDR and Vietnam that encourage the production of NTFPs and their marketing as an incentive to forest conservation.

Forest-based income generation, as an incentive for forest conservation, has become quite popular in Asia. The Center for International Forestry Research (CIFOR) published a book of methodologies focusing on SSFBEs (Wollenberg and Ingles 1998). The Regional Community Forestry Training Center (RECOFTC), the Community Forestry Unit of the FAO, IUCN and other partner organizations recently published a field manual based on the Market Analysis and Development (MA&D) methodology for SSFBEs (Lecup and Nicholson 2000).

The MA&D manual series provides facilitators assisting SSFBE entrepreneurs with a step-by-step outline designed to be adaptable to a variety of real-life situations. It
integrates social, technical and ecological, as well as economic and financial considerations. The MA&D process is a series of phases focusing on capacity building and institution strengthening at the local level, which supports enterprise development. The MA&D approach involves continuous monitoring and evaluation of opportunities and constraints, the development of hypotheses about costs and benefits of a forest product and finally the testing of the hypotheses in order to make appropriate recommendations about the product, its marketing, and means of market development. MA&D helps identify profitable products and strategies, and it allows for early identification of constraints, preventing a waste of resources on the wrong product. The manual seeks to help entrepreneurs develop the skills necessary to generate income in conjunction with sustainable use of the forest and rural development (Lecup and Nicholson 2000).

MA&D has been tested, a number of times, in SSFBE projects in Nepal, Vietnam and Lao PDR. That said, although the methodology is based on recognized business and marketing principles, it is important to understand that it has not yet been fully applied through all stages of enterprise development. Two major issues emerging are the difficulty in training for the specialized business and marketing skills needed, as well as the cost of conducting the feasibility studies and creating business plans required (Fisher 2000). Therefore, it is unclear, at present, as to how effective this manual has been to those implementing it.

The Biodiversity Conservation Network (BCN) is another organization that has tested income generation as an incentive for forest conservation. BCN field-tested the
incentives approach in seven countries, across twenty different projects, thirty-nine sites and forty-eight different community-based projects over a period of seven years. The BCN report concluded that, “An enterprise strategy can lead to conservation benefits, but only under limited conditions…and never on its own. (Salafsky et al. 1999)” The limited conditions include the need for the SSFBE to be viable and the need for linkages between SSFBEs and biodiversity; such that declines in biodiversity affect the viability of the SSFBE.

Fisher (2000) states that there is some potential for achieving forest conservation in some circumstances. However, he sees the incentives approach to forest conservation as less promising. In his review of the subject, he found little evidence of people receiving significant benefits from SSFBEs associated with outside interventions. There were, however, documented cases of significant income resulting from improved production or marketing of individual forest products. Foppes and Ketphanh (2000) reviewed one such case of a village in Lao PDR where improved bamboo marketing led to a significant increase in family income. They estimate that income from SSFBEs contributes to 40 percent of rural family income in Lao PDR. For villages located near the forest, 55 percent of families’ cash income came from SSFBEs. In Thailand, there are examples of entire communities which are dependent on forest conservation. Many villagers in Pred Nai village collect and sell crabs from a nearby mangrove swamp. The villagers see the need to conserve the mangroves in order to support regeneration of crab populations. There are many cases of local sustainable production systems throughout Asia (Fisher 2000).
Fisher (2000) points out that the realities in terms of political ecology are perhaps the greatest limitation to income generation and forest conservation. For example, it is frequently illegal to collect and sell NTFPs in many Asian communities, although, the collection of low value forest products is often tolerated. Timber, too, is generally under the control of the state and, thus, is inaccessible to localities. In this area, valuable forest products are rarely accessible to rural communities, making it difficult for these communities to break their cycle of poverty. Creating alternative sources of income through the management of forest products or focus on the sustainable use of forest products is an attempt to break this poverty cycle by opening up SSFBE opportunities, primarily through NTFPs, to rural communities.
Chapter Five – Constraints to SSFBEs

