Chapter 5
The Adoption of Smallholder Rubber Production by Shifting Cultivators in Northern Laos: A Village Case Study

Vongpaphane Manivong¹ and R.A. Cramb²*

Abstract Rubber smallholdings are being established by shifting cultivators in Northern Laos, in response to demand from China and encouraged by government land-use policy. This can be seen as part of a general transition from subsistence to commercial agriculture in the uplands – in particular, from shifting cultivation to tree crop production. This study examines the economics of smallholder rubber production in an established rubber-growing village in Luangnamtha Province. Data were obtained from key informant interviews, group interviews, direct observation, and a farm-household survey. The study shows that, given current market conditions and credit support, investment in smallholder rubber production in the uplands of Northern Laos can be economically rewarding. Hence rubber can be considered one of the potential alternatives for poor upland farmers, in line with the government policy of stabilising shifting cultivation and supporting new livelihood options for poverty reduction. However, there are risks associated with rubber production and emerging constraints of land and labour, hence government should move cautiously in promoting rubber where farmers are uncertain about reducing their dependence on shifting cultivation or where forests are under threat. The recommended role for government is to ensure provision of support services for rubber development, including adaptive research, technical support, extension, credit, road access, and marketing. In particular, maintaining secure access to the China market will be crucial. If carefully managed, the expansion of smallholder rubber in Northern Laos has the potential to contribute to sustainable rural livelihoods.

Keywords Agricultural transition, China market, farm economics, land allocation, upland livelihoods, tree crops

¹Socio-Economic Research Unit, National Agriculture and Forestry Research Institute, P.O. Box 811, Vientiane, Lao PDR
²School of Natural and Rural Systems Management, University of Queensland, Brisbane, QLD 4072, Australia

*Corresponding author: r.cramb@uq.edu.au
5.1 Introduction

Lao PDR (hereafter Laos) is a predominantly rural country with 83 percent of the population living in rural areas, of which two thirds relies on subsistence agriculture (Roder 2001). Agriculture accounts for nearly half of GDP and employs 80 percent of the labour force (NSC 2005a). With a total area of 236,800 km$^2$ and a population of 5.6 million, Laos is the least densely populated country in Asia at only 24 persons per km$^2$ (NSC 2005b). Yet suitable agricultural land is scarce as around 80 percent of the land area is classified as hilly or mountainous (ICEM 2003). Moreover, with the present annual population growth rate of about 2.5 percent, the agricultural population density will double over the next 25–30 years (Raintree 2002). Laos is one of the poorest nations, with a GDP per capita in 2002 of US$330 and a ranking of 135 out of 175 countries on UNDP’s Human Development Index (ICEM 2003; UNDP 2003). The greatest levels of poverty are in the mountainous uplands of the Northern Region, where 50 percent of the land area has a slope of 30 percent or more (Raintree 2002). This mountainous Northern Region is extensively used for shifting cultivation (ICEM 2003).

Shifting cultivation in Laos involves more than 150,000 households (or around 25 percent of rural inhabitants) and may account for up to 80 percent of the land allocated for agriculture, including fallowed fields. Shifting cultivation in the past was recognised as the best land-use alternative for the mountainous regions of Laos because of low population densities, low incomes, little opportunity for trade, and limited access to inputs (Roder 2001). However, this traditional agricultural system has become increasingly unsustainable, reflecting the combined effects of population growth, resource depreciation, and international perceptions of environmental impacts, forcing farmers to shorten their fallow periods. As a result, widespread problems of weed invasion, soil erosion, and declining yields are occurring (De Rouw 2005).

The Government of Laos has made ‘stabilisation’ of shifting cultivation a priority national program. As stated in its Strategic Vision for the Agricultural Sector (MAF 1999), the Government aims to transform the existing ‘harmful’ system of shifting cultivation to more ecologically stable cultivation systems with proper land management by villages and individuals. The Government is proceeding with land allocation programs, the promotion of cash crops and livestock production, and the promotion of tree-planting programs with a vision to achieve this aim by 2010. While this policy is controversial and its impacts on rural livelihoods need to be closely monitored (Ducourtieux et al. 2005), there is no doubt that upland farmers are involved in a significant transformation of their traditional subsistence-oriented farming and land-use systems (Thongmanivong and Fujita 2006).

To stabilise shifting cultivation and eradicate poverty in Northern Laos, more sustainable and income-generating agricultural practices have to be identified and adopted. One possible approach to support this transformation is the introduction of tree crops such as rubber to increase farmers’ income. Rubber was first introduced into Laos in 1930, with the first rubber plantation established in Southern Laos by French planters during the colonial era. However, smallholder rubber in