

Greening rubber? Political ecologies of plantation sustainability in Laos and Myanmar



Miles Kenney-Lazar^{a,*}, Grace Wong^{b,c}, Himlal Baral^{c,d}, Aaron J.M. Russell^c

^a Hakubi Center for Advanced Research & Center for Southeast Asian Studies, Kyoto University, Japan

^b Stockholm Resilience Center, Stockholm University, Sweden

^c Centre for International Forestry Research, Bogor, Indonesia

^d School of Ecosystem and Forest Sciences, The University of Melbourne, Carlton, VIC 3010, Australia

ARTICLE INFO

Keywords:

Cash cropping
Sustainability
Rubber
Laos
Myanmar

ABSTRACT

Over the past decade, the cultivation of rubber trees has expanded rapidly throughout the Mekong region to non-traditional rubber growing areas of Laos and Myanmar. Prompted by rising prices from 1990 to 2010 and government agro-industrialization policies, farmers and investors have rushed to plant the new boom crop. A latex price crash in 2011, however, has made it more challenging for small-scale producers to earn an income, leading to uneven social-ecological transformations and economic consequences. Several proposals have been made to address these challenges by transforming rubber into a more economically, socially, and environmentally sustainable crop. In this paper, which emerged from one such project to investigate the potential for “green” rubber, we argue that the sustainability of rubber is a challenging and elusive prospect – particularly in resource frontier contexts like Laos and Myanmar. Concepts like “sustainability” or “green” production are vague and malleable. They can be imbued with a variety of contradictory meanings, which often do not address the most socially and environmentally problematic aspects of cash crop expansion. Sustainable rubber, if rigorously and specifically defined, would be exceedingly difficult to reach in both countries, due to the ways in which political-economic and governance factors interact with the biophysical and social characteristics of the crop. Instead, we recommend using sustainability as a political tool for highlighting the most harmful socio-environmental impacts of rubber and generating debate concerning the best ways to address these, thus limiting unsustainable practices.

1. Introduction

Over the past two decades, the cultivation of rubber trees has expanded rapidly throughout the Mekong region to non-traditional rubber growing areas of Laos, Myanmar, and Cambodia (Fox et al., 2014b). A unique combination of political-economic factors have induced farmers and companies to rapidly plant the crop in pursuit of profit, income, and rural development. These include a rapid increase in rubber prices from 2000 to 2011, strong demand in the Chinese market, investments from Chinese companies, and cooperative promotion by the Chinese and Mekong region country governments. Despite a recent drop in rubber prices as of 2011, global demand remains strong. The International Rubber Study Group (IRSG) estimates annual consumption will reach 13 million tons by 2018 (Li and Fox, 2012) and 19.1 million tons by 2025, an increase of over 40% since 2010 (Warren-Thomas et al. 2015). Based on Warren-Thomas et al.’s (2015) scenario assessments, this could lead to between 4.3 and 8.5 million hectares

(ha) of global rubber expansion by 2024.

Like many boom crops, rubber is often imbued with a miraculous quality to generate wealth, built on success stories such as those of smallholder farmers in southern China (Sturgeon, 2010). It has even been referred to as “white gold” in reference to the white color of latex (Noam, 2010). However, its expansion has also led to detrimental social and environmental impacts (Liu et al., 2006). While rubber plantations in the right places can provide economic and even environmental benefits (Baral et al., 2016), these are oftentimes not realized by the rural poor who need them most. Ahrends et al. (2015) show that much of the recent expansion of rubber from 2005 to 2010 has been into marginal environments (higher altitudes, steeper slopes, more frost, lower temperatures during the wet season and/or the coldest month of the year, and a longer dry season), and have converted a variety of natural and cultivated lands, much of which were of high-value for biodiversity conservation, landscape functioning and/or food security. Conversion to rubber can also increase evapo-transpiration by 15–18%

* Corresponding author.

E-mail address: mklazar@cseas.kyoto-u.ac.jp (M. Kenney-Lazar).

