As a mountainous country with a sparse population largely dependent upon agriculture and natural products, Laos must overcome many challenges to develop its economy and raise living standards. The geographical constraints are well known—rugged and inaccessible terrain which makes transport and large-scale agriculture or industrial development difficult. However, it is also important to recognize how recent history has shaped the country. War, social disruption, and insecurity have not only affected communities, but also the landscape and the ways in which agriculture and resources have been managed. As we pursue development projects in rural Laos, we must be cognizant of all these influences.

Laos: at the heart of mountainous mainland Asia

Mountainous, ethnically diverse, and isolated, Laos has often been depicted as an area difficult to access. Accounts of European explorers during the late 19th century support this notion, telling of how the rugged terrain often thwarted their expeditionary ambitions. In mountainous mainland Southeast Asia, this remoteness also meant that the indigenous population was relatively dispersed and isolated, which helped them preserve their cultural identity. But difficult access and a sparse population did not mean that Laos was always “forgotten” or isolated from the outside world. Historical accounts dating from the 12th century reveal that an extensive trade in forest products played an important role in ancient Laos. Aromatic forest products such as benzoin, musk, cardamom, and sandalwood travelled far, to the East and the West, and were a source of wealth for the monarchs of Laos.

Brief history of land use changes

Civil war years
Although trade in natural resources and agriculture has a long history in Laos, changes in the landscape were relatively insignificant in the years preceding the colonial period. This began to change around the time of the civil war, between the early 1960s and the mid-1970s. Heavy bombing and disruption between 1963 and 1975 induced a massive exodus of rural people from the eastern to the western part of the country (Table 1). This migration was not a one-step process but a gradual one, as people attempted to find circuitous routes to the refugee camps across the Mekong in Thailand. As they moved across the country, the refugees settled in makeshift villages, clearing forest, expanding areas of shifting cultivation.

<table>
<thead>
<tr>
<th>Period</th>
<th>Major events</th>
<th>Effects on land use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil war 1963–1975</td>
<td>• Bombing and disruption</td>
<td>• Forest destruction</td>
</tr>
<tr>
<td></td>
<td>• Migration and relocation</td>
<td></td>
</tr>
<tr>
<td>Early socialist era 1975–1985</td>
<td>• Collectivization</td>
<td>• Expansion of paddy fields</td>
</tr>
<tr>
<td></td>
<td>• Development of state enterprises</td>
<td>• Degradation of forests</td>
</tr>
<tr>
<td>Market transition 1985–1990</td>
<td>• Market liberalization and trade</td>
<td>• Cash crop production</td>
</tr>
<tr>
<td>Post-socialist era 1990 to present</td>
<td>• Normalization of trade relations</td>
<td>• Land use zoning</td>
</tr>
<tr>
<td></td>
<td>• Infrastructure development</td>
<td>• Control of shifting cultivation</td>
</tr>
<tr>
<td></td>
<td>• Institutional development</td>
<td>• Control of opium production</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Increased cash crop production</td>
</tr>
</tbody>
</table>
and, eventually, initiating the development of secondary forest stands. The legacy is evident today in widespread patches of second growth forest.

**Post-war changes**
The war ended in 1975 with the establishment of the People’s Democratic Republic of Laos, a socialist government. The new regime introduced rural reform by promoting collectivization of agriculture. The emphasis was primarily on modernizing production technology and attaining self-sufficiency in food. Land reform was not a great issue in population-sparse Laos, where most farmers were rural peasants living subsistence lifestyles (Figure 1). It was also during this early socialist period that government-supported state enterprises undertook extensive logging for export. While timber provided a major source of government revenue, the lack of responsible management led to widespread degradation of forests throughout the country.

**Controls on logging and shifting cultivation**
A transition occurred in the mid-1980s, as the government began to revise its course of development. In 1986, the government liberalized trade and markets, promoting private-sector activities. State forestry enterprises were also dismantled and logging was banned in 1988. This was the beginning of the new era in forest resource management, as the government organized the first national conference on forestry in 1989 to address the problems of degraded forestland. The conference called for control of logging and shifting cultivation, which were perceived as the main causes of forest degradation.

The decade following 1990 was a period of institutionalization and increased integration in the regional economy. Normalization of trade relationships with Thailand boosted economic growth in Laos during the early 1990s; cash crop production increased in particular. The increased economic influence of Vietnam and China, and the strengthening of regional trade institutions were fostering the swift integration of the Lao economy into regional markets. By 2003, trade accounted for over 50% of GDP. The impact of this increased integration is apparent, as more farmers are involved in cash crop production. The changes also coincide with government efforts to reduce rural poverty and control shifting cultivation and opium production in the mountainous areas. It is also worth noting that amid these efforts to improve rural livelihoods, the Constitution in 1991 granted equal status to all ethnic groups with safeguards for their cultural rights. The government aims to promote social and economic improvement of all ethnic groups (Figure 2).

**Integration in the market economy and changes in resource management**
How have livelihoods in rural mountainous areas changed over recent decades? Rural people have been forced to adapt or change their livelihoods, initially because of displacement and the wanton pillaging or destruction of natural resources during the years of civil unrest, and more recently because of land use reforms and new market exposure. One substantial change is the transition from subsistence-based farm production to commercial and market-ori-
Development

Entert production. Upland farmers are no longer dependent solely on subsistence production from upland swidden cultivation; they are diversifying production systems to include cash crops, livestock grazing, and cultivation of non-timber forest products.

However, for rural farmers, lack of market information systems remains a bottleneck. They lack quick and easy access to market information, which makes them vulnerable to market risks. In many places, farmers rely on information from their friends and relatives about “boom crops” that will help them get rich. Information tends to be partial and incomplete, making it impossible for farmers to make a balanced assessment of the market; thus, many farmers have experienced significant losses as numerous people plant “boom crops” simultaneously, which consequently floods the market and causes prices to crash.

Many upland villagers abandoned traditional crops such as cotton, hemp, and indigo for cash crops such as hybrid maize or soybeans. Cotton, hemp, and indigo were often used to make traditional clothing, but they were no longer necessary, as cotton threads could be bought cheaply in the markets and, moreover, people were starting to wear factory-made clothes. This meant that not only were upland farmers’ production systems changing, but their lifestyles were also starting to change.

Role of development and research

Support from international NGOs and bilateral donors in Laos increased in the late 1980s, as the Lao government started to open its doors to the West. Since then many organizations have been working with provincial and district agriculture and forestry offices across the country to strengthen agricultural production systems and build farmers’ resilience to the changing economic environment.

Some organizations have not only supported the agricultural production system, but have been organizing farmers’ groups to market their produce collectively, leading to more bargaining power and income at both household and village levels. Collective management also provided a mechanism to regulate over-harvesting, over-grazing, and over-production of their products. This meant that farmers as a group were producing regularly, according to market demand.

Collectives distribute income among the farmers who participated in their activities. They also retain a portion of the profit as communal funds. Because the profits were not only shared among the farmers but also used for village development, those who participated in the collectives perceived that benefits were being shared equitably. Communal funds also gave communities a sense of financial independence, since they had the ability to initiate village development, instead of having to wait for external support.

In the meantime, international and national agricultural research institutions are also beginning to explore alternative ways to improve the productivity and sustainability of the upland farming system. Given the relatively limited and basic research capacity of national institutes, the focus is primarily on applied and on-farm research. This also requires tapping into the local knowledge base and understanding ways in which different groups of farmers in the local communities perceive problems and adapt their resource management practices to the prevailing situation.

FURTHER READING