

Land grabbing, conflict and agrarian-environmental transformations: perspectives from East and Southeast Asia

An international academic conference
5-6 June 2015, Chiang Mai University

Conference Paper No. 75

Mapping context of land use for a non-traditional agricultural
export (NTAE) product: case study of land use for coffee
plantation in Pakxong district, Champasak province, Lao PDR
Saithong Phommavong, Kiengkai Ounmany and Keophouthone Hathalong
June 2015



BICAS

www.plaas.org.za/bicas

www.iss.nl/bicas



In collaboration with:

Demeter (Droits et Egalite pour une Meilleure Economie de la Terre), Geneva Graduate Institute
University of Amsterdam WOTRO/AISSR Project on Land Investments (Indonesia/Philippines)
Université de Montréal – REINVENTERRA (Asia) Project
Mekong Research Group, University of Sydney (AMRC)
University of Wisconsin-Madison

With funding support from:



**Mapping context of land use for a non-traditional agricultural export (NTAE) product:
case study of land use for coffee plantation in Pakxong district, Champasak province,
Lao PDR**

by Saithong Phommavong, Kiengkai Ounmany and Keophouthone Hathalong

Published by:

BRICS Initiatives for Critical Agrarian Studies (BICAS)

Email: bricsagrarianstudies@gmail.com

Websites: www.plaas.org.za/bicas | www.iss.nl/bicas

MOSAIC Research Project

Website: www.iss.nl/mosaic

Land Deal Politics Initiative (LDPI)

Email: landpolitics@gmail.com

Website: www.iss.nl/ldpi

RCSD Chiang Mai University

Faculty of Social Sciences, Chiang Mai University Chiang Mai 50200 THAILAND

Tel. 66-53-943595/6 | Fax. 66-53-893279

Email : rcsd@cmu.ac.th | Website : <http://rcsd.soc.cmu.ac.th>

Transnational Institute

PO Box 14656, 1001 LD Amsterdam, The Netherlands

Tel: +31 20 662 66 08 | Fax: +31 20 675 71 76

E-mail: tni@tni.org | Website: www.tni.org

June 2015

Published with financial support from Ford Foundation, Transnational Institute, NWO and DFID.

Abstract

General debate on the issue of land acquisition is usually related to large scale investment project. Taking land use for coffee production, a non-traditional agricultural export (NTAE) product, as a case, the purpose of this study is to 1) investigate the pattern of land use in a non-traditional agricultural export (NTAE) product, 2) to examine the contribution of NTAE production to local livelihood improvement, and 3) to explore the impact of land use in NTAE production on the ecological conditions. This research is a part of the research project for development (R4D), employment in sustainable development funded by Swiss Agency for Development and Cooperation and Swiss National Science Foundation. Qualitative method was applied to collect data in 4 villages and 5 coffee planters/exporters in Paksong district, Champasak province, Lao PDR. Stakeholder consultation was held in relation to promotion of NTAE. In total 34 interviews had been made. Data analysis for this paper included thematic analysis and narrative method. Findings show, land use in a non-traditional agricultural export (NTAE) product, case of coffee production in southern part of Laos takes forms of household, internal private, and foreign direct investment ownership. Different forms of land ownership in NTAE provide significant various contributions to improve livelihood of local community and address the poverty. The coffee production has least impact to ecological condition of land and water. The NTAE production is well integrated with other vegetable and cash crops. Some policy implications are that greater attention should be paid to land allocation for the landless group, improving the yield of NTAE production of household land ownership, and minimize overuse of hazardous fertilizer by foreign direct investors in NTAE production.

Keywords: land use, local livelihood improvement, ecological impact, non-traditional agricultural export, coffee production, Laos.

Introduction

A legend of land studies are allied to land grabs and large-scale land acquisitions (Oya 2013, Hall, 2011, Gironde et al. 2014). Oya 2013 puts effort to formulate methodological reflections on land grab data bases and the land grab literature rush. In general, a land grab is known to be violate of human rights, fail to consult affected people, ignore requirements for proper consent, and happen in secret. One of the key issues of the land grab is the questions over the reliability and inaccuracy of estimation. The GRAIN and Land Matrix data base for instance was found difficulty to fulfill those criteria and still biased. In particular case, land use data are difficult to collect and obtain with reliability. Another problem of this type of land use data base is also related to serious limitations in highly heterogeneous context and reveals large discrepancies. In addressing some of those problems, Hall (2011) proposed four approaches including regulatory power, market power, force, and legitimation to assess land grabbers gain control over land. Taking Southeast Asia as an example, Hall applied those approaches to analyze some cash crops so called cash booms (cocoa, coffee, fast-growing trees, oil palm, and shrimp) in Malaysia, Indonesia, Thailand, and Vietnam.

Avoiding of using the vague jargons of the land grab, Gironde and his team (2014) adopted an idea of large-scale land acquisitions (LSLAs) and take closer look at Southeast Asia, in particularly Laos and Cambodia. One main objective of this research is to assess question of the impact of land deals on local populations in terms of livelihood system, resilience and adaptation. A vulnerable factor is to identify situation prior to the acceleration of LSLAs that is the land had already become limited due to various factors, including demographic increases, in-migration flows and policy-induced programmes prior to land and forest allocation program.

A number of reasons influenced land grab and acquisition. Hall (2011) raised an issue of the land grab and land control in Southeast Asia crop booms. The author highlights of land grab for plantation of cash booms (cocoa, coffee, fast-growing trees, oil palm, and shrimp) in Malaysia, Indonesia, Thailand, and Vietnam. The authors argued that land is distributed to both foreign own investment companies and domestic smallholders for cash boom. The smallholders who were particularly *in situ* before the boom began. The allocation of the land to local people has been done.

The land use for cash crops is growing important factors for social economic development in Laos particularly for the poor local communities who are relying on agriculture. Land is primary condition for them to improve livelihood and get rid of poverty. In general, some studies of land deal for cash crop have already been carried out in Laos for instance by Gironde et al. (2014) and Gironde et al. (Policy Brief, Undated). Gironde et al. (2014) took some villages in Paksong district, Champasak province Laos as study sites for LSLAs and found that in Laos LSLAs has been increased in the past decade revealing a more than 50 fold of land deals. The land deals are smaller in size but more numerous in numbers. Gironde et al. (Policy Brief, Undated) also compared case of LSLAs between Laos and Cambodia.

