**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. 42***

# Political Economy of the Rise of the Contemporary Industrial Tree Plantation Sector in Southern China

Yunan Xu

May 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:***





**Political Economy of the Rise of the Contemporary Industrial Tree Plantation Sector in Southern China**
by Yunan Xu

*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

May 2015

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

*****Note: This paper is simultaneously published online in the BICAS Working Paper Series (http://www.plaas.org.za/bicas; www.iss.nl/bicas) and Chiang Mai Conference Paper Series.

# Abstract

Industrial tree plantations (ITP), as a newly emerging sector, is expanding quickly and massively in Southern China, involving foreign corporations (including Finnish and Indonesian) tied to a variety of domestic partners, both state and corporate. In some places, the villagers embrace the land deals, while in others these land deals have provoked conflicts. The commodities produced are mainly for Chinese domestic consumption. The expansion of the ITP sector in southern China in the era of the global land rush, and fuelled by the convergence of food, fuel, environmental crises, is a pattern of land investment worth studying. Firstly, the ITP sector, despite its relative scale and links with the construction, paper and automobile industries has received much less academic attention compared to other sectors of food, biofuels, and mining in the context of studies about resource grabs today. Secondly, the foreign capital involved in the ITP case makes this type of land investment even more complicated, because the role of China in the current literature on land grabs is framed either as a key “grabber” or as the main location for the consumption of agro-products, but never as a destination for large-scale transnational land. For a more comprehensive understanding of the global land rush and the role of China in it, this paper examines the dynamics of the development of the ITP sector in China through a political economy lens. It takes on the province of Guangxi, the key hub of the ITP sector in China, as the regional focus. It will show that four factors, namely, the domestic demand for the products, the agronomic conditions in southern China, the institutional conditions of land control and labour in rural China, and the financial capital from both domestic and international sources all play a significant role in fuelling the development of industrial tree plantations in Southern China. I hope that the findings of this study will contribute to the understanding of the character and trajectory of the global land rush, especially the role of China in it.



**Key words**: Industrial tree plantations; Southern China; investment dynamics

# Introduction

During the past few decades, various forms of land deals at different scales have been forged worldwide. These land transactions, especially transnational "land grabs" (Borras et al. 2011), have been given much public attention due to their complex mechanisms and implications fuelled by the convergence of food, fuel and environmental crises. Recent academic literatures around the land deals/land grabs are abundant, with focus ranging from the conceptual and methodological discussions (Scoones et al. 2013; Oya 2013; Edelman 2013; Edelman, Oya, and Borras 2013; Borras et al. 2014; Borras and Franco 2012), to empirical studies concerning food/biofuel production or resource/environmental conservation ("green grabbing") in Africa (Benjaminsen and Bryceson 2012; Amanor 2012), Latin America (Borras et al. 2012), Russia (Visser, Mamonova, and Spoor 2012), and Southeast Asia (Hall 2011). This work shows specific shared characteristics, namely that land investments/land grabs are embedded in global structures and involved with the boom of several specific crops.

Firstly, no matter the underlying 'North-South' or the "emerging 'South–South' dynamics" (Borras et al. 2011, 209), the "host" countries of land grabs are usually resource (especially land) abundant supply countries, while the "gabber" countries are normally capital abundant but resource demanding countries, like the USA, European countries, and the newly-emerged BRICS countries (Brazil, Russia, India, China and South Africa). Secondly, no matter oil palm, sugarcane or soybean, the sectors related to or targeted by land investment, and occurring with high frequency, are food, biofuel or mining sectors.

This makes the large-scale fast-growing tree sector (the ITP sector) in Southern China worth studying. Firstly, this redresses the balance in the land-grabbing literature, which is overly focused on the food, biofuel and mining sectors; ITP is linked with the construction, paper and automobile industries, and so somewhat separate from the research "hot spots". Although there are some academic studies about the ITP sector (Kroger 2012, 2014, 2013; Gerber and Veuthey 2010), the research has been limited to very few scholars in the main empirical sites of Brazil, Finland, India and coastal Ecuador. This does not match the importance, variety and scale of the ITP sector worldwide (as will be explained in detail below). Secondly, the academic attention around land investments/land grabs are following the specific geographic trajectory mentioned above, which framed the role of China either as a key "grabber" in the recent global land rush (Brautigam and Zhang 2013; Buckley 2013) or as the main site for agro-products consumption, but never as a destination for transnational large-scale land deals. Where studies about land grabs in China do exist, (Siciliano 2014, 2013), the research is limited to domestic land investment, neglecting the complicated fact that foreign capital (including from Finnish and Indonesian corporations) is also involved.

For a fuller understanding of the character and trajectory of the global land rush, especially the new role of China in it, in this paper, I will analyse the dynamics of the ITP sector in Southern China using a political economy lens, with a more detailed, albeit preliminary, discussion around ITP's technological, value, material and financial bases. To be specific, this paper identifies and then discusses in detail four factors that have a role in the expansion of ITPs in Southern China, namely, the domestic demand for the products, the agronomic conditions, the institutional conditions of land control and labour in rural China, and the financial capital from both domestic and international sources. Prior to this, I will introduce certain empirical issues in relation to ITP in general, and also in China (Guangxi in particular).

# 1 The ITP Sector: Globally and in China

An overview of the fundamental characteristics of the ITP sector must precede any analysis of the

political economy of ITP in Southern China. First of all, the concept of industrial tree plantations should be clarified here with reference to several different definitions presented by different authors (Overbeek W 2012; Kroger 2012; Sheldon and Styring 2011; Gerber 2011). The term "industrial tree plantations" (ITPs) in this study refers to monocultures of non-food tree crops, mainly fast-wood forestry. In this study, oil palm tree plantations with food (palm oil) as its main usage are excluded. Meanwhile natural rubber tree plantations are not included in this analysis either. In this study a narrow definition of ITPs is adopted, including mainly eucalyptus, pine, and acacia trees. Among these, eucalyptus trees, with faster growth rate and a quicker, larger expansion trend in southern China, compared to the other two species, are the main focus of my study. This is not meant to isolate eucalyptus growing from other ITP sectors, nor for that matter from other agricultural sectors. In short, I will examine the eucalyptus sector in a relational way, while maintaining focus on it. Thus, throughout this paper, I will interchange the eucalyptus sector with the ITP sector, and in places where a distinction needs to be made, such as in referring to the broader and more comprehensive ITP sector, I will highlight this.

As mentioned earlier, the ITP sector is less visible in the emerging literature on the global land rush despite its significant scale, level and multiple uses. First of all, the ITP sector is likely responsible for a far wider land use change than other boom crops (see Table 1).

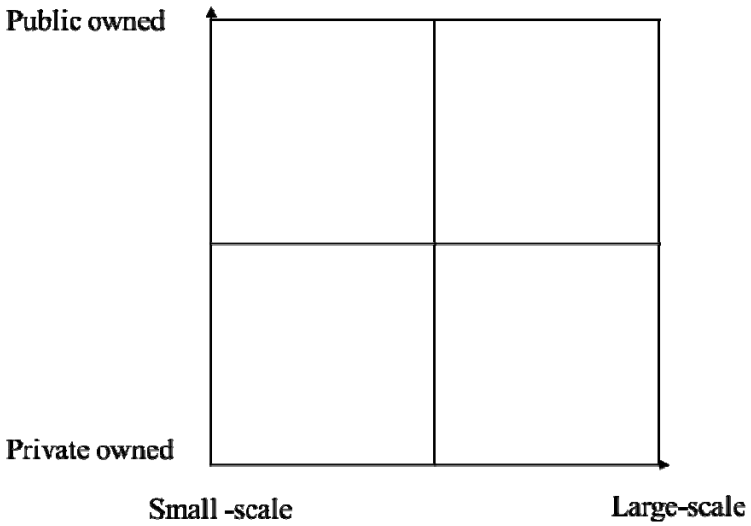
**Table 1: Regional Plantation Area and its Increase from 1990-2010 (million ha)**

| | **1990** | **2010** | **Change %, 1990–2010** |
|---|---|---|---|
| **Africa** | 11.663 | 15.409 | 32.1 |
| **Asia and the Pacific** | 74.163 | 119.884 | 61.6 |
| **Russian Federation** | 12.651 | 16.991 | 34.3 |
| **Europe** | 46.395 | 52.327 | 12.8 |
| **Caribbean** | 0.391 | 0.547 | 39.9 |
| **Central America** | 0.445 | 0.584 | 31.2 |
| **South America** | 8.276 | 13.821 | 67.0 |
| **Near East (excluding N. Africa)** | 4.677 | 6.991 | 49.5 |
| **Canada** | 1.357 | 8.963 | 560.5 |
| **Mexico** | 0.35 | 3.203 | 815.1 |
| **USA** | 17.938 | 25.363 | 41.4 |
| **World** | 178.307 | 264.084 | 48.1 |

Note: Data cited from Kröger (2014b, 242). The ITP sector here includes rubber and oil palm, although fast-growing trees occupy the most shares in this.