Having examined the broad landscape of SSFBEs, I now turn to examine the multitude of problems faced by such enterprises. The small size of most SSFBEs present their own obvious disadvantages. They are also susceptible to market fluctuations and raw material shortages. A series of problems identified by FAO (1987) and FAO (1991) include:

- Small and fluctuating unstable markets resulting from low rural income, the seasonality of the enterprises, generally insufficient accessibility to larger markets, and rigorous competition from other entrepreneurs and larger industries

- Shortages of raw materials, often resulting from wasteful processing, restrictive government regulations, insufficient distribution, and an overall lack of working capital

- Lack of working capital and access to credit in conjunction with poor access to available markets and their costs result in finance shortages

- Appropriate technology is inaccessible or unavailable

- Inability to analyze situations and develop ways to mitigate adverse impacts due to weaknesses in managerial skills

- Inability to effectively utilize or seek out available support services, such as local NGOs, banking, and business enterprise support, due to a lack of organizational skills
The first of the above points suggest that the forces of the market play a major role in determining whether an SSFBE will succeed or fail. Competition among SSFBEs and other small enterprises and larger enterprises can easily have a negative impact on an SSFBE. It is very common for more enterprises to exist than can be supported by the market, especially when most are selling the same product at the same price. This is primarily due to the general ease of creating such enterprises, with very little capital or skills required. Where there are a high number of very similar enterprises, competition, and, as a result, failure rates, tend to increase. Along the same line, in many of these cases, entrepreneurs are unable to make their enterprise profitable enough to generate a surplus at one level, may have to invest more resources in their enterprise to improve and expand it in an attempt to increase its chances of success (FAO 1989).

The instability of rural markets can also be a threat to SSFBEs. Given the agricultural nature of SSFBEs, there may be periods in which short seasons may drive situations in which the demand for forest products may exceed the ability of SSFBEs to supply that demand. This gives larger enterprises an opportunity to fill the supply gap. The lack of working capital can also present a major obstacle to SSFBEs making them even more vulnerable to seasonal fluctuations (FAO 1989).

SSFBEs are faced with increasing competitive pressure when rural infrastructure improves. Products from the outside, previously unavailable because of market inaccessibility, begin to also increase competition at the market. Rising rural incomes also effect competition. For example, furniture made by local artisans becomes increasingly susceptible to displacement by factory-made furniture. Also, products such
as bags and mats made from man-made materials tend to replace similar products made by hand from natural materials (FAO 1989).

Second, SSFBEs continually face the threat of shortages of raw materials. In many cases, the shortages are due to increased or unselective felling by contractors who fail to recognize the need to preserve valuable NTFPs. Shortages can also result from simple depletion of forest raw materials, resulting from either large-scale industry extraction or uncontrolled SSFBE extraction. The poorest SSFBE entrepreneurs and employees are most often the most affected by shortages of raw materials; for they are the people who rely the most on income earned from the collection, trade and processing of forest products. They also have the least leverage or bargaining power (FAO 1989).

West Africa and Southeast Asia are good examples of regions where forest products have been over-exploited as markets have grown. In West Africa, an increased demand for gamemeat has resulted in a severe depletion of wildlife resources. Similarly, in Southeast Asia, rattan has been severely overexploited due to its increased profitability. As a result, its extraction, once relatively easy, now requires trips over longer distances to gather less material (FAO 1989).

Third, low capital investment and limited access to credit are major constraints to SSFBE development. A small amount of cash is quite difficult for subsistence farmers and entrepreneurs to save. They often have very little to put up in terms of collateral. And, in many cases, they are located far from any sort of credit-granting facility, other than local informal moneylenders (FAO 1991).
Fourth, appropriate technology seeks to aid and support the human ability to understand, operate, and sustain technological systems to the benefit of humans while having the least negative societal and environmental impact on communities and the planet (Wicklein 2001). Access to appropriate technology is very important to the improvement and sustainability of SSFBEs, particularly those located in isolated rural areas (FAO 1987).