Given the studies of land grab and LSLAs, which focus mainly on the land deal and land acquisition aspect, this study reviews the situation of the land use for a non-traditional agricultural export (NTAE) product of which coffee is selected as a study cash crop. An argument is that the persistence of small scale landholders for NTAE cash crop like coffee is still largely prevailing, playing great important role, and creating lesser impact to ecological condition. The main objective of this study is three folds: 1) to investigate the pattern of land use in a non-traditional agricultural export (NTAE) product, 2) to examine the contribution of NTAE production to local livelihood improvement, and 3) to explore the impact of land use in NTAE production on the ecological conditions. After this introductory section, the paper is structured by literature review, methodology, findings of the study, and concluding discussion.

Land Use and Development of Non-Traditional Agriculture Export in Laos

Lao People's Democratic Republic, hereafter Lao PDR or Laos, is a landlocked country located in mainland Southeast Asia sharing borders with Cambodia, China, Myanmar, Thailand and Vietnam. The country has a total land area of 236,800 square kilometres and a population of 6.7 million¹ inhabitants in 2014, making it the least populous country in Southeast Asia.

In Lao PDR, land use and development of NTAE have been shaped by geographic location and political turmoil. During the French occupation, between 1893 and 1954, unlike other French Indochinese territories such as Cambodia, Cochinchina, and Annam, the French colonialists did not develop large-scale plantations in Laos due to a number of reasons such as the remoteness of the country, an abundance of the land in other French Indochina, and a lack of dependable and cheap labour force in Laos (Baird 2011). As a consequence, Laos had remained untouched until contemporary era. Following independence from France in 1954, instead of peace and stability, the country was turned into a battlefield for the most devastated civil war in Lao history. The conflicts hindered national economic development as a whole and large-scale plantation development in particular.

The Lao PDR was established in the 2nd December 1975 after the victory of the *Pathet Lao* over Royalist backed by USA. After the proclamation of the Lao PDR, the government of Laos pursued centrally planned economic system aiming at building socialism under Vietnamese and the former Soviet Union mentors. Under the command economic system, major industries including banking sector were nationalized. In 1978 cooperative programme was introduced in agricultural sectors with the aim to secure agricultural surplus and gain political control over peasants. Under the cooperative programme, the government gained control over the agricultural land and other means of production and redistributed it based on egalitarianism principles, which afterward aggravated opposition from the peasants. In addition, the government imposed taxes on agricultural products, discouraging farmers to increase their production. Furthermore, some farmers reduced their farm size just in order to evade paying taxes. Subsequently, the cooperative programme was suspended and abolished due to peasant opposition.

After the unsuccessful attempt, the government of Lao instituted economic reform scheme called *chintanakanmai* (literally new thinking) or New Economic Mechanism (NEM) in 1986 with the aim to install "social market economy". Some industries have been privatized and private domestic and foreign investors have been incentivized to invest in several sectors including agriculture. Nevertheless, investors showed sign of little interest in investing in large-scale plantations between 1980s and 1990s. This was explained by a number of factors including insecurity, poor infrastructure, bureaucratic and opaque government and hostile relations with neighboring Thailand (Baird 2011). By 1988, the relation between Laos and Thailand was restored when a former Thai Prime Minister Chatchai Choonthavan changed attitude toward Cambodia, Laos and Vietnam by crafting foreign policy of transforming "battlefield into market places". On November 1990, Thai firm called Asia Tech Company, one of the pioneers, requested the government of Laos 16,000 hectares for investment in large-scale plantations in Bolaven Plateau in Champasack Province, Southern Laos (Baird 2011).

Investment in forestry subsectors and agricultural subsectors is a key factor driving land use change and loss of forestland. Between 1982 and 1989, forest and woodland including deciduous and evergreen forest cover 49% and 47% of the total land area respectively. In contrast, permanent agriculture land rose from 3% to 4% between 1982 and 1989 respectively (Manivong and Sandewall, 1992 cited in Fujita and Phanvilay, 2013). By 2002, forest represented 41.5% of the total land area, the

¹www.nsc.gov.la

highest percentage among countries in Southeast Asia, but decreasing at alarming rate of 53,000 hectares per annum (World Bank, 2008). In 2012 agriculture land covers 10.3% of total land area (<http://faostat.fao.org>). Studies have been conducted to identify the relationship between land use changes and agriculture development and characteristics of social-ecological system. Messerli et al. (2009) examine land mosaics at meso level using spatial scale and human-environment interaction interpretation approach. Results illustrate that swidden agriculture involves 17% of the population and 29% of country total landmass while permanent agriculture involves 74% of the population and 29% of total area. Boilat et al. (2015) examine the possible links between forest cover change and characteristics of social-ecological system. Results indicate that accessibility is a major factor driving forest cover change, while poverty does not constitute a key driver. Ethnicity moderately contributes to forest cover change.

Large-Scale Land Acquisitions (LSLAs) has become global phenomenon due to increasing demand for raw materials. LSLAs are complex processes where several actors have been involved. The most affected groups are the poor people in developing and less developed countries. Southeast Asia has been viewed as a hotspot for LSLA due to the phenomenon called “crop booms” (Hall, 2011). In their book titled *Powers of Exclusion: Land Dilemmas in Southeast Asia*, Hall et al. (2011) presented a framework, which includes four types of forces: *regulation*, *the market*, *force*, and *legitimation* to explain land acquisition and land grabbing in the region. *Regulation* refers to state and other groups formulate rules to determine who and how people gain access to the land. *The market* force is the market price of land and inputs to work on the land. *Force* refers to an ability to coerce the others from access to the land. *Legitimation* involves the argument regarding the ways in which the land must be or must not be governed, allocated and used. The framework is applied for analysing land acquisition in Southeast Asia to answer three key questions (1) who seek to control the land for exported-oriented crop production; (2) how prospective producers take the burdens of regulatory power, market power, force and legitimation to gain control over land and (3) how crop booms affect the areas with different types of land holding (Hall, 2011). In addition, the framework was applied in other research project to understand environmental enclosure and dispossession of ethnic minorities from the land in the Golden Economic Quadrangle² area (Sturgeon et al., 2013).

Laos was perceived as a country with empty large land area with little population (Baird, 2011; Perera, 2014). With the objectives of industrialization and modernization, the government of Laos pursues a controversial policy of “turning land into capital” (Kenny-Lazar, undated; Baird, 2011; Tan, 2012). The government of Laos gave generous incentive to local and foreign investors up to 99 years with relatively low costs and in some cases without costs (Perera, 2014). This resulted in an increasing land acquisition by domestic and foreign investors. By 2012, it was reported that there were approximately 2,642 land deals in Laos covering an area of 1.1 million hectares accounted 5% of the total areas of the country (Schonweger et al., 2012). The conceded areas have been used for mono crop cultivation such as rubber, eucalyptus, cassava and other cash crops (Gironde et al., 2014).