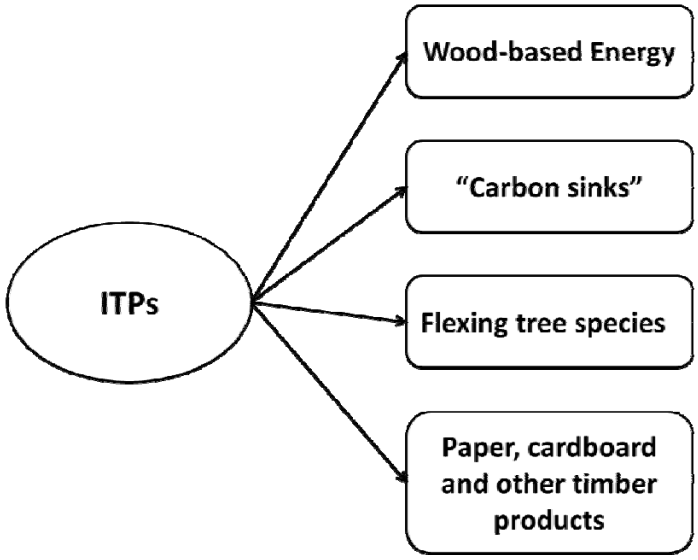
Secondly, the ITP sector involves variegated forms in terms of scale, land and property rights, the investment mechanism, and implications. The tree plantations could either appear in large-scale or small-scale, and are owned either by private individuals or public institutions (as shown in the Figure 1). Also, the boom of the ITP sector could be driven by the alliance of the industrial sector and the state, as is the case of Brazil (Kroger 2012), or based on the smallholder units, as is the case of Vietnam (Sikor 2011). The rise of the ITP sector may sometimes lead to large-scale rural displacements, as is the case of Ecuador (Gerber and Veuthey 2010).

**Figure 1: The Schema of Variegated ITPs**




Thirdly, the industrial tree crops are involved with the current flexing complexity due to its multiple uses (Borras, Franco, and Wang 2013). Industrial tree plantations are mainly "destined for pulp and fuelwood" (Overbeek W 2012, 15). And ITPs, as pointed out by Kröger (2014a), have other uses such as wood-based energy (including bio-refineries, electricity, and heating), "carbon sinks", and flexing tree species[1], due to the development of technology and increased demand for its products as fuel and environmental crises converge (as shown in Figure 2). These multiple uses for industrial tree crops imply that ITPs are involved with specific value chains with actors from not only the usual agribusiness sector, but also from industrial sectors, including paper companies, pulp companies, construction companies, automobile companies, textile producers, and energy producers (Kröger 2014a).

**Figure 2: The Multiple Uses of ITPs**




(Adapted from (Kröger 2014a, 5)

The ITP sector, with profound implications worldwide and its complicated dynamics, deserves to be systematically studied, especially since the sector has been gaining ground and expanding in a

[1] "Flexing tree species" refers to the GM trees (Kröger 2014a, 5).

dramatic fashion in China recently. As shown in Table 2, China is a dominant producer of industrial trees throughout the world. Industrial tree plantations in China emerged slowly in the 1980s, but gained momentum in the 1990s, and have expanded dramatically since then. They are concentrated in the Autonomous Province of Guangxi, as well as other southern parts of China[2], namely in Hainan, Yunnan, Fujian and Guangdong Provinces.

**Table 2: Area of Chinese "Planted Forests" in 1990, 2010; ITPs[3] in 1980s (thousand ha)**

| | Area of ITPs at the end of the 1980s [a] | Area of 'planted forest' in 1990[b] | Area of 'planted forest' in 2010[b] | Area of planted forests with introduced (exotic) species in 2010[b] |
|---|---|---|---|---|
| **China** | 400 | 41950 | 77157 | 21603 |
| **Global** | 1275 | 94938 | 152902 | 44589 |
| **%** | 31,37% | 44,19% | 50,46% | 48,45% |

Note: Author's elaboration based on the EJOLT report (Overbeek W 2012), (a) Bazett (1993) cited in the book *Pulping the South: Industrial Tree Plantations and the Global Paper Economy* (Carrere and Lohmann 1996), and (b) FAO (2010)

Among these ITP sites, Guangxi – a key hub of the ITP sector in China – is the regional focus of this paper, and eucalyptus as a subsector within ITPs, is the principal sector for this research. Guangxi is an ethnic minority autonomous province, in the southwest coastal area of China (see Figure 3). The geographic location has created suitable natural conditions, namely, a subtropical, mild and moist climate for eucalyptus, which will be detailed analysed below.

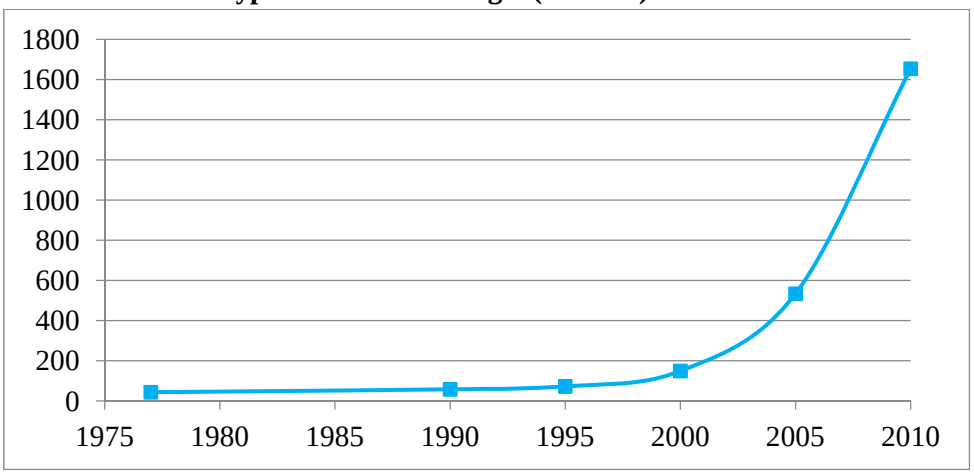
**Figure 3: Map of Guangxi**


As shown in Figure 4, in the 25 years prior to 2000, the acreage of eucalyptus increased by about

[2] According to the forestry regional plan of China, the forests in the south are for commercial use "北休、西治、东扩和南用"(http://people.com.cn/GB/paper85/15907/1406021.html)
[3] The ITPs here include rubber tree plantations and oil palm plantations.

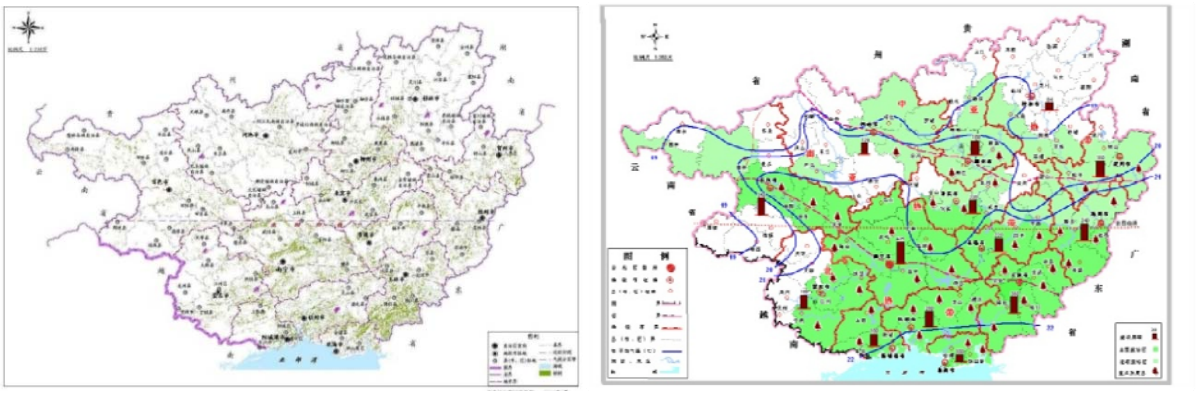
3.5 times, from 43.2 thousand ha in 1975 to 148.8 thousand ha in 2000. Between 1990 and 2000, the area covered by eucalyptus expanded eleven times to the current (2013) total of 1653.3 ha. To date, Guangxi has more than one-third of the fast-growing forests in all of China, and area of eucalyptus, Guangxi ranks first in China. In addition to the present scale (2010), the Guangxi government is planning to further push the expansion of eucalyptus tree plantations, according to the future plan from the Guangxi Forestry Department in 2011 (see Figure 5). However, the expansion of ITPs might slow down, since in 2013 the Guangxi Forest Department issued a policy to generally reduce the area of eucalyptus trees in Guangxi to 4 million mu (equaling to 0.27 ha) in 2020.[4]

**Figure 4: Area of Eucalyptus Trees in Guangxi (1000 ha)**




Note: The data of eucalyptus trees (except 2010) are from a report (Pang 2006), while the area of eucalyptus trees in 2010 is from another newspaper report[5].