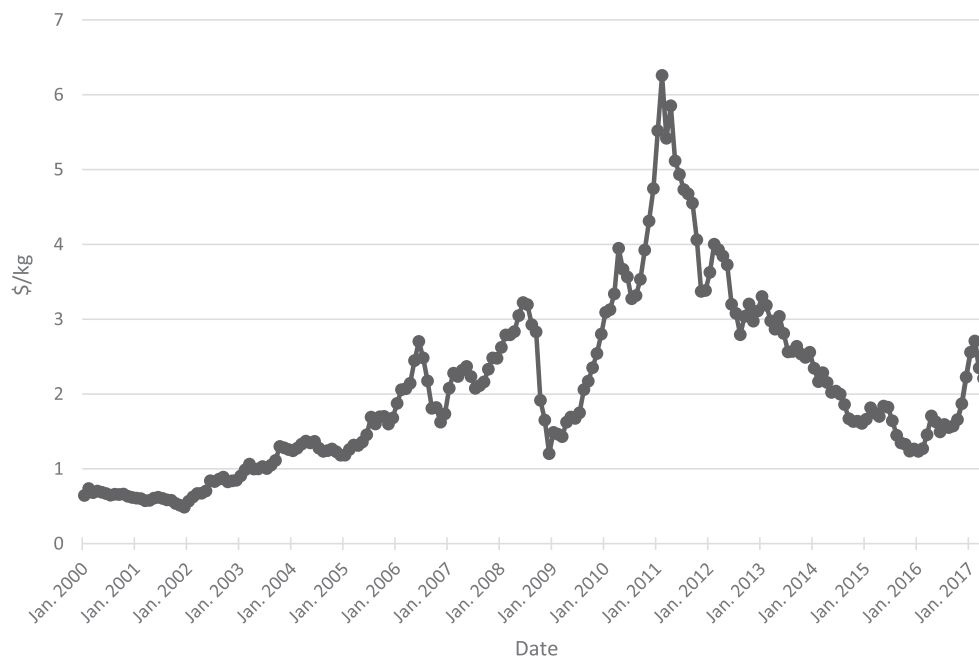


Fig. 1. Price of rubber (\$/kg, nominal \$) from Jan. 2000 to May 2017 on the Singapore Commodity Exchange. Source: World Bank Global Economic Monitor – Commodities (<http://databank.worldbank.org/data/databases/commodity-price-data>).

relative to native vegetation by depleting deep-soil moisture during the dry season, thus reducing groundwater and streamflow (Guardiola-Claramonte et al., 2010, Tan et al., 2011). In addition to the impacts of expanding rubber on biodiversity and ecosystems (Beukema et al., 2007, Ziegler et al., 2009), many plantations have dispossessed rural communities of their agricultural and forest lands, increased food insecurity in the conversion of subsistence crop lands to rubber production, and led to exploitative relations of production between farmers and agribusiness companies (Fox and Castella, 2013; Baird, 2010). Additionally, the drop in rubber prices in mid-2011 – which only leveled out and recovered slightly within the past two years (see chart of rubber prices in Fig. 1 below) – has made it much more difficult for many farmers to base their income on rubber tapping, leading some to switch to other crops or sell their land (Shi, 2015, Dwyer and Vongvisouk, 2017).

While rubber was introduced at a small scale to Laos and Myanmar during their respective colonial periods (Keong, 1973, Manivong and Cramb, 2008, Myint, 2015), it has only been expanded as a significant cash crop since the mid to late 1990s and early 2000s (Manivong and Cramb, 2008, Myint, 2015). By 2014, over 600,000 ha (ha) of rubber had been planted in Myanmar¹ (Myint, 2015), while more than 280,000 ha had been planted in Laos (Vongkhamor, 2016). Rubber has been planted under a variety of production models in each country, which can be roughly categorized into three main types: independent smallholder production, estate plantations by companies established via state land concessions, and contract farming between companies and farmers. While socio-environmental impacts within each category of production can vary significantly, there are some generalities that can be drawn across them for Laos and Myanmar. Although rubber production has increased incomes of smallholders in Southwest China and Northern Thailand (Liu et al., 2006, Fox et al., 2014a), the prevalent conversion of swidden agriculture to industrial estate plantations in Laos and Myanmar has disadvantaged rural communities by dispossessing them of land, decreasing food security, and creating poor

labor conditions (Baird, 2010, Woods, 2011, Kenney-Lazar, 2012, Fox and Castella, 2013).

These problems have generated interest in the sustainability of rubber production and trade among a wide range of actors, including governments of the region (Chan Mya Thwe, 2016, CCCMC, 2017), companies and industry organizations (ISRG 2014, Michelin 2016), non-government organizations (Global Witness, 2017, WWF, 2017), and international research organizations and academics (Häuser et al., 2015, Warren-Thomas et al., 2015, Kennedy et al., 2017). Warren-Thomas et al. (2015) argue that there is an urgent need for a robust sustainability standard for rubber cultivation so that rubber expansion is not solely driven by market forces, particularly when there are few options for farmers and policy is poorly enforced. Recent attempts create such standards include the Sustainable Natural Rubber Initiative (SNRI) from the International Rubber Study Group (IRSG) and the "Guidelines for Sustainable Development of Rubber" by the Chinese Chamber of Commerce of Metals, Minerals & Chemicals Importers & Exporters (CCCMC). These projects are discussed in more detail in the following section.

Considering such policy interest, we examine the possibilities of sustainable rubber in Southeast Asia, particularly Laos and Myanmar. We argue that the prospects for sustainable rubber in both countries – at least in the near future – are dim. This is first because the concepts of "sustainability" or "sustainable development" are often framed in relatively malleable, technical, and apolitical terms. They can be manipulated to meet the concerns and interests of powerful actors, addressing some aspects of sustainability that are easier to meet while ignoring others that may challenge their business models (Sneddon, 2000, Mansfield, 2009). Second, if a robust and meaningful definition of sustainability built on the principles of political ecology is developed, addressing environmental, social, and economic dimensions and paying attention to politics and power relations, it is unlikely to be met. This is due in part to the political-economic and governance challenges of the Lao and Myanmar contexts where investment in rubber is driven by poorly regulated agribusinesses whose power in relation to poor farmers enables land dispossession, labor exploitation, and unfair contractual arrangements (Woods, 2012, Global Witness, 2014).

Smallholder rubber production has the potential to bring direct economic benefits to farmers, but only with significant financial and

¹ While acres are the official unit of measurement for area in Myanmar, we have converted all area data to hectares for purposes of comparability with data from Laos and other countries. As a result, some of the area data appear abnormal as they are not rounded numbers, but this is due to their conversion.

Download English Version:

<https://daneshyari.com/en/article/7353513>

Download Persian Version:

<https://daneshyari.com/article/7353513>

[Daneshyari.com](https://daneshyari.com)