There are not only multinational companies involved in the land acquisition, but also migrants, local elites, and local businessmen. In fact the process of land concession and allocation was not regulated according to the laws (Schonweger et al., 2012). The granting was considered at the national and provincial level, while land allocations are carried out at provincial and district levels. In many cases, government officers at the district level were forced to find land for investors. It has been found that investors involved in the whole process. The land allocation was not based on availability of the land rather commercial viability of the land such as accessibility, suitability and distance to markets. Consequently, in many cases, the conceded areas are overlapping with protected areas.

²The former name of Golden Triangle, bordering area between Laos, Myanmar and Thailand notorious as an epicenter for drug trafficking

Accession of an individual to the land implies an exclusion of the others from the land (Hall et al., 2011). Studies indicate that LSLAs posed severe economic, sociocultural and environmental impacts on local people, particularly the poor who heavily depend on the land for sustaining livelihood. According to Gironde et al. (Undated), LSLAs benefit only few urban dwellers at the costs of economic catastrophes for the poor. Without new sustainable livelihood strategies, the poor suffer from the process. Golay and Cismas (undated), who conducted research on LSLAs in Cambodia and Laos, argue that LSLAs lead to violation of human rights such as the right to food, the right to education, the right to house etc. A major concern is that there is no legal mechanism to redress these violations. Ian Baird (2011) examines the impacts of large-scale economic land concession on ecological system and local livelihood. He argues that “primitive accumulation³” helps us to better understand the political process, motivation of public officials including justification for dispossession of local people from the land.

Coffee as an important cash crop for livelihood improvement and a driver of land use changes

Although coffee cultivation has been developed since the French colonial period in early 20th century (Galindo et al., 2007), it started playing a crucial role in Lao economy just in the 1980s when the Lao government used it for debt settlement with the former Soviet Union and Vietnam (Southichack, 2009). In early 1990s, Lao coffee sector experience strong growth due to the effects of economic liberalization in 1986, which stimulate domestic and foreign private investment in the coffee plantations.

Coffee cultivation is concentrated in the Bolaven Plateau, an ancient volcanic area with altitude up to 1,300 meters, in Paksong District Champasack province in Southern Laos. The area is responsible for approximately 80% to 85% of total production while about 15% to 20% is produced in Bolaven Plateau extended in neighbouring provinces of Champasack namely Salavan, Sekong and Attapeu (Southichack, 2009).

Coffee is one of the most important cash crops and the 7th export of Laos. Lao produced 25,000 metric tons of coffee, of which 95% of the output was exported to international markets (information from MOIC). According to the International Coffee Organization, Laos produced 500,000 bags (30,000 tons) of coffee in 2014 (www.ico.org). By 2015 the output of Lao coffee will reach 55,000 tons (Vientiane Times, 02/08/2012). Lao coffee sector is dominated by 20,000 small coffee farmers with farm size ranging from 1 to 3 hectares in cultivating area approximately 40,000 hectares (Southichack, 2009). This implies that coffee cultivation is playing increasing role in improving local livelihood by creating job opportunities and raising income for local people. In addition, there are some domestic and foreign private investments in coffee plantations with the farm size larger than 100 hectares.

There are only few studies on coffee cultivation and impacts on local livelihood in Laos. Philaphone (2011) looks at government policy perspective. The study reports that government trade policies do not only contribute to an increase in income for coffee farmers but also achieving rural development objectives. Southichack (2009), for example, reports that promotion of foreign direct investment (FDI) in coffee production benefits farmers in the forms of an access to international markets and capital for farm infrastructure development, and modern processing facilities. In addition, FDI also promote higher coffee prices, revolving fund and technology transfer for quality

³According to Ian Baird (2011), primitive accumulation refers to ‘the direct expropriation of people’s conditions of production, the purposeful of forcing the people into wage labor, and the intentional manipulation of social division of labor.

improvement.

Like other cash crops such as rubber, cassava and recently banana, coffee plantations involve large-scale land acquisitions by foreign firms. According to Gironde et al. (2014) land deals related to coffee consist of 59 cases accounted for 16% of the total deals in agriculture subsectors. Nevertheless, few studies focus on the impacts of coffee plantation on land use changes. In fact, many argue that coffee cultivation, especially traditional-shaded coffee; benefit local community and biodiversity conservation (e.g. Gross et al., 2014).

Methodology

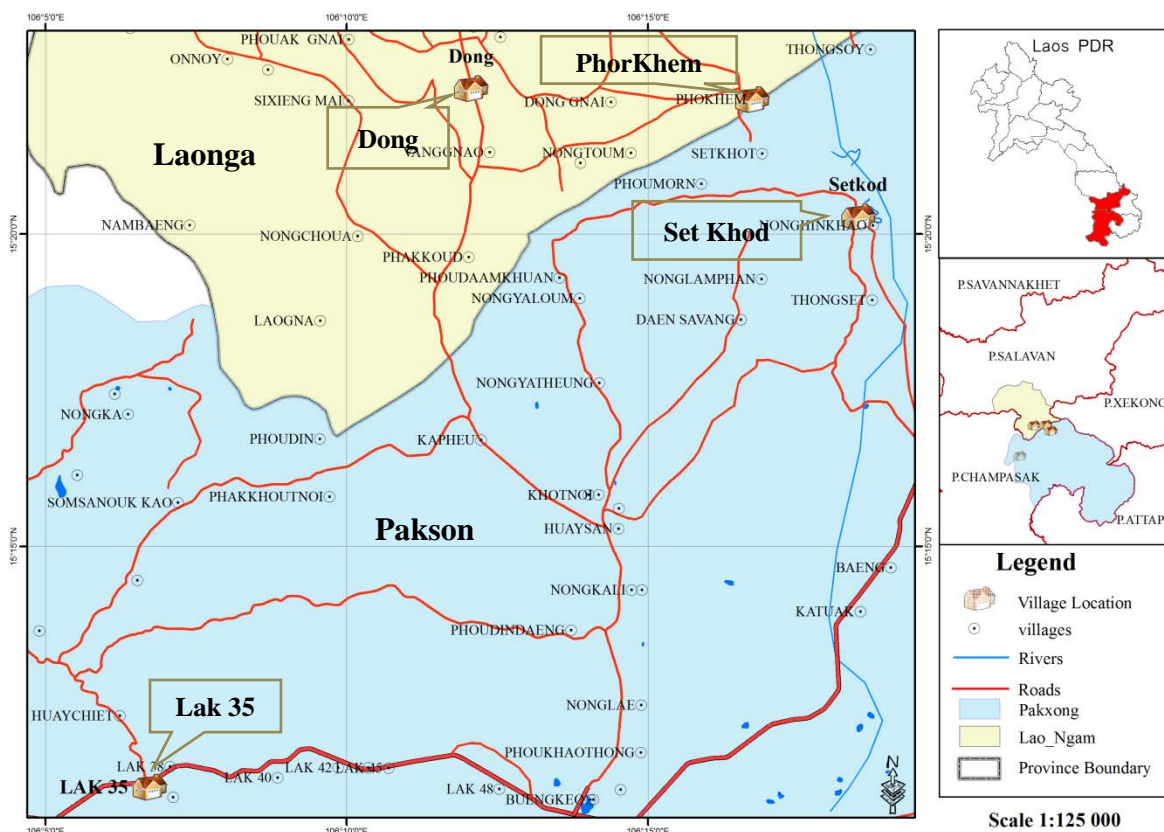
This study applied of qualitative research method of which thematic analysis and narrative method is applied for data analysis. In-depth interview method, focus group discussion and observation with/out participation are used for qualitative data collection. The global positioning system is also employed to coordinate the points for mapping of the land use. The in-depth interview is conducted to interview of the local farmers who are owners, workers, middlemen, supplier, producers/exporters and government staff at different level. The observation is done during the visit to the coffee farms, coffee milling houses, processing factories, and exporting channels.