**Figure 5: Present (left) and Future (right) of Eucalyptus Tree Planting in Guangxi[6]**



Within the ITP sector of Guangxi, both overseas and domestic companies are involved. The foreign investors (Stora Enso from Finland and APP from Indonesia) involved mainly specialize in paper products, while the domestic ones, including the state forest farms, mainly specialize in timber/board/furniture products. Additionally, the commodities produced from the ITPs are mainly for Chinese domestic consumption.

The scenario created by such land investment in Southern China raises the question: Why did the industrial tree plantations (ITP) gain ground and expand so massively in southern China within such a

[4] http://www.forestry.gov.cn/main/392/content-737409.html
[5] http://blog.sina.com.cn/s/blog_4bba963a0101360q.html
[6] From the Guangxi Forestry Department

short period of time? In other words, what are the domestic and international dynamics that caused the rise of the ITP sector in Southern China, especially Guangxi?

In order to fully understand such dynamics, the value, material, institutional and financial bases for the development of the ITP sector in Southern China will be analysed alongside the secondary data from online and published documents, and the primary data through fieldwork carried out in Guangxi China from March 10 to March 30, 2014 and from March 2 to April 25, 2015.

## 2 The Domestic Demand for Products

As mentioned above, the products from industrial tree plantations are highly diverse, ranging from the tangible – paper, board and wood-based energy – to the intangible – "carbon sink". While in southern China, the carbon market has not been built-up due to difficulties around the carbon sequence assessment, and popular wood-based energy is still using simple combustion technologies rather than bio-refineries, which is gradually being substituted by electricity generated from other sources. As the main uses of the industrial tree crops, this leaves boards/panels and pulp for paper. In China, the domestic demand for these forest products is huge, given the country's rapid urbanisation rate and remarkable population growth. Before 2000, the domestic demand for forest products was far beyond the supply. According to the *Chinese Forestry Development Report* 2001, the existing gap between the domestic demand and supply in 2000 had reached 33.6 million $m^3$,[7] and in comparison with 1999, the average prices of timber and paper both increased.[8]

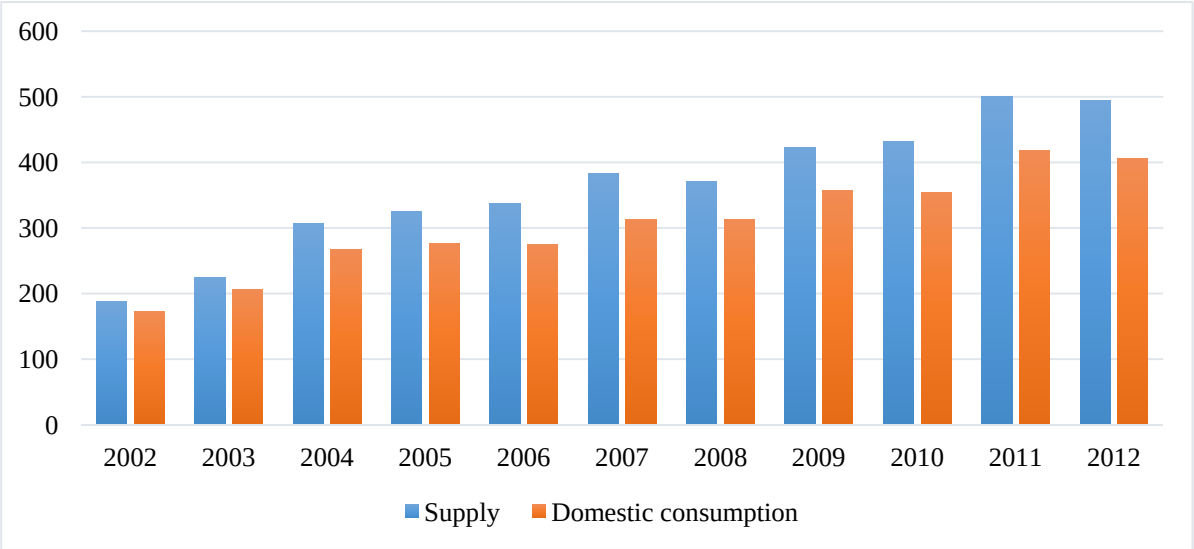
Since then, the mismatch between the demand and supply of forest products has been gently mitigated, partly due to the rise of industrial tree plantations from 2000 onwards (see Figure 4). As shown in Figure 6 (below), the supply of forest products has increased dramatically in the recent decade, from 187.9 million $m^3$ in 2002 to 494.9 million $m^3$ in 2012. While the domestic consumption of forest products also more than doubled, and the percentage of domestic consumption remained above 80% of the total supply in the 10 years. But this does not mean the domestic demand has now been fulfilled. In 2011, the average annual household paper consumed per capital was only 3.9 kilos, far below the amount consumed in North America (25 kilos), Western Europe and Japan (15 kilos).[9] This means, the demand for the forest products, especially paper, has a huge capacity to increase space in the future.

[7] The estimated domestic demand in 2002 was 109.473 million m3, while the planned production was 62.23 million m3 and the import was 13.6117 million m3 (http://www.forestry.gov.cn/main/62/content-82.html).

[8] The annual average price of timber in 2000 increased 4.7%, compared with 1999, and the price index of chemical pulp was 130.2 in 2000 (http://www.forestry.gov.cn/main/62/content-82.html).

[9] http://www.paper.com.cn/news/daynews/2011/120809092545947125.htm.

**Figure 6: The Supply and Domestic Consumption of Forest Products in China (million $m^3$)**




Source: *Chinese Forestry Development Report 2003-2013* （2003-2013 年中国林业发展报告）[10]

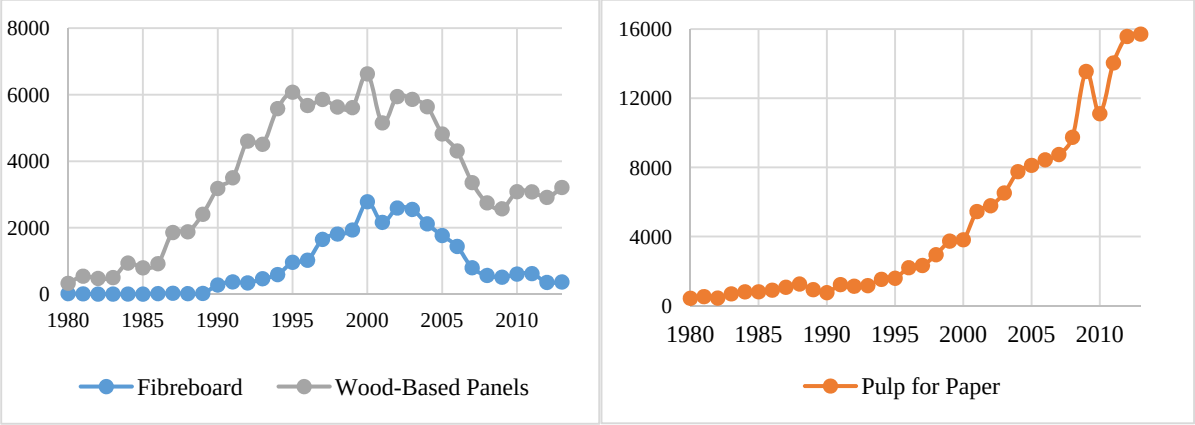
The strong domestic demand for forest products has caused the value of these products to soar. Correspondingly, the market of these products thrived. Accordingly, more fibreboard, wood-based panels and paper pulp are being imported since the 'Reform and Opening' (Gaige Kaifang) of the 1980s (see Figure 7). The import volumes of fibreboard in 2000 is over 140 times the 1980 amount, and the import of wood-based panels grew from 329.2 thousand $m^3$ in 1980, to 6626.5 thousand $m^3$ by 2000. However, import volumes of fibreboards and wood-based panels have decreased since 2000, which is related to the expansion of the ITPs in Guangxi, and also to the technological breakthrough on the processing of boards.[11] Unlike fibreboards and wood-based panels, the volume of imported pulp has been increasing since 1980, and reached about 16 million tonnes in 2013, accounting for a large part of the total supply of the pulp in China.[12] The increase of the import volume of pulp for paper, even after the expansion of ITPs, implies differences within the commodity chains of these products, which needs further research.

[10] http://www.forestry.gov.cn/CommonAction.do?dispatch=index&colid=62

[11] Explained by both the professor from the Forestry department of Guangxi University (13 Mar 2014) and the staff from one of the state-owned farms (18 Mar 2014). The staff of the state-owned farm mentioned that the profit of manmade panels and boards became much less recently due the technological development.