Fifth, FAO (1987) reports that nearly 80 percent of SSFBEs go out of business within their first five years, primarily due to poor management and organizational skills. This includes functions such as creation of the enterprise, organization of production, market identification and marketing, growth planning, and use of support services. Training programs would reduce the incidence of enterprise failure as a result or poor management and organizational skills.

Foppes and Ketphanh (2000) present a good example where efforts to coordinate and organize rural communities and their enterprises have been successful. In the village of Oudomxay in Laos, villagers were regularly faced with rice shortages for part of the year. A few individual SSFBEs collected and sold bamboo shoots, but the income earned was too little. An IUCN project team, through several village meetings, facilitated an agreement whereby the villagers would team up and sell their bamboo shoots at a fixed price and in a specific location. Over a five-month period, the group was able to significantly increase their SSFBE income to approximately US$130 per family. This income level is significant in comparison to average rural incomes in Laos. Foppes and Ketphanh report that this success was a result of collective agreement in the community and their interest in generating income.
Chapter Six - Furthering Enterprise Development

Having examined some of the constraints to SSFBEs, I now examine some factors that have led to success in SSFBEs, in particular, processing at the local level, markets chains, and tapping local knowledge.

Processing at the Local Level

Factors influencing the success of an SSFBE often involve local incentives, rights to forest use, stable and supported local institutions, and availability of stable markets, including an emphasis on quality products (Enterprise 1999). Local processing is one step towards increasing returns through value added.

For an SSFBE to be a success, one step lies in adding value to raw material through local processing. This provides a greater portion of the returns from the product to the entrepreneurs. Processing at the local level can preserve resources, reduce postharvest losses and allow for the product to reach markets further away. In the Philippines, for example, local processing was key to the success of the Kalahan Educational Foundation (KEF). The KEF is a local organization in north central Luzon that helped its community gain control over their local forest. This was the first Philippine community stewardship agreement. In 1980, KEF established a local food-processing center, which tested methods of producing jellies and jams from forest fruits, with the goal taking over 10 percent of the Manila market. By 1995, the center was providing over 150 households with their primary source of income. The success of the center led KEF to reinvest much
of the center’s profits into local institutions, allowing them, over time, to build both a local health clinic and a high school (Rice 1995).

Markets

Market chains often present obstacles to SSFBEs, though they should not always be considered as inefficient or exploitative. Intermediaries can provide a useful service by absorbing short-term risks and by providing access to markets that are otherwise inaccessible, and, used wisely.

SSFBEs can actually help local producers improve market chain operations. In the Jumla region of Nepal, for example, the jatamashi medicinal plant, which yields a valuable essential oil, is an important income generator. For years though, collection was totally disorganized and frequently done illegally, which led to large disparities between what the collectors received and what the intermediaries received and what the collectors were paid. Over time, black markets and uncontrolled harvesting severely depleted raw materials to the point of near extinction (Lecup 1994). Faced with economic disaster, in the early 1990’s several projects were initiated that helped community households recover and re-enter this difficult market. The Humla Oil Project was a particularly successful project, which involved local partners in the Humla Conservation and Development Association with the regional Asian Network for Small-Scale Bioresources and Enterprise Works Worldwide. Recognizing that communities could control more of the jatamashi market by producing locally, the project established two factories for processing the oil. SSFBE gatherers sold jatamashi roots to the factories for processing, while the factories in return worked with the gatherers to map out local jatamashi
resources. Humla Oil also helped document the regeneration of the valuable plant as well as other commercially useful forest plants. The two factories employ approximately five workers each and do business with nearly 600 gathering enterprises. The Humla Oil Project has been such a success that it has broadened its operations to include other forest plants and the project’s emphasis on quality has increased its market size to include India and the United States (Taylor 1999).