Study sites for this research are four villages including Lak 35, Setkhod villages Pakxong district, Champasak province and Phor Khem and Dong villages Laongam district, Salavan province. The identification of the research site takes long process and involvement of concern stakeholders including researchers from CDE branch office in Vientiane Capital, Laos and consultation with senior researchers from Faculty of Social Sciences, NUOL. Several field visits have been made before final decision for sites were selected. Other cash crop farms including rubber and cassava were also visited to compare and identify of the most appropriateness for this study. This study is a part of the research project supported by SNSF, Swiss Development Agency under research 4 development project. The main research interest is related to feminization of the agricultural transitional and export. This study is contributed to the main research project. In total, 6 fieldworks have been conducted in these areas and many interviews have been done with concern authorities and government offices.

This study applies various data collection tools including in-depth interview at 4 villages for qualitative papers, focus group discussion (FGD), GPS coordinating points for mapping of the study site and land use data. In-depth interview is used to conduct with key informants including village headman and committees and other administrative lines, and villagers at different levels including government office, villagers, private companies, and workers at farms. The key persons and stakeholders for interview are government officials of 2 ministries including Ministry of Commerce and Industry and Ministry of Agriculture and Forestry, 2 provinces Champasak and Salavan provinces, 2 districts, Pakxong and Lao Ngam (and Bachieng Chalern Suk during primary survey), 4 villages (Lak 35 or Itu, Set Khod, Dong, and Phor Khem, and other 2 villages Chansavang and Huay Kong villages was interviewed during primary survey. The owners and managers in coffee industries including Pakxong Highland Co.,Ltd, Phetsavang Joint Development Lao Coffee CO.,Ltd, Pakxong Chaleunxay Promoting Agriculture CO.,Ltd, Organic Coffee cooperatives, Lao Coffee Association, and Bolaven Coffee Producer Cooperative (Coopérative des Producteurs de Café du Plateau des Bolovens: CPC), Dao Heuang Group were also interviewed.

Focus group discussion (FGD) is done at government office and villagers to conduct with different groups involving with coffee production including village coffee administrative unit, village coffee production unit, villagers, traders, exporters. GPS coordinating points is conducted to collect data to produce map of the study site and land use data. In total, 34 interviews had been made.

Figure 1. Map of study site, Lak 35, Setkhod villages, Pakxong district, Champasak province and Phorkhem and Dong villages Laongam district, Salavan province



Source: Illustrated by Authors and GIS & Geography Department, FSS, NUOL

Socio-economic development of study villages

The study villages have distinct village historical establishments. The first two villages, Lak 35 and Set Khod were established after 1900s, where Phor Khem and Dong were settled more than a century ago. This provides a different platform for different land use. Another distinctive feature of these villages is administrative locations. Lak 35 and Set Khod are located at Pakxong district, Champasak province, where Phor Khem and Dong belong to Laongam, Salavanh province. These villages share a similarity in terms of geographical position and poverty level. All villages have similar elevation with the exception of Set Khod. According to village administrative units, the poverty is reported low and nil at these villages. Other socio-economic development including demographic, occupation, infrastructure, and per capita issues are shown in the table 1.

Table 1 shows socio-economic development of study villages in 2015

Description	Lak 35	Set Khod	Phor Khem	Dong
Village establishment	1930	1973	1807	1768
Population (family)	217	501	348	380
Population (people/female)	1009/458	2861/1481	1812/919	1961/982
Elevation (above sea level)	920	1036	900	900

Main Occupation	Farmers, traders, civil servant	Farmers, traders	Farmers	Farmers
Road access to district	Asphalt road 15 km	30 km, earth road 4.5 km	Earth road 20 km	Earth road 9 km
Public health care	Health care center	-	1 health care center	1 health care center
School	Primary-upper secondary school	Primary-lower secondary school	Primary-upper secondary school	Primary-lower secondary school
Per capita (USD/year)	852	1277	1000	600
Poverty level	Nil	Low	Low	Nil

Sources: Interview village headmen

The pattern of land use in a non-traditional agricultural export (NTAE) product by villages

Three main typologies of land use emerged in a non-traditional agricultural export (NTAE) product, village household, domestic companies and foreign direct investment companies. The village households own land and use for the coffee plantation. The use of the land by the villagers has long history. In the former time, the land was use for rice planting, animal raising, and home garden. After ARABICA Typica Bourbon or big coffee and ROBUSTA or medium coffee were introduced to the area at the early of 1900s, the purpose of land use was switching from traditional crops to coffee. The area use for coffee plants has been changing and increasing over time. After the country revolution in 1975, only state enterprises involved in plantation and export of the coffee. The coffee plantation area was reported declining during state intervention. The land use for coffee was boom again after the introduction of new coffee variety Arabica Cartimor or small coffee in early 1990s; villagers then turn their land into this coffee plant. The plantation areas were turning from traditional varieties to this new seed.