[12] The percentage is 47% was calculated with data accessed from FAOSATA, but the 80% figure is from an interview with a staff member from one of foreign companies in Guangxi.

**Figure 7: The Chinese Import Volumes of Fibreboards (1000 $m^3$), Wood-Based Panels (1000 $m^3$) and Pulp for Paper (1000 tonnes)**




Source: FAOSTAT (http://faostat3.fao.org/download/F/FO/E, accessed on 23 Feb 2015)

The surge in domestic demand since the 1980s actually created the value base for the development of the ITPs in China, [13] which can be denoted by the rapid increase in the price of eucalyptus trees from 200 Yuan per $m^3$ in 2000, to 850 Yuan per $m^3$ in 2015[14]. While such demand for tree crop products did not naturally push the rise of ITP sector alone, it also needs some material bases.

## 3 Agronomic Conditions in Southern China

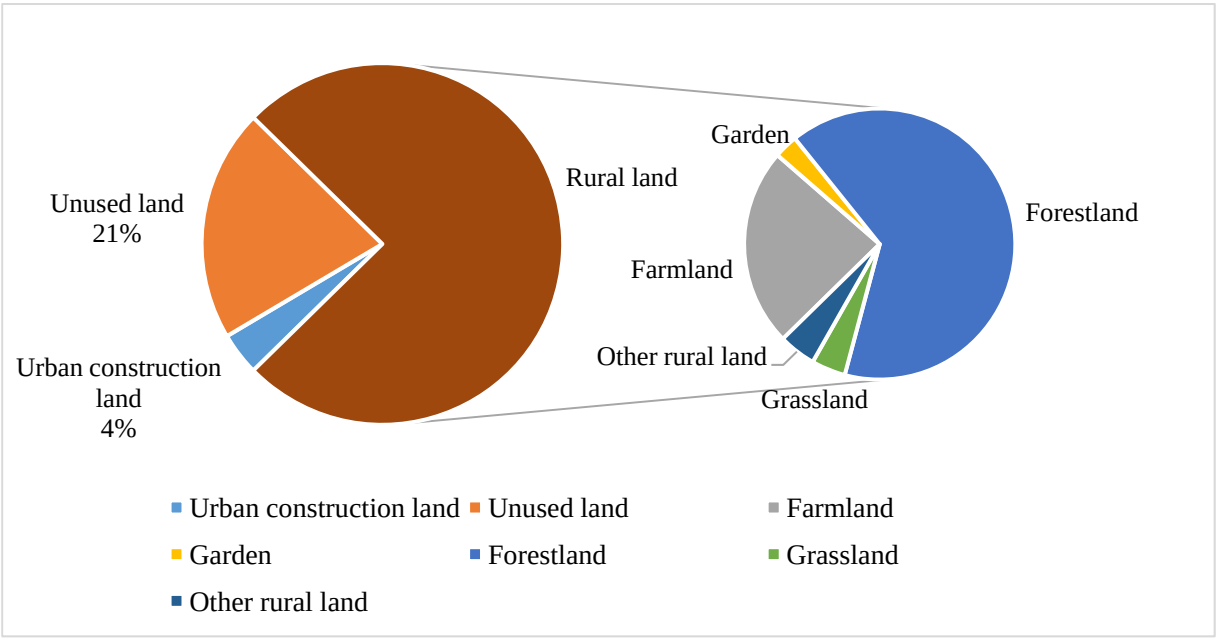
The emergence and expansion of the ITP sector in Southern China (especially in Guangxi), rather than anywhere else, is mainly a result of its certain climate and land conditions.

The climate of southern China, especially Guangxi, is preferential for tropical crops, especially eucalyptus trees. Specifically, the temperature there is mild-with annual average temperatures around 20 degrees and little seasonal difference,[15] and annual rainfall is also abundant for crops, at around 1300-3000 mm per year – perfect for the eucalyptus tree crops originally from tropical areas.

In regard to the land condition in Guangxi, about 70% of the territory there is hilly (mountains over 200 m high),[16] implying a huge potential for the development of forestry. According to a land-use survey conducted in 2005 (the result is shown in Figure 8), the rural land (including land directly and indirectly used for agricultural production)[17] accounted for about 75% of total land in Guangxi, equalling 17.89 million ha. Amidst these rural lands, 65% (around 11.61 million ha) is forestland, which is an area almost three times as large as the flat land used for farming.

[13] Such implications are not one-way: the rise of ITPs, in turn, had some (if not a profound) impact on the supply and demand relations around the production of ITPs, which is encapsulated in the import volume changes shown in Figure 7.
[14] The data is from the interviews with the staff in the state-owned forest farms on 27 March 2015.
[15] http://www.gx121.com/gx_climate_info.asp
[16] According to the introduction in the official website of the Guangxi Agricultural Department (http://www.gxny.gov.cn/web/2008-11/228935.htm)
[17] http://baike.baidu.com/view/1293581.htm

**Figure 8: Types of Land in Guangxi**




Source: Author's elaboration based on data from *Land-use Plan of Guangxi Zhuang Autonomous Region (2006- 2020)*[18]

However, such preferential climate and land conditions in Guangxi did not induce the rise of eucalyptus trees right away, since eucalyptus was introduced into China in the 1890s[19], because the species introduced at that time did not show huge economic potential. The development of eucalyptus trees did not take off until the 1980s when Dongmen Forest Farm, a state-owned farm in Guangxi, started a technological collaboration with Australia around the forestry sector, especially in the introduction and cultivation of eucalyptus tree species[20]. More than 100 species were introduced through the collaboration,[21] among which, one fast-growing species, namely, *Eucalyptus grandis* × *E.urophylla* soon became popular across southern China due to its high economic value.

More specifically, this tree species is characterised by a fast growth rate (which can be logged in 4-6 year rotations)[22] and strong regeneration ability (one eucalyptus tree can generate two or three shoots after logging naturally).[23] Moreover, to improve the profitable features of eucalyptus tree species (for the shorter growth period and greater amount of growing stock per unit), the hybridized ones are cultivated with clone technology in the labs of different experimental seed bases (including the experimental base in the Dongmen forest farm).

In this sense, the technological development in seed cultivation, especially the clone techniques, strengthened the economically attractive characteristics of the eucalyptus tree crops, which plays a critical role in the massive and rapid expansion of eucalyptus trees in Guangxi.

## 4 Land Control and Labour Changes in Rural Guangxi

Market demand and agronomic conditions are still not sufficient explanations for the massive and

[18] http://www.gxdlr.gov.cn/News/NewsShow.aspx?pd=1828&NewsId=3277
[19] http://www.chinaeuc.com/data/shuzhong.aspx?id=46340ecc-fc7b-4b51-8175-2bd52c42b18
[20] http://blog.sina.com.cn/s/blog_598139890101e02m.html
[21] Data from interview with one professor specialising in forestry (17 Mar 2014)
[22] Data from the interview with one of eucalyptus specialists in Guangxi University(13 Mar 2014)
[23] Data from the interview with the staff from one of state-owned farms (19 Mar 2014)

rapid expansion of ITPs in Guangxi, as the institutional dynamics around land control and labour in the sector must not be neglected. Similar to other regions in China, recently rural land in Guangxi is generally following three stages: collectivisation, (re)distribution and concentration.

Followed by the general agrarian transformation in China, both the farmland and forestland in Guangxi were collectivised in the 1950s. Then, in the 1980s, the farmland and a small part of the forestland in Guangxi were contracted to villagers within the household responsibility system (HRS) reform. Under the HRS, the user rights of rural land were contracted to the farmers (Zhang and Donaldson 2010, 464), based on the principle of fairness, mostly according to the "size of each household" (Unger 2002, 107). When the user rights of these rural lands were allocated to farmers, the property rights remained in the hand of collective, meaning these farmers still do not fully own the land, even though they can decide what to produce and how to deal with the products. The HRS reform was considered by mainstream scholars (like Wang Xiaoqiang and Bai Nanfeng) in China as the "turning point" for the later take-off of economic development, as it increased the productive incentives of the farmers (Day 2013b, 40). However, there are also critiques. Wen Tiejun argued that HRS was a way for the state to offer land use rights in exchange for relinquishing responsibility of a series of social services in rural areas (like social insurance and education fees), which should be the state's responsibility (Wen 2012). He also argued that the state put some money into the left pocket of peasants, while taking other money out of their right pocket.