Tapping Local Knowledge

Tapping local knowledge can also help increase the success of SSFBEs. Nicholson (1995) studied a project in Nepal that demonstrates how local knowledge and skills can increase the profitability and success of SSFBEs. Women’s cooperatives in Nepal’s eastern Makalu-Barun National Park and Conservation Area had been developing trade in the allo cloth for ten years. In 1990, the government in partnership with the Mountain Institute provided technical support for marketing and business operations in four villages, with a marketing study documenting the promise of cloth sales in the tourist markets of Kathmandu. The project helped to establish links between the villages and the capital. Distributors filled consumer orders and assumed transport costs. To prevent exploitation of village producers, a detailed price list was created outlining acceptable profit margins. At the same time, seeking to sustain their business, the women explored other techniques for allo cultivation.

This enterprise demonstrated the efficacy of fostering respect for local knowledge and traditions. Local product design and production in the household figured prominently in
the SSFBE. The enterprise was effective also in that it recognized the environmental and
cultural value that consumers place in such forest products (Nicholson 1995).

Lessons Learned from SSFBE Development

The experiences of many rural communities, governments and NGOs with SSFBEs have
provided valuable lessons that may contribute to the success of future SSFBEs. Taylor
(1999) presents four very important elements that are essential to the success of forest-
based enterprises:

- Rural communities need to be supported through clear land tenure and policy
  support. SSFBEs are known to be more successful when communities are
  organized and control access to their forests.

- It is often useful to focus initially on local markets. They are easier and less
  expensive to enter compared to the capital heavy investment needed to enter
  foreign markets. Larger markets may be entered where harvests are sustainable,
  capital is available, and the product is of sufficient quality.

- Entrepreneurs must make every effort to build management and business skills. In
  addition, they should try to use only quality products. Collaboration and
  partnership among enterprises, state agencies, and NGOs are necessary to achieve
  this.

- Governments must support SSFBEs through policies that assist in trade and the
  acquisition of credit. Credit needs to be made available to SSFBEs, as well as
  other small enterprises, and price controls need to be removed.
State agencies, NGOs, and other organizations assisting SSFBEs must take advantage of local knowledge and resources to be able to optimize forest management and rural livelihood.
Chapter Seven - Policy Constraints and Points for Action

The needs of forest-dependent people have long been neglected with forest policies tending to focus on large-scale industry needs, directed towards increasing revenues, foreign exchange earnings, and ensuring raw material supply (FAO 1989). In the same manner, SSFBES, as well as other small enterprises have to generally operate within this restrictive policy environment. Put simply, poor rural people, including those that participate in SSFBES, face constraints in land control and rights, market access, and forest regulations that significantly affect their ability to generate income and better their standard of living.

Land Control and Access Rights

Many rural forest users are unable to work themselves out of poverty because their rights to manage and control their forest and its resources are insufficient. El-Lakany (2001) suggests that the transfer or returns of ownership of the forest and its resources to rural forest users, or gaining long-term access and control agreements are feasible and affordable strategies.

Arnold (1994) reports that the principal issue affecting access of SSFBES to forest products has been the gradual weakening, breakdown or lack of local control and management of community forests. As a result, this has led to the collapse of local collective controls, the loss of rights to access and usage, and the privatization of resources previously accessible to anyone. Arnold suggests that the case for strengthening users’ rights is perhaps strongest where the economic case is also strong.
Reasonable and proper control and access rights would give local people the power to increase their food and forest security, prevent outside encroachment, and generate a sustainable income. El-Lakany (2001) gives the following examples of poor forest communities, which have gained forest rights and are moving themselves out of poverty through SSFBEs and other forest uses:

- Mexico, The Gambia – complete transfer of forest resources
- Bolivia, Indonesia – long-term concessions
- Ghana, Nicaragua, Tanzania – ownership or control of forest reserves by rural or indigenous communities
- China, Vietnam – household forest allocations
- Nepal, Philippines – complete handover of forest resources
- India, Tanzania – joint forest management agreements

None of these examples are broadly generalizable since they vary based on circumstance, but each is a significant step towards poverty alleviation. Certainly, strengthening the forest rights of the poor and access to forest resources is a necessary step in improving rural livelihood and increasing income generation through SSFBEs.