Table 2 land use for coffee plantation by households at the villages (all varieties)

No	Village name	Total land area (ha)	Land use for coffee plant (ha)	Household	Average land use for coffee /hh (ha)	Village coffee production (ton)
1	Lak 35	1277	400	205	1.95	904
2	Set Khod	1110	833	517	1.61	1787
3	Phor Khem	1200	950	348	2.73	760
4	Dong	1100	1049	308	3.41	1000
Total		4687	3232	1378	2.35	4760

Sources: Interview village headman

The land use for coffee plantation by village households is different in each village. In general, the total land area per each village is rather equal for all four villages, which is greater than a thousand hectare. In practice, the land use is thus classified into 3 categories: large size, small size, and land less group. The large land size and landless group share small portion than small size. According to the survey, the largest land owner by a household in Phor Khem village for instance is 100 hectares or more than 10 hectares in case of Lak 35. The small size of land use for coffee plantation is significantly different between long establishment and new establishment villages. The oldest establishment villages, Phor Khem and Dong have larger total land use for coffee plantation than new villages Lak 35 and Set Khod. The total land area for coffee at Lak 35 is smaller than other because it is located closed to main road and urban area. On average, the village land use for coffee is rather

small size, especially in Set Khod village. The rough data in the table also reveals that total average land area for all villages is only about 2 hectares. The distribution of land for each household is however unequal. Some of the villagers are becoming landless people in Set Khod because they have to sell their lands and pay for debts which they borrowed to invest in their coffee plants (Interview Set Khod village headmen 24 December 2014).

The pattern of land use in a non-traditional agricultural export (NTAE) product by companies

Table 3 land use for coffee plantation by companies

Name	Start year	Land concession (Ha)	Plantation area (Ha)	Ownership	Marketing
Sinouk Development Sekong Co., Ltd	1994	56	56	Domestic	France, EU, Thailand, Asian
Dao Heuang Group	1996	250	250	Domestic	France, EU, Thailand, Japan, Asian
Phetsavang Joint Development Lao Coffee Co., LTD	2004	278	250	Domestic	Vietnam (90%), Thailand (10%)
Pakxong Highland Co., LTD	2009	3010	2500	Foreign	Japan
Pakxong Chaleunxay Promoting Agriculture Co., LTD	2012	27	15	Joint venture	Vietnam, Thailand
Total		3621	3071		

Sources: compilation by authors

About a decade ago, coffee was promoted widely as commercial crop and attracted both local people and foreign investors. The land uses of private companies are related to three types of ownership including domestic private companies, foreign direct investment and joint venture ownerships between Laos and foreigners. Table 3 reveals some examples of land use of 5 companies who set up at different period of time. Domestic companies initiated by Lao took the first start since 1990s and followed by foreigners and joint venture coffee companies. Other land use aspects including land concession, plantation and marketing are shown in Table 3.

Different business ownership has different size of land use for coffee plantation. Domestic companies and joint venture companies have less land concession. The foreign companies took larger land concession of coffee plantation. Where is the land from? According to the interview with agricultural and forestry authorities, the land concession was secondary forest land and grass land (PAFO, Deputy-Director, Mr. Khamdy and his team, 22 December 2014, DAFO, Deputy-Head, Mr. Viengsy and his team, 22 December 2014). Until late1980s, it is confirm that the land in Pakxong district was still a forest land, confirmed a district staff (DAFO, Deputy-Head, Mr. Khamdy, 22 December 2014).The new area of forest land is reported not used for coffee plantation (DoCI, 22 December 2014). The use of glass land for coffee plants is good to address fire problem. District of Pakxong used to have forest fire problem due to grass land. The land use was not boom that time because coffee and cardamom were considered as prohibited crops in 1978-79. Only state enterprise could purchase and export cash crops including coffee (OoCI, Deputy-Head, Mr. Kongsy, 3 October 2014).

Some pieces of grass land are not ready condition to yield good harvest coffee. According to the report of Manager of Pakxong Highland Company, the company took the land concession from Asia Tech Company in the form of land for planting vegetable and trees (Deputy-Manager of Pakxong Highland, Mr. Phanmy, 23 December 2014). Most of the land concession by Pakxong Highland Company has stone under the ground, the Company has to invest in excavation of underground stone out of the land before planting coffee, said a deputy-manager of the company.

Figure 1 shows grass land and underground stone of coffee farm of Pakxong Highland Company, Pakxong district, Champasak province.



Source: Pictured by Saithong, 24 December 2014

Nevertheless, some land concession and land use for coffee plantation by the private companies were belonged to villagers in the forms of forest land, grass land, vegetable and rice garden, animal farm, village road and walking path, NTFP harvesting areas, etc. The use of some pieces of land by private concession in the adjacent to villages thus created a conflict between companies and local people. According to the survey, some land concession areas by private companies is still using by villagers, “*land concession by Pakxong Highland Company about 60 ha and 250 ha for Dao Heuang are in our village areas*”, said a village committee (Chansavang village, 4 October 2014). The actual area might be greater than the report because land titling project is not yet done in the area. According to the survey, it is said that “*those lands are reported used as village animal rearing area, food seeking area and road. Most of the cases, with the exception to Dao Heuang Company, the villagers are not allowed to enter coffee planting areas which pose a constraint for the villagers who want to cross the area*” (Chansavang village, 4 October 2014, Pakxong Highland Co.Ltd. 23 December 2015).

The land use for coffee plantation by Pakxong Highland Company is closed to more than 10 villagers at the adjacent of the farm. According to the manager of the company, the villagers are still using the area of the company land concession. A reason is that the land left abandoned without any plantation by the former land concession or previous contractor. The nearby villagers and migrants from Attapeu province grabbed that land. Nowadays, six locations of the company coffee farm area are invaded by the villagers (Pakxong Highland Co.Ltd. 23 December 2015). The issue was proposed to the local government for solution, but it is still delay in response. The company solves the problem by excavation an open tunnel around the farm, but the villagers still connect the bridge to the farm in order to avoid the damage road.

The contribution of NTAE production to local livelihood improvement

Coffee plantations in the study area indicate significant improvement of local livelihood in various dimensions. The obvious advantage is job and income opportunities. According to the survey, the villagers receive benefit from employment at coffee production either by individual households or companies. Coffee production is a labour intensive sector and requires pool of workers at different

processes. Workers are needed in all section of coffee production from plantation to harvest and processing. Workers are needed for the coffee production in following duties: prepare land, planting, weeding, fertilizing, nurturing, harvesting, milling, drying, roasting, packaging and transportation coffee to market.