Amid these arguments, the HRS was maintained, but with several nuanced changes in the past four decades, especially with regard to (i) contracted land payment, and (ii) land circulation. Firstly, the cost of the contracted land changed both in form and amount with the fiscal system reforms. In the 1980s, agricultural tax and grain quotas were the "rent" paid by the farmers for the allocated land (Bernstein and Lü 2003). In the 1990s, the grain quotas were cancelled, but replaced by additional fees and charges called "Five Tongchou and Three Tiliu" [24] with the fiscal decentralisation (Kennedy 2007; Bernstein and Lü 2003; Oi 1992). In 2002, the fees and surcharges, as the main cause of the plight of peasants in China, were reduced and replaced with a "Tax for Fee" reform, part of the fiscal recentralisation (Kennedy 2013; Li 2007; Kennedy 2007). In 2006, this agricultural tax was completely abolished, and after the elimination of the agriculture tax, the user rights of rural land became "free" for Chinese farmers. Although the abolition of the agricultural tax seemed to reduce the burden of the peasants and create opportunities to increase rural governance (Day 2013a, 941), it actually produced a series of negative impacts, including the withdrawal of townships in the provision of social services (Kennedy 2007; Oi et al. 2012) and the accelerated extraction of public resource (such as land leasing) by local state aimed at compensating the loss of taxes and fees (Kennedy 2013, 1021; Day 2013a).

Secondly, although the total amount of farmland has not changed significantly since the HRS reform (see Figure 1), the circulation of distributed land under HRS has been boosted dramatically. The transfer rate of rural land had been very low in the 1980s, because rural land could "not be legally leased out for profit" according to the *Land Management Law* issued in 1986 (Hsing 2010, 1). As shown in a survey conducted by the Agricultural Department of China in 1990[25], the number of rural households that ever transferred their contracted land was more than 2 million, accounting for 0.9% of total HRS recipient households, and the area of transferred rural land accounted for 0.44% of the total farmland, which was 6379 thousand mu (425 thousand ha). However, in the 1990s, rural land circulations skyrocketed, as urban sprawl and marketization fuelled rapidly increasing land values

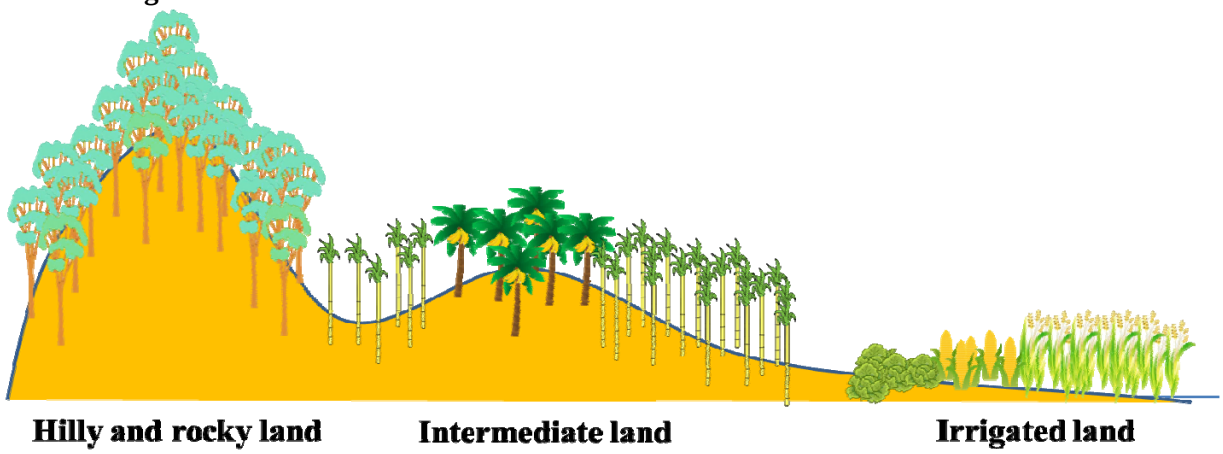
[24] It refers to the family planning, social special care, militia training, road construction and education fees at township level (five tongshou), pubic accumulation funds, public welfare funds and administration fees at village level (three tiliu). Besides, there are other charges for peasants, such as "self-raised funds" (jizi) and apportions (tanpian).

[25] Source: http://baike.baidu.com/view/15132539.htm?fromTaglist

(Hsing 2010, 1). This trend has continued, and by the end of 2008, the acreage of circulated (user right) rural land reached 109 million mu, or 8.9% of the total farmland in China. In February 2015, a new central government policy further freed the rural land market, by endowing the cirulation of rural lands' user rights with a legal position equal to that of urban lands, providing certain land-use provisions were met. This policy also increased peasant rights to include compensation for the loss of land.[26]

Echoing these institutional changes in the rural land property system, rural land relations in Guangxi also changed. Because of the large rural population and various land conditions in Guangxi, the land plots allocated to each household were not only tiny, but also spatially separated based on different land quality for the sake of fairness. As shown in Figure 9, one household may own several plots, and each plot is usually less than 0.5 ha. Some is irrigated "good" land which can produce crops with high requirements for soil (like rice and vegetables), some is less irrigated "intermediate land", which is suitable for crops like sugarcane and fruit trees, while other land is rocky and hilly and can only be used to plant commercial trees.

**Figure 1: A Rough Sketch of Different Plots of Land Allocated to Households under HRS**




Such land fragmentation is thought to be the main limitation for development in rural China. In order to concentrate the spatially separated land, the land concentration project named "*transforming small plots into large plots*" (*Xiaokuai bian dakuai*) was introduced in Guangxi. This project is the land exchange within the community, and it started in 1996.[27] In the beginning, such land concentration was driven by the villagers spontaneously to exchange the fragmented land awarded in the HRS reform (as mentioned above) based on social relations. Later, the state (referring to the local state from the provincial level) got involved and soon became the driving force. To be specific, in 2012 the provincial government provided the bonuses for those villagers, rural cooperatives and companies who invested in the land levelling and infrastructure construction (including the road and irrigation construction) to encourage land concentration.[28] The county government helped the villagers/rural communities seek loans and firms specialised in land levelling/infrastructures construction to facilitate the project. According to documents issued by the provincial government[29], the area of concentrated land is targeted to reach as much as 500000 mu in 2015 (equal to 33333 ha).

After the land exchange, the total area of the land owned by the household did not change[30], but

[26] http://news.xinhuanet.com/house/cs/2015-02-26/c_1114434777.htm
[27] http://www.gxny.gov.cn/web/2014-09/430710.htm
[28] http://www.gxcz.gov.cn/gxzzzzqczt/yfwlgk/gfxwj/bbmwj/jjjsgl/201411/t20141125_47036.html
[29] http://www.gxdlr.gov.cn/News/NewsShow.aspx?NewsId=9595
[30] According to the interview with staff working in the county government, the hectares of roads and irrigation were deducted, and then the land was redistributed to the villagers based on their share of the total area of their

the originally non-adjacent land became contiguous. This kind of land exchange, on one hand, simplified the ownership of the contiguous patches, which actually facilitates land investments by making the large-scale land circulation more convenient. On the other hand, it transformed production towards more machine-based value-added crops cultivation like eucalyptus trees, which enriched a group of villagers, especially the rural elites, village cadres and their relatives.

However, the forestland reform was a different story. In Guangxi, 10% of the forestland is owned by state forest farms, leaving 90% in the hands of the collective (see Table 3). Most of the collective forestlands in Guangxi were not contracted to the villagers, as the farmland in the HRS reform was, leaving the user rights vague until the collective forestland reform from 2008 to 2012[31]. The user rights of the collective forestland were, then, formally distributed and cleared, although most of the land is already used or occupied by internal villagers or external investors before the reform, especially since the reforest subsidy policy was issued in 2002[32].

**Table 1: Typology of Forestland in Guangxi around Property Rights (in 2010)**

| Types | Area (10000 ha) | Percentage |
|---|---|---|
| State forest farm-owned | 148,88 | 9,28% |
| Collective –owned | 1456,11 | 90,72% |
| Total | 1604,99 | 100,00% |

Source: Author's elaboration based on data from the present (2011) forestland use table in the *12th Five-year Plan of the Development of Eucalyptus in Guangxi (2010-2015)*[33]

Similarly, the labour conditions in Guangxi, like other regions of China, have changed significantly, mainly due to the massive rural-urban migration, which has taken a large number of labourers out of rural Guangxi. Such migration is always temporary. Some family members, usually the young and the strong ones, leave their villages and seek jobs in the cities. These people "generally take the heaviest and dirtiest jobs, are the most poorly paid, do not enjoy legal protections, and work without benefits or with reduced benefits" (Huang, Yuan, and Peng 2012, 141). The process of internal migration started from the 1980s (the de-collectivization reform period of China): *"As noted before contemporary Chinese history, young men migrated out to work in the first wave in 1980s, followed by middle-aged men and then young women. Finally, the tide of migration involved almost all capable labourers in rural communities"* (Ye et al. 2013, 1125). As shown in Figure 10, Guangxi is the 10th largest supply province of peasant workers. The accurate number of rural-urban migrant workers in Guangxi has reached 11.65 million in 2014, which equals more than one-fifth of the total population there.[34]

This internal migration – whether a forced survival option in the context of the current capitalist system (Bernstein 2010) or an active livelihood choice of the villagers to "form twin legs and/or crutches" (Huang, Yuan, and Peng 2012, 164) – has significantly changed the labour conditions in rural Guangxi, which has a great fit for the development of labour-saving crop[35], such as eucalyptus

originally owned land plots.

