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## Dynamics of Livelihood Strategies of Smallholder Rubber Farmers in Southwest, China

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### Abstract

Driven by the rising rubber prices since 2000s, Xishuangbanna Dai Autonomous Prefecture (XSBN), Southwest China, experienced dramatic expansion of smallholder rubber plantation. Rubber has taken over the rural economy and contributed to the reduction of poverty. On the other hand rubber monoculture has increased income uncertainty and has made to become dependent on rubber farming. When rubber prices declined after 2012, smallholder farmers were challenged to mitigate income loss and to develop better livelihood strategies. Evidences from many studies in developing countries have shown that diversifying the sources of livelihood can reduce uncertainty of agriculture. However most of these studies followed a static approach using cross section data. This study is using panel data collected from some 600 small holder rubber farmers in Xishuangbanna collected in 2013 and 2015.

As methodologies we carry out cluster analysis identify typical livelihood strategies based on land and labour as major household resources. To identify the determinants of smallholders' livelihood choices we develop two models: (a) a multinomial logit model and an (b) an ordered logit model to identify the determinants associated with farmers' livelihood practices as well as the factors that cause a shift in livelihood strategies

Initial results show that four groups of livelihood strategies can be differentiated: (i) rubber- dominated, (ii) rubber cum other cash crops, (iii) rubber cum traditional crops, and (iv) highly diversified system. As the major factors that determine livelihood choices of farmers and their changes we identify education of household head and the altitude of household. Even though Xishuangbanna is characterised by diverse ethnic groups, ethnicity is not obvious in influencing household rubber farmers' livelihood strategies options. Our findings offer a good basis for developing local food security policies.

**Keywords:** Livelihood strategies, rubber, smallholder, Southwest China