The workers at the coffee production can be divided into 3 groups: self-employment, daily wage workers and monthly or contract wage workers. Self-employment is workers from individual family members who are working on their own garden. These works can decide on their own about work time per day and week. Daily wage workers are the workers who work for other people's farms. The workers are recruited two ways either by employers or by workers themselves. The negotiation of the work and payment for the daily wage worker is usually based on mutual agreement between farm owners and workers (Interview manager Phetsavang coffee company, 23 December 2014). Nowadays, labour is shortage; the wage determination is rather based on workers and payment rate. In all cases, only verbal contract is made. The workers usually commute daily from home to garden and only some larger farms such as Sunthone and Phetsavang who provide accommodation for workers (Interview managers of Sunthone farm 18 November 2014 and Phetsavang Co.Ltd 23 December 2014).

The monthly or contract wage workers have written contract and receiving various payments. In case of Pakxong Highland Co. Ltd., for instance, the contract is provided to workers who are working longer period from one year or more. The welfare for the monthly workers are better than the daily workers, the companies also offer accommodation, telephone card, insurance, daily transport, annual bonus, performance salary, compensation for health care check-up and treatment, accident, birth-giving, over time work, and annual leave (Deputy-Manager, Pakxong Highland, 23 December 2014). Recruitment of contracting staff is more complicated than daily workers. After recruitment, the probation is needed for 3-4 months before final selection. Only the payment is provided during the probation period. The numbers of workers are employed based on production season. Daily wage workers are employed mainly during harvest season from November to March. Only monthly or contract wage workers have full-time work for whole year to pick the bean, process the bean, clear weed, put fertilizer, and work in the factory office.

The minimum wage rate is actually defined in the labor law. The Office of Labour in district has the duty to promulgate the Labour Law to monthly or contract workers in the coffee companies. In practice, the wage rate is set by the company. An employer said that "*the wage rate is set by company and compared with other companies' wage rate*" (Phetsavang coffee company, 23 December 2014). The daily wage rate for harvest season can be paid in two systems: by weight of picking bean (1000 kip per kilo) and 40000 kip/person/day. The monthly payment is 1.5-5million kip/month for Pakxong Highland Company and 0.8-1 million kip/month plus food allowance 12000kip/day for Phetsavang. The company is also building up of the trust between the company and workers. The workers can get support from the company like eating free fish from the farm pond. Sometime the payment is advanced by rice and the workers can payback after harvest season (Phetsavang coffee company 23 December 2014).

The workers are satisfied with the work, earn more income and improve their food nutrition after joining the employment. A female worker employed in a coffee farm said that "*I am satisfied with the work and payment because I don't know how to work in other occupations and I don't want to go to work in abroad, it is risky to go to work there, whatever I get I am happy*" (interview a female daily wage worker in Mr. Sitha's farm, 25 December 2014). Working in coffee production can improve workers' finance. Another contention from daily wage workers from Lak 28 said that "*I used to have land and planted rice, but few years ago, my land was given to Vietnamese investors to plant rubber trees, so I didn't have land to plant rice. I have to work in coffee garden to earn more money to buy rice and necessary things for my family*" (interview a female daily wage worker in Mr. Sitha's farm, 25 December 2014).

The employment in this sector also improved food nutrition of the workers. The majority of the coffee farmers in Pakxong and Laongam districts don't have paddy rice. The villagers insert that majority of land area is used for coffee plantation, paddy rice is not possible in the high land area and nowadays rice garden is using for planting coffee. The villagers have to work and earn from coffee plantation and spend for rice and food. This portion of income is important source of income to secure food supply. Coffee is for rice in this sense.

Nevertheless, an impact of the large scale land concession for household assets is emerged. According to the survey, some villagers report that some land concession areas are grass land for animal rearing. After concession, the number of animals has been relocated to other areas. The number of cattle has been reported declining due to limited area of grass land (Interview of DoCI, 22 December 2014, Head of Pakxong DAFO, 23 December 2014).

The impact of land use in NTAE production on the ecological conditions

The impact of NTAE production on the ecological conditions can be seen in 2 processes: coffee plantation and coffee processing. In general, some related laws regarding the environment emphasizes on the impact of the natural resources management and pollution with regards to the production process. The impact of the plantation process on land and water is minimal. According to the point of view of private coffee planters, the pollution of coffee plantation is limited harm. Manager of Sunthone farm stated that *"my coffee farm has no impact to the environment, no need to water the garden, so no impact to water"* (Manager, Sunthone farm, 18 November 2014). The impact of plantation to soil is confirmed least impact. According to head of DAFO Pakxong district, coffee plantation is still using chemical and organic fertilizers, but the farmers follow the instruction, so the soil has least impact and the products are classified as organic product and clean agriculture (Head of DAFO Pakxong district, 22 Oct 2014).

Coffee plantation has no land degradation and soil erosion. A manager of Paksong Highland Co. Ltd., confirms that *"the land use for coffee plantation is bush land, grass land, plateau, not mountain, and high land elevation forest, it thus has no land degradation and soil erosion, after tilling, an earth channel is constructed to block the land slide, so this leads to least impact of land sliding"* (Manager of Paksong Highland Co. Ltd., 23 December 2014). The companies also reported that the district environmental staffs also came to inspect the impact once a month, particularly the quality of land, and waste water from falling coffee trees to streams (Manager of Paksong Highland Co. Ltd., 23 December 2014, Manager of Pakxong Chaleunxay Promoting Agriculture Co., LTD., 24 December 2014). In the plantation, chemical fertilizer is reported used 3 times by putting under the ground about 1 meter depth before laying down coffee seed, 0.5 meter for second step, and finally 20 centimeters (Manager of Paksong Highland Co. Ltd., 23 December 2014). The fertilizer was covered by the soil, when the rain comes the chemical substance is melting down to underground. The most important is no chemical weed killing substance was reported used nowadays by the farm. Another prevention tool to protect land slide is to keep forest 50-100 meters from the river (there are two rivers Huay Set and Huay Khao at the garden of Pakxong Highland CO.Ltd). The manager of Paksong Highland confirms that no complaint from the villagers to the impact of waste water (Ibid).