[31] http://www.gov.cn/jrzg/2012-10/29/content_2252860.htm

[32] Reforest subsidy, sponsored by the Chinese central government, is intended both to stop the abandonment of ample land due to immigration from rural to urban areas, and to improve the eco-environment at the same time. During the first round (from 2003 to 2011), the subsidy included 150 kilos rice per mu and 50 Yuan in cash for 8 years.

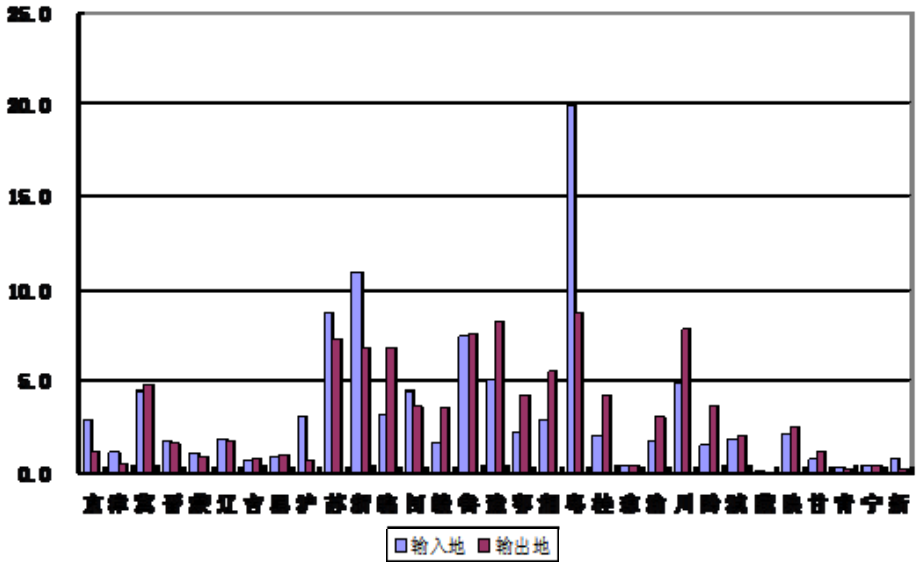
[33] 《广西桉树速生丰产用材林"十二五"发展规划》(2010-2015)

[34] Data source: http://www.gx.lss.gov.cn/7/2014_8_22/7_24715_1408713640588.html

[35] The trees only require labour in the first 6 months and during the harvest season (about 2 days per year per mu

trees. Consequently, in the rural villages of Guangxi, those households with family members as migrant workers are most likely to be the ones that plant eucalyptus trees if they have the land and capital. [36] However, the ITP sector can sometimes lead to adverse migration: in some cases, villagers who used to be migrant workers gave up their wage jobs in the urban areas to specialize in eucalyptus trees in rural areas[37].

**Figure 10: The Geographical Distribution of Peasant Workers in 2012**




Source: http://www.stats.gov.cn/tjsj/zxfb/201305/t20130527_12978.html

In the last 10 years, the land-labour conditions created by the institutional context discussed above in Guangxi were the cornerstone for further land circulation. However, the land investments, mainly for the expansion of ITPs, need not only institutional arrangement, but also financial support.

## 5 Land Concentration, Domestic and Foreign Investment

There were three different patterns of land investment driven by different financial sources which directly or indirectly facilitated the development of the ITP sector, namely: (i) the land investment driven by the villagers/rural cooperatives, (ii) the land deals driven by the private corporations, especially transnational corporations (TNCs), and (iii) land leasing driven by state farms.

In Guangxi, several land investments in the ITP sector were driven by individual rural households or cooperatives. Those individual rural investors were mainly so-called “large households” (*Da hu*), meaning households possessing the natural, social or economic capital (as classified by Ian Scoones 1998). They leased the land from the village collectives or neighbours (sometimes with financial support from relatives and/or banks), conducted the large-scale mechanised industrial agricultural production, and sold their products either directly to processing companies or indirectly to the middlemen. This latter arrangement usually occurs in places where transportation systems are less developed or where the scale of ITPs is relatively small. The rural cooperatives, which are mainly organised by these “large households”, carry out similar practices as do individual rural households, except for two things: the funds are raised from cooperative members, and the profits are distributed

on average) according to information gathered from fieldwork in Guangxi.
[36] Information from the interviews with villagers, 07 and 28 Mar 2015
[37] Information from the group discussion on 13 Apr 2015

based on the shares of these members.

The second pattern is land investment driven by private corporations, mainly in two sub-forms. Firstly, these companies lease land from either the state or villagers to build their ITP production bases. Secondly, they contract independent growers to get raw materials (mainly eucalyptus trees) at a certain price with the provision of (sometimes the subsidies for) seed, technology and other chemical inputs. These land investors are mainly domestic agribusiness corporations, including those local "dragon head enterprises" (which means the leading companies in a sector) (Schneider and Sharma 2014, 24) and state-owned farms, but transnational companies (TNC) are also involved in Guangxi's land complex. It is an anomaly as Chinese companies go abroad in search of resources, while they seem to provide foreign companies with easy access to their own resources in Guangxi.

For a better understanding of this TNC-driven land investment in Guangxi, the mechanism of land investment from two foreign investors – Stora Enso (Finland) and APP (Indonesia) – were deconstructed. Five main characteristics of their land investment can be detected. Firstly, the capital involved in land deals undertaken by these two foreign investors is very intensive, with 12.8 billion Yuan in the Stora Enso case and 40 billion Yuan in the APP case. Secondly, these two paper giants have invested in Chinese land for raw material provision on an incredibly large scale. As shown in Table 4, the ITPs owned by Stora Enso had reached 90.2 thousand ha by 2010, with sites located in Beihai, Nanning, Qinlian and Yunlin, while APP had 106.7 thousand ha ITPs in Qinzhou, Nanning and Wuzhou.[38] Thirdly, TNC-driven land investments, according to the rules in China, must also involve domestic capital, which is denoted as a 15% share of Guangxi Guihai Co. Ltd (a sub-corporation of Guangxi Forestry Group, a company set up by the Guangxi Forest Department in the Stora Enso Guangxi[39]. Fourthly, the foreign companies' access to land is more or less facilitated by the state. For Stora Enso, more than 80% of their forestland is transferred from 8 state-owned forest farms through the state-backed company, Guangxi Forestry Group. Additionally, 41.9% of the APP's forestland in Guangxi is accessed through a similar approach from 5 state-owned forest farms. Fifthly, these transnational land deals have provoked a myriad of conflicts with villagers. Some of these conflicts are related to the compensation of land expropriation, as the conflicts between Stora Enso and the villagers in Hepu, Guangxi (Ping and Nielsen 2010). Further, some resistance from villagers has emerged in response to the negative impacts of ITPs on the local ecological environment[40].

**Table 2: The Two Main Foreign Investors in Guangxi**

| **Name** | **Nationality of the company** | **Started year** | **Investment (billion Yuan)** | **Planned ITPs scale** | | | **Present (2011) ITPs scale (1000 ha)** |
|---|---|---|---|---|---|---|---|
| | | | | State land (1000 ha) | Social land (1000 ha) | Total area (1000 ha) | |
| **Stora Enso** | Finland | 2002 | 12.8 | 96.67 | 23.33 | 120.00 | 90.2 |
| **APP** | Indonesia | 1995 | 40.0 | 44.67 | 62.00 | 106.67 | 106.67 |

Source: The official website of Guangxi Forestry Group[41], Stora Enso website[42] and APP website[43].

[38] Beihai, Nanning, Qinlian, Yunlin and Wuzhou are all cities in Guangxi.
[39] http://www.sdpc.gov.cn/zcfb/zcfbtz/201406/t20140609_614572.html
[40] The ITP's fast-growing feature is linked to sharp demands of water and soil nutrition within a short growth period (Calder et al. 1997; Calder 2003). The genetically modified characteristics of the tree crops, on the other hand, may inevitably affect the balance of the natural ecosystem. Moreover, the industrial production mode, especially the chemical fertilizers and herbicides used, aggravates the environmental and ecological destruction.
[41] http://www.gxlyjt.com/news/shownews.php?lang=cn&id=163
http://www.gxlyjt.com/news/shownews.php?lang=cn&id=164
[42] http://www.beihai365.com/bbs/m/iphonetest/read.php?tid=3443840&onlylz=1
[43] http://www.appjg.com.cn/Content.aspx?SiteID=1&ModuleID=2&PageID=2&DataID=10709

Compared with foreign investor-driven land investments, the scale of land leasing led by the state farms[44] is considerable, if not larger. At Gaofeng Forest Farm, for example, more than 65.7% of the forestland is leased from smallholders in order to fill the land shortage caused by land leasing to foreign companies (Stora Enso). Additionally, according to interviews with staff working in state farms, most of the land leased by these state farms is used to grow eucalyptus trees to provide raw materials for board/panel production intended for the domestic market.