**Market Access**

Costly controls applied to the harvesting, gathering, selling, and transporting of their forest products also frequently affect SSFBEs. At the same time, state and corporate producers are often subsidized (El-Lakany 2001). Small enterprises also are often too small in size to take advantage of the subsidized credit allocations and preferential tax regulations that benefit enterprises over a certain size. In addition, other licensing and
bureaucratic procedures often neglect SSFBEs in offering access to incentives or assistance (Liedholm and Mead 1987).

In Indonesia, for example, the government ban on rattan exports promoted investment in large-scale industry where they produced rattan carpets, ignoring SSFBEs already producing rattan carpets. Although the government initiative succeeded in raising production and creating more employment opportunities, it also caused a fall in the prices of rattan raw materials, which had a negative impact on small-scale rattan growers, and SSFBEs (Arnold 1994).

Governments should remove market access barriers to small-scale enterprises. El-Lakany (2001) reports that SSFBEs would have a comparative advantage if states were to provide enabling conditions for the poor in markets where they would generally not be able to compete. In addition, more state support is needed to increase opportunities for access markets. SSFBEs are an integral part of many developing countries in that they are generally among the top three non-farm rural commercial employers. In Brazil, SSFBEs produce over 25 percent of the country’s timber. Government policy in South Africa has also allowed poor farmers to participate in timber markets through SSFBEs. Access to markets can help poor rural communities reduce poverty.
Forest Regulations

Raw materials shortages are often caused by government policies and policy enforcement practices. These can include initiatives establishing harvesting controls that favor timber production, exclusivity of allocation to large timber enterprises, complicated licensing and auctioning procedures, heavy deposit requirements and other difficult preconditions, as well as distribution systems and high prices as a result of state monopolies. In a survey done in northeast Thailand, Boomgard (1983) reports that over half of the furniture makers surveyed cite government forestry regulations as the main problem affecting their SSFBEs.

Policy initiatives have been launched in recent years to promote trade in specific forest products for industrial and niche export markets. Such product trades have generally proven to be susceptible to market fluctuations, dominated by middlemen, and shifts to domestic or synthetic sources of supply have resulted in unsustainability (Arnold 1994). These types of initiatives open up rural SSFBE households to high risk, especially where the trade has persuaded entrepreneurs to move away less risky, agriculturally based livelihoods (Browder 1992). Other policy initiatives have promoted product expansion to the point of severe resource depletion, which has been the case with a program in Botswana that was successful in expanding export demand for decorative baskets made by rural SSFBEs (Terry 1984.)

Less volatile market opportunities often involve trades that serve rural and urban demands for forest products. Governments, however, frequently intervene hindering
small enterprise participation. In an effort to acquire a portion of the profit, forest departments may require fees. SSFBEs may be forced to sell to government marketing bodies, or to other enterprises to which concessions have been granted. In many developing countries, the government utilizes its state forests and intervenes in the market directly (Arnold and Bird 1999).

One very fundamental policy issue that governments need to address is their strategy to provide forest products. Some governments may provide support to SSFBEs through one forestry program, while they encourage competition through their industrial forestry component, thus leading to a major policy conflict. Eventually, the state may need to curtail state production of forest products where SSFBEs are involved. In the short run, what is ultimately at issue is a requirement for the state to remove or relax regulatory constraints that give advantage to the state and/or large-scale industry (Arnold and Bird 1999). In these cases, SSFBEs must achieve a less biased policy environment.

El-Lakany (2001) states that the rule of law is undermined by larger entities that defy regulatory control while access to forest resources is over-regulated for the rural poor. If forest dwellers are given a voice in the creation of forest regulations, they will effectively adapt and enforce the regulations. For example, rural fuelwood markets have been established in Niger, with rural forest users, through a set of regulations developed with the state, given control of fuelwood harvesting and trading. In this case, regulations that support the rural forest community and its SSFBEs have benefited their livelihood.
**Chapter Eight - Conclusions**

In most developing countries where forests are an abundant resource, the income generated from gathering and trading, and processing and manufacturing enterprises comprises a significant portion of rural household income. In many developing country where there are SSFBE activities, SSFBEs form one of the largest rural employers outside of agriculture. Growth in the number of SSFBEs continues to be high. SSFBEs are an important part of the economic well-being involving of rural, and even, urban households. SSFBEs are important to their nutrition, health, food security, agriculture, forestry, rural development, and livelihood.