Nevertheless, the impact of the land use for coffee plantation by the large scale production is still complaining by the villagers. The impact of the large scale land concession for coffee plantation takes forms of impacting to villagers' health. The large scale coffee plantation is still reported posing a constraint on villagers' health. According to the survey, the villagers reported that some private companies who use chemical substances to nurture the coffee trees still lay down the waste water into

the river. Some local people at the downstream of the river dare not use the river's water for home use (Village committee of Chansavang village, 4 October 2014).

The coffee processing also causes some impact to soil. There are different approaches to manage waste water from coffee processing including free discharge waste water, building waste water tank, and waste water storing pond. The household coffee processing is freely discharge waste water at anywhere within the home yard or adjacent areas. The waste is not treated and properly managed. Anyone including animals can touch and get affected by the waste.

Picture 2 shows small coffee miller machine, installation in home's yard, no waste water management system, Setkhod village



Source: pictured by Saithong 24 December 2014

The picture illustrated a small coffee miller which belongs to individual household. The machine is installing at the village yard without any storage for garbage (bean shelter) and waste water. The garbage and waste are free discharge to village ground and without any cover material. The garbage and waste water from the machine is floating to home's ground without proper management. The villagers and animals can touch the garbage and waste water directly which can harm them right away.

Pictures 3 shows small water tank for washed milled coffee bean, installation in coffee farm, Phorkhem village



Source: taken by Saithong 18 November 2014

The picture show small tank for coffee processing machine at villagers' coffee farm. The machine is used to process red bean coffee after daily harvest. This system is set up for the case of medium scale of coffee farm that process larger amount of coffee on daily basis. The water tank is building to

store the processed bean before washing and leaving bean out of water. The red coffee bean are picked or bought from farmers by traders and processed at this machine. The red bean is processed daily to get the white one. The tank is however only used to store milled coffee and afterward the waste water still lay out at the farm land without any recycling. This can cause harm to soil and people also.

Picture 4 shows medium water pipe and tunnel for milled coffee bean, installation in CPC coffee producers' group, Dong village



Source: taken by Saithong 23 December 2014

A largest scale of coffee processing at the village is performed by the coffee producer cooperative (CPC). The farmers who are members of the CPC sell the red been to the group and processed at the processing house. A medium processing machine is equipped and funded by project at each CPC group, a new machine was just installed and replaced old one this year. The CPC has rather good waste water management system. A concrete water tunnel is built to dispose water out of the machine as shown in Picture 4.

Picture 5 shows a final collection stage of medium coffee miller machine, installation is in CPC coffee producers' group, Phorkhem village



Source: taken by Saithong 24 December 2014

Picture 5 shows a last stage of milled coffee bean collection at the CPC coffee bean processing

house. The waste water after this part is still not properly managed at the CPC. Most of the cases, the waste water is still flowing out to village ground and farm land without any recycling system. Many tons of red coffee beans are milled at the village farm every day during the harvest season. The waste water is accumulated in larger volume than individual and farm processing machines. This can cause larger impact to the villagers and farm land.

Picture 6 shows an earth waste water pond used to store water after milling, installation in CPC coffee producers' group, Phorkhem village



Source: taken by Saithong 24 December 2014

A CPC processing house in case of Phorkhem village is a good example of how the waste water from coffee miller machine is well properly managed. A so called recycle waste water pond was digging next to the machine. The waste water after milling of the bean is laying out to water tunnel and then to the pond. According to an observation, the pond is enough to store the water within processing season. The water is reported used by the villagers as fertilizer to fruit trees, vegetable garden, and coffee trees.

Concluding discussion

This study explores the pattern of land use in a non-traditional agricultural export (NTAE) product in southern Laos. The findings have shown that there are three typologies of land use including village households, domestic companies and foreign direct investment companies. Most of the village household land is small sizes which are cultivated by family members; using their own labors couple with little hired labors. The domestic companies and foreign direct investment companies on the other hands have larger land scale and operated by managers of the companies and use a pool of labors. The land use changed is due to the introduction of policy to promote commercial agriculture by Lao government (Boundeth, Nanseki, Takeuchi, Satho 2012). After introduction of new variety of cash crop like Arabica Cartimor coffee in early 1990s the pattern of land use has been changed. Land has been used for new variety and replaced of traditional shading coffee plants and other cash crops including rice. More land concession has been granted to foreigners and joint business partners and some of these lands are still using by villagers. The spreading of globalized market economy on the other hand is also considered as a leading factor to land use change (Saphangthong and Yasuyuki, 2009) and particularly crop booms affect the areas with different types of land holding (Hall, 2011). The commercialization of the new variety of cash crop like Arabica Cartimor coffee leads to cash crop production boom and speeding up of land acquisition. The share of land used to plant this new crop variety has been increased over time by both household and private farms.

The adaptation of new coffee variety is an influencing factor for household to actively seek new

economic opportunity and improve their livelihood (Thongmanivong, Yayoi, Phanvilay, Vongvisouk 2009). The study reveals that this NTAE product like Arabica Cartimor coffee contributes significantly to local livelihood improvement. Coffee production is meaningful to the life of local people who have to rely on this source of revenue to pay for staple food and other basic human needs. Technically, the new variety is rather bush tree and easier to harvest as well as generate greater income than other traditional varieties. Coffee production is still a labor-intensive sector which needs manual works in different processes of the sector. The new coffee variety has also contributed to income generation repeatedly during the harvest season. The working condition has been secured and more welfare schemes have been employed for the monthly paid workers.

The impact of land use in NTAE production on the ecological conditions is emerging during the plantation and processing process. Two distinctive perspectives toward the impact of the land use on the NTAE production process are appearing. Coffee planters and officers realized the least impact of the coffee plantation on soil and villagers' health, whereas the villagers are still concerned of the greater impact on their health. There is still a complaint of chemical substances used for coffee plantation and a lack of proper management system of the waste water during the processing. The waste water management has been initiated at the coffee processing house but not all houses can afford. The impact of the coffee production at the plantation and processing is still evident.