Such land investments driven by different financial capital sources are closely interlinked to the rise of the ITP sector. On one hand, both domestic and foreign capital involved in land investments creates the required conditions for the expansion of ITPs. On the other hand, more financial capital is and will be mobilized to flow in along with the investment boom in the ITP sector.

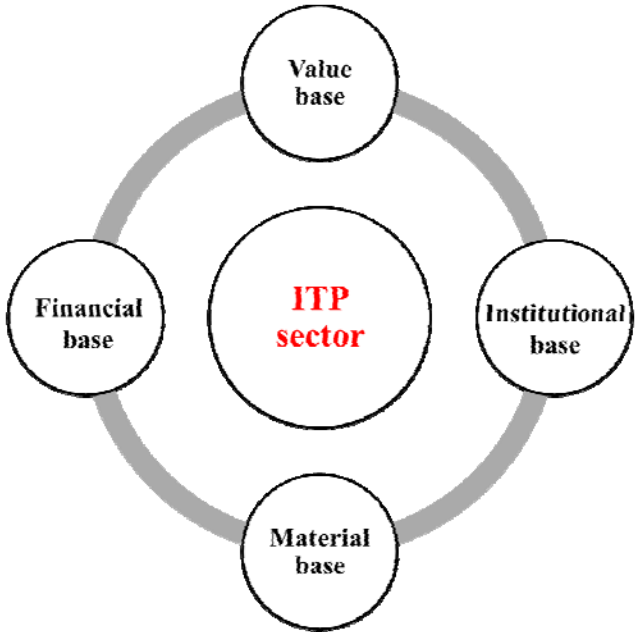
# 6 Conclusions

The emergence and the expansion of the ITP sector cannot be simply concluded as the result of the factors analysed above. Rather, it has more complicated dynamics due to (1) the coupled relations between the factors, and (2) the various livelihood choices made by the villagers[45]. Firstly, the value, the material, the institutional and the financial bases for the rise of the ITP sector discussed above are intertwined, as shown in Figure 11. The technological development on the cultivation of industrial tree crops is stimulated by the high economic value of ITPs driven by the huge domestic demands. Further, the technological development enhanced the economic feature of industrial crops, such as the faster growth rate. Labour and land conditions in Guangxi, transformed by massive internal migration and rural land reform, also made it possible for the emergence of ITPs, which are characterized as land-intensive and labour-saving. With the development of the ITP sector, land was further concentrated and labour continually migrated, making the land and labour conditions in rural Guangxi more favourable for the expansion of the ITP sector. Similarly, financial capital is attracted by economic features, which are strengthened by technological developments and suitable land and labour conditions – both by nature and nurtured by the institutional environments. The large-scale investments driven by the capital from both inside and outside China are not only the main driving force for technological development, but also transformed the land-labour condition, with changes in land control and agrarian structures.

[44] State farms used to be part of the state and later was partly separated to be financially "independent" from the state after "the state farms commercialization reform" (Bank 1988). But the state farms were originally invested in by the state, and much of the land and other means of production still belong to the state.

[45] The livelihood choices made by the villagers are not fully free, but embedded in the existing power structure, as observed by Borras and Franco (2012, 52): "while land-based wealth and power transfers do occur, access to and control over land is further concentrated in the hands of dominant social classes and groups: landed classes, capitalists, corporate entities, state or other dominant community groups such as village chiefs."

**Figure 2: Intertwined Factors for the Rise of the ITP Sector**




Besides the complex linkages within these factors, the trajectory of the ITP sector is further complicated by the reshuffling of land-labour relations, based on the livelihood choices and different forms of capital owned by these villagers. Some villagers leased the land to their neighbours, private companies (both domestic and international), or state-owned forest farms, in order to plant eucalyptus trees, unlock the capital tied up in land, and transfer cultivation risks. A small part of these land leasers later were employed by these companies/farms (which are involved in the eucalyptus tree productions) as either farm or off-farm workers, which is closer to the framing of McCarthy (2010) on various conditions of *(adverse) incorporation*[46]. Other villagers left the land completely and became landless surplus labourers seeking wage work in urban areas, which is an emblematic example of what Tania Li (2011) argues: "when their land is needed, but their labour is not".

When some lost the land, others had their land size increased. They leased land from their neighbours and became either independent growers in hope of higher economic profits or the out-growers of large business in the hope of reducing risks. These rural villagers are always called "new middle farmers", because their agricultural production is still household based without hiring other wage labourers (Chen 2013).

Not all of the villagers embrace the expansion of the ITP sector; there are also many recurring conflicts in and linked to the ITP sector in southern China. But it is not a simple panorama of villagers resisting against 'foreign land grabbers' or 'state land expropriation'. These political conflicts are far more varied for their causes and character, reflecting what Borras, Franco, and Wang (2013) have argued more broadly. The issues in these conflicts range from illegal land occupation or land usurpation to underpaid/unpaid land rent, underpaid labour in ITPs, and environmental issues. Some villagers are resisting large-scale enclosure of their lands, as in the large Behai special economic zone in Guangxi, while others are mobilizing against 'brokers' such as Guangxi Forestry Group who get big cuts from land lease, and still others are mobilizing in order to get incorporated into the ITP value chain under favourable terms. Mobilizations and protests around environmental issues have also

[46] The notion of adverse incorporation, "as a fairly broad critique of neoliberal accounts of poverty and development", refers to "the risks and disadvantages of inclusion and participation in unregulated capitalist markets" (du Toit 2009, 2).

become an increasing basis of collective action.[47] There are other issues that are complicated by the involvement of actors external to the ITP sector – such as the sugarcane producers, who are also interested in the very land that is being absorbed by the ITP sector.

The internet and social media are common venues for many of these protests. Villagers have posted their grievances about eucalyptus tree plantations on the Internet, such as through "Weibo" (the Chinese version of Twitter), or on a web forum. Due to the promotion of rural informatization in China, most of the peasants currently have Internet access, which makes it possible to resist through this means. The anonymous feature of the Internet reduces the cost and risk of their resistance, and the broad reach of the Internet makes it easier to raise public concern. When a piece of news about illegal forestland expropriation is posted on Weibo (especially if there are photographs to prove it), it may be shared millions of times within a couple of minutes and will soon get the public's attention, as well as that of the authorities. Of course, public actions are not limited to the Internet and social media. There are actual actions in the villages, commune centres and cities.

These resistances have become the limiting factor for the expansion of the ITP sector. Considering the resistance from below the ITPs generate, some counties in Guangxi and Guangdong have issued policies to stop the planting of eucalyptus trees and plan to completely remove the ITPs already planted.[48]

In short, the rise of the ITP sector is pushed by the domestic demand for products, the agronomic conditions in southern China, the institutional conditions of land control and labour in rural China, and the financial capital from both domestic and international sources. Underlying these dynamics, the villagers' differing livelihood choices also play a role in either promoting or impeding the development of the ITP sector in southern China.

Then, based on the discussion above, further questions arise: who wins and who loses with the expansion of the ITP sector, and why? How are the villagers' land rights and labour conditions, as well as the state policies (at a national and local level) shaping and being shaped by the contours and trajectories of the ITP sector? What are the implications of the ITP sector on rural villagers in southern China in terms of the political economy of their livelihoods, and how have key actors (state, corporate, villagers) (re)shaped one another? All of these deserve more careful and systematic study in the future.

## References


Amanor, K. S. 2012. "Global resource grabs, agribusiness concentration and the smallholder: two West African case studies." *Journal of Peasant Studies* no. 39 (3-4):731-749. doi: Doi 10.1080/03066150.2012.676543.

Benjaminsen, T. A., and I. Bryceson. 2012. "Conservation, green/blue grabbing and accumulation by dispossession in Tanzania." *Journal of Peasant Studies* no. 39 (2):335-355. doi: Doi 10.1080/03066150.2012.667405.

Bernstein, Henry. 2010. *Class dynamics of agrarian change*. Vol. 1: Kumarian Press.

Bernstein, Thomas P, and Xiaobo Lü. 2003. *Taxation without representation in contemporary rural China*. Vol. 37: Cambridge University Press.

Borras S. M., Jennifer C Franco, and Chunyu Wang. 2013. "The challenge of global governance of land grabbing: changing international agricultural context and competing political views and strategies." *Globalizations* no. 10 (1):161-179.