There are five central policy lessons emerging from this paper (see Table 6). First, SSFBEs require educational support in terms of business, managerial and organizational skills. Without knowledge and skills to complement the enterprise, the business risks failure. Second, SSFBEs require trusting relationships within communities, in the form of associations, cooperatives, and other types of organizations, to better facilitate benefit distribution. Third, rural forest users require improved forest access rights to support SSFBEs. Fourth, SSFBEs require increased access to market and infrastructure networks, which would contribute to enterprise profitability. Lastly, SSFBEs require savings and credit services which would further contribute to SSFBE sustainability.
Table 6: SSFBEs and Rural Livelihoods: Room for Improvement

<table>
<thead>
<tr>
<th>Area of Focus</th>
<th>Importance</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business, managerial, and organizational skills, and ability to work, allowing entrepreneurs to determine their own path towards a better livelihood.</td>
<td>Gives people the knowledge and skills to affect change.</td>
<td>Do not confine poor rural forest users to marginal, low-return forest-related enterprises with low entry thresholds. Focus support on skills and knowledge development, which would allow them to participate in better forest activities.</td>
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<tr>
<td><strong>People:</strong></td>
<td></td>
<td></td>
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<tr>
<td>Social bonds that create trusting relationships, which support cooperatives, groups, and organizations, allowing people to work together.</td>
<td>Cooperatives, groups, and organizations are entities through which benefits can be distributed and land control and use decisions can be made.</td>
<td>Access to cooperatives, groups, and organizations must be increased in order to improve access to other benefits, to have better bargaining power for transactions, and to influence policy decisions.</td>
</tr>
<tr>
<td><strong>Natural Resources:</strong></td>
<td><strong>Market:</strong></td>
<td><strong>Finance:</strong></td>
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<tr>
<td>------------------------</td>
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<tr>
<td>Livelihoods are derived from natural resources.</td>
<td>Support SSFBEs.</td>
<td>Improve forest rights to allow rural forest users to protect their access to forests, existing forest uses, and increase access to other areas that would allow them to further capitalize on forest resources.</td>
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<tr>
<td>Provides food and services to rural communities.</td>
<td></td>
<td>Reform policy within institutions that govern forest access.</td>
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<tr>
<td><strong>Infrastructure and market networks needed to support SSFBEs, which support livelihood.</strong></td>
<td>Increased access to infrastructure and market networks can have beneficial effects on health, education, productivity and income generation.</td>
<td>States must provide infrastructure and market networks, which would increase access to profitable markets by rural forest communities and would allow for integration of agriculture products and forest-based products within the same market.</td>
</tr>
<tr>
<td><strong>Financial resources available to SSFBEs, such as savings and credit.</strong></td>
<td>Gives entrepreneurs and their family the means to achieve a livelihood outcome.</td>
<td>States, NGOs and local institutions should tailor local financial services to the needs of low-income entrepreneurs.</td>
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</tbody>
</table>
Incomes gained from SSFBEs may sometimes only provide for a marginal livelihood, but they nevertheless contribute to the limited cash resources of poor rural households. SSFBEs almost always emerge in response to the needs and opportunities of rural households. They often provide opportunity where there has been little or none, particularly for women and the abject poor. Once government policies have been oriented, where appropriate, more in support of SSFBEs, entrepreneurs can be better trained, and more detailed studies of SSFBEs can be conducted to effectively develop these enterprises, leading ultimately to significant improvements in the livelihoods of urban and rural households through more sustainable forest use and increased income generation. Bottom line: SSFBEs have the potential to significantly benefit rural livelihoods in developing countries.