References

- Baird, I. (2011). Turning Land into Capital, Turning People into Labour: Primitive Accumulation and the Arrival of Large-Scale Economic Land Concessions in the Lao People's Democratic Republic. *Journal of Marxism and Interdisciplinary Inquiry*, 5(1), 10-26.
- Boillat, S., Dao, H., Bottazzi, P., Sandoval, Y., Luna, A., Thongmanivong, S., Lerch, L., Bastide, J., Heinemann, A., Giraut, F. (2015). Integrating Forest Cover Change with Census Data: Drivers and Context from Bolivia and the Lao PDR. *Land* (2015) 4: 45-82.
- Boundeth, S., Nanseki, T., Takeuchi, S., Satho, T. (2012). Land Use Change and Its Determinant Factors in Northern Laos: Spatial and Socio-Economic Analysis. *Journal of Agricultural Science*, 4(12): 190-
- Bourdet, Y. (2000). *The Economics of Transition in Laos: From Socialism to ASEAN Integration*. Glos, UK: Edward Elgar Publishing Limited.
- Evans, G. (2004). Laos: Situational Analysis and Trend Assessment (pp. 34): WRITENET.
- Fujita, Y., Phanvilay, K. (2013). Land and Forest Allocation in Lao People's Democratic Republic: Comparison of Case Studies from Community-Based Natural Resource Management Research. *Society & Natural Resources*, 21(2), 120-133.
- Gilando, J., Sallee, B. (2007). Participative analysis of coffee supply chain in Lao PDR. Groupe de Travail Café.
- Gironde, C., Golay, C., Messerli, P., Peeters, A., Schonweger, O., Biglino, I., Cismas, I., Friis, C., Nanthavong, V., Paramita, P., Portilla, G. S., Seng, S. (2014). Large-Scale Land Acquisition in Southeast Asia: Rural transformations between global agendas and peoples' right to food. Working Paper. Swiss Network for International Studies.
- Gironde, C., Quintero, L., Portilla, G. S., Nanthavong, V., Fonrouge, M., Friis, C., Paramita, P., Seng, S., Summer, L., Tang, S., Laval, E. (undated). Large-Scale Land Acquisitions and Livelihoods in Cambodia and Laos: Increasing Vulnerability. Policy Brief. Swiss Network for International Studies.
- Golay C., Cismas, I. (undated). Large-Scale Land Acquisitions, Human Rights and State Accountability. Policy Brief. Swiss Network for International Studies.

- Gross, L., Erickson, J., & Mendez, E. (2014). Supporting Rural Livelihoods and Ecosystem Services Conservation in the Pico Duarte Coffee Region of the Dominican Republic. *Agroecology and Sustainable Food Systems*, 38 (9), 1078-1107.
- Hall, D. (2011). Land grabs, land control and Southeast Asia crop booms. *The Journal of Peasant Studies* 38(4), 837-857.
- Hall, D., Hirsch, P., Li, T. (2011). *Powers of Exclusion: Land Dilemmas in Southeast Asia*. University of Hawai'i Press.
- Kenny-Lazar, M. (undated). Land Concessions, Land Tenure, and Livelihood Change: Plantation Development in Attapeu Province Southern Laos. Faculty of Forestry, National University of Laos
- Messerli, P., Heinimann, A., Epprecht, M. (2009). Finding Homogeneity in Heterogeneity-A New Approach to Quantify Land Scape Mosaic Developed for Lao PDR. *Human Ecology* (2009) 37: 291-304.
- Miet Maertens., Johan F.M.Swinnen. (2009). Trade, Standards, and Poverty: Evidence from Senegal. *World Development*, Vol. 37, No. 1, pp. 161-178.
- Perera, O. (2014). Investment Incentives for Sustainable Development: The Case of Lao PDR (pp. 16). Manitoba, Canada: International Institute for Sustainable Development.
- Philaphone, M. (2011). Promotion of Organic Coffee Products for Export in Lao PDR. *Lao Trade Research Digest* (2011)2: 113-148.
- Roman Krznaric. (2007). The Limits on Pro-poor Agricultural Trade in Guatemala: Land, Labour and Political Power. *Journal of Human Development*, 7:1, 111-135, DOI: 10.1080/14649880500502144.
- Saphangthong, T., and Yasuyuki, K. (2009). Continuity and Discontinuity in Land Use Changes: A Case Study in Northern Lao Villages. *Southeast Asian Studies*, 47(3): 263-346.
- Schonweger, O., Heinimann, A., Epprecht, M., Lu, J., Thalongsechanh P. (2012). Concessions and Leases in the Lao PDR: Taking Stock of Land Investments. Geographic Bernnesia. Bern and Vientiane: Centre of Development Studies (CDE), University of Bern.
- Schonweger, O., Messerli P., Peeters, A., (undated). Beyond Anecdotal Evidence of Large-Scale Land Acquisition. Policy Brief. Swiss Network for International Studies.
- Southichack, M. (2009). The Lao Coffee Economy: A New Growth Path on the Horizon? Intergro Inc.
- Sturgeon, C. J., Menzies, N. K., Fujita, Y., Thomas, D., Ekasingh B., Lebel, L., Phanvilay, K., Thongmanivong, S. (2013). Enclosing Ethnic Minorities and Forests in the Golden Economic Quadangle. *Development and Change* 44(1): 53-79.
- Tan, D. (2012). "Small Is Beautiful": Lessons from Laos for the Study of Chinese Overseas. *2012*, 61-94.
- Thongmanivong, S., Yayoi, F., Phanvilay, K., Vongvisouk, T. (2009). Agrarian Land Use Transformation in Northern Laos: from Swidden to Rubbers. *Southeast Asian Studies*, 47(3): 330-347.
- World Bank (2008). Lao PDR Environment Monitor. The World Bank, Vientiane, Lao PDR.

Land grabbing, conflict and agrarian-environmental transformations: perspectives from East and Southeast

An international academic conference
5-6 June 2015, Chiang Mai University

International Conference Paper Series

The purpose of the 2015 Chiang Mai conference is to contribute to *deepening* and *broadening* of our understanding of global land deals, resource conflict and agrarian-environmental transformations – in the specific regional context of Southeast and East Asia, with special attention to climate change mitigation and adaptation policies as well as the role of China and other middle income countries (MICs) within the region.

The Conference Paper Series aims to generate vibrant discussion around these issues in the build up towards the June 2015 conference – and beyond. We will keep these papers accessible through the websites of the main organizers before, during and after the conference.

About the Author

Saithong Phommavong, a lecturer, a regional coordinator, and a senior researcher at the Faculty of Social Sciences, National University of Laos, recently involved with various research projects including feminisation, agricultural transition and rural employment (FATE), risk, coping and incentives in changing forest-agriculture landscapes research funded by Center for International Forest Research (CIFOR) project, and integration of mountainous regions of mainland Southeast Asia, 1960-2010: between adaptation and marginalization. His main research interest is socio-economic development and transformation, local livelihood impact, sustainable development, poverty reduction, pro-poor tourism, land use and ecological impact on land use.