[47] It is different from the finding of Deng and Yang (2013, 321) in the face of real and serious pollution, villagers may seek to redress environmental grievances by piggybacking on politically favourable issues"

[48] http://news.sohu.com/20060411/n242749631.shtml, http://www.eeo.com.cn/2014/0815/264952.shtml

Borras S. M., Ruth Hall, Ian Scoones, Ben White, and Wendy Wolford. 2011. "Towards a better understanding of global land grabbing: an editorial introduction." *The Journal of Peasant Studies* no. 38 (2):209-216.

Borras, S. M., and J. C. Franco. 2012. "Global Land Grabbing and Trajectories of Agrarian Change: A Preliminary Analysis." *Journal of Agrarian Change* no. 12 (1):34-59. doi: DOI 10.1111/j.1471-0366.2011.00339.x.

Borras, S. M., J. C. Franco, S. Gomez, C. Kay, and M. Spoor. 2012. "Land grabbing in Latin America and the Caribbean." *Journal of Peasant Studies* no. 39 (3-4):845-872. doi: Doi 10.1080/03066150.2012.679931.

Borras, S. M., Jennifer C Franco, Ryan Isakson, Les Levidow, and Pietje Vervest. 2014. "Towards Understanding the Politics of Flex Crops and Commodities: Implications for Research and Policy Advocacy."

Brautigam, D., and H. Zhang. 2013. "Green Dreams: Myth and Reality in China's Agricultural Investment in Africa."*Third World Quarterly* no. 34 (9):1676-1696. doi: Doi 10.1080/01436597.2013.843846.

Buckley, L. 2013. "Chinese Land-Based Interventions in Senegal." *Development and Change* no. 44 (2):429-450. doi: Doi 10.1111/Dech.12016.

Calder, Ian R. 2003. "2 Eucalyptus, water and the environment." *Eucalyptus: The Genus Eucalyptus*:36.

Calder, Ian R, Paul TW Rosier, KT Prasanna, and S Parameswarappa. 1997. "Eucalyptus water use greater than rainfall input-possible explanation from southern India." *Hydrology and Earth System Sciences Discussions* no. 1 (2):249-256.

Carrere, Ricardo, and Larry Lohmann. 1996. *Pulping the South: Industrial Tree Plnatations and the Global PaperEconomy*: Zed Books Ltd.

Chen, Yiyuan. 2013. "Zibenzhuyi shi jiating nongchang de xingqi yu nongye jingying zhuti fenhua de zai sikao [The rise of Capitalist Family Farms and a reflection on the differentiation of agricultural subjects]." *Kaifang shidai [Open Times]* no. 4:137-156.

Day, A. F. 2013a. "A century of rural self-governance reforms: reimagining rural Chinese society in the post-taxation era." *Journal of Peasant Studies* no. 40 (6):929-954. doi: Doi 10.1080/03066150.2013.859138.

Day, Alexander F. 2013b. *The peasant in postsocialist China: History, politics, and capitalism*: Cambridge University Press.

Deng, Y. H., and G. B. Yang. 2013. "Pollution and Protest in China: Environmental Mobilization in Context." *China Quarterly* (214):321-336. doi: Doi 10.1017/S0305741013000659.

du Toit, Andries. 2009. "Adverse Incorporation and Agrarian Policy in South Africa." *Cape Town*.

Edelman, M. 2013. "Messy hectares: questions about the epistemology of land grabbing data." *Journal of Peasant Studies* no. 40 (3):485-501. doi: Doi 10.1080/03066150.2013.801340.

Edelman, M., C. Oya, and S. M. Borras. 2013. "Global Land Grabs: historical processes, theoretical and methodological implications and current trajectories." *Third World Quarterly* no. 34 (9):1517-1531. doi: Doi 10.1080/01436597.2013.850190.

FAO. 2010. Global Forest Resources Assessment. In *FAO Forestry Paper*. http://www.fao.org/docrep/013/i1757e/i1757e.pdf.

Gerber, Julien-François. 2011. "Conflicts over industrial tree plantations in the South: Who, how and why?" *Global Environmental Change* no. 21 (1):165-176. doi: 10.1016/j.gloenvcha.2010.09.005.

Gerber, Julien-FranÇOis, and Sandra Veuthey. 2010. "Plantations, Resistance and the Greening of the Agrarian Question in Coastal Ecuador." *Journal of Agrarian Change* no. 10 (4):455-481. doi: 10.1111/j.1471-0366.2010.00265.x.

Hall, D. 2011. "Land grabs, land control, and Southeast Asian crop booms." *Journal of Peasant*

*Studies* no. 38 (4):837-857. doi: Doi 10.1080/03066150.2011.607706.

Hsing, You-tien. 2010. *The great urban transformation: politics of land and property in China, OUP Catalogue*. New York: Oxford University Press.

Huang, P. C. C., G. Yuan, and Y. S. Peng. 2012. "Capitalization without Proletarianization in China's Agricultural Development." *Modern China* no. 38 (2):139-173. doi: Doi 10.1177/0097700411435620.

Kennedy, J. J. 2007. "From the tax-for-fee reform to the abolition of agricultural taxes: The impact on township governments in North-West China." *China Quarterly* (189):43-59. doi: Doi 10.1017/S0305741006000798.

———. 2013. "Finance and rural governance: centralization and local challenges." *Journal of Peasant Studies* no. 40 (6):1009-1026. doi: Doi 10.1080/03066150.2013.866096.

Kroger, M. 2012. "The Expansion of Industrial Tree Plantations and Dispossession in Brazil." *Development and Change* no. 43 (4):947-973. doi: DOI 10.1111/j.1467-7660.2012.01787.x.

———. 2013. "Globalization as the 'Pulping' of Landscapes: Forestry Capitalism's North-South Territorial Accumulation." *Globalizations* no. 10 (6):837-853. doi: Doi 10.1080/14747731.2013.814433.

———. 2014. "The political economy of global tree plantation expansion: a review." *Journal of Peasant Studies* no. 41 (2):235-261. doi: Doi 10.1080/03066150.2014.890596.

Kröger, Markus. 2014a. "Flex trees: political and rural dimensions in new uses of tree-based commodities." *Think Piece Series on Flex Crops & Commodities*:1-14.

———. 2014b. "The political economy of global tree plantation expansion: a review." *The Journal of Peasant Studies* no. 41 (2).

Li, Linda Chelan. 2007. "Working for the peasants? Strategic interactions and unintended consequences in the Chinese rural tax reform." *The China Journal*:89-106.

McCarthy, John F. 2010. "Processes of inclusion and adverse incorporation: oil palm and agrarian change in Sumatra, Indonesia." *The Journal of Peasant Studies* no. 37 (4):821-850.

Oi, J. C. 1992. "Fiscal Reform and the Economic Foundations of Local State Corporatism in China." *World Politics* no. 45 (1):99-126. doi: Doi 10.2307/2010520.

Oi, J. C., K. S. Babiarz, L. X. Zhang, R. F. Luo, and S. Rozelle. 2012. "Shifting Fiscal Control to Limit Cadre Power in China's Townships and Villages." *China Quarterly* (211):649-675. doi: Doi 10.1017/S0305741012000823.

Overbeek W, Kröger M, Gerber J-F. 2012. An overview of industrial tree plantation conflicts in the global South.Conflicts, trends, and resistance struggles. In.*EJOLT Report No. 3*.

Oya, C. 2013. "Methodological reflections on "land grab' databases and the "land grab' literature "rush'." *Journal of Peasant Studies* no. 40 (3):503-520. doi: Doi 10.1080/03066150.2013.799465.

Pang, Zhenghong. *The General Development Status of Eucalyptus Tree Plantation in Guangxi Province* 2006. Available from http://www.wendangxiazai.com/b-b00a1628bd64783e09122bac.html.

Ping, Li, and Robin Nielsen. 2010. "A Case Study on Large-Scale Forestland Acquisition in China." *The Stora Enso plantation project in Hepu County, Guangxi Province. Rights and Resources Initiative, Washington DC*.

Schneider, M. L., and Shefali Sharma. 2014. "China's Pork Miracle? Agribusiness and Development in China's Pork Industry."

Scoones, I., R. Hall, S. M. Borras, B. White, and W. Wolford. 2013. "The politics of evidence: methodologies for understanding the global land rush." *Journal of Peasant Studies* no. 40 (3):469-483. doi: Doi 10.1080/03066150.2013.801341.

Scoones, Ian. 1998. "Sustainable rural livelihoods: a framework for analysis."

Sheldon, F. H., and A. R. Styring. 2011. "Bird Diversity Differs between Industrial Tree Plantations on

Borneo: Implications for Conservation Planning." *Raffles Bulletin of Zoology* no. 59 (2):295-309.
Siciliano, Giuseppina. 2013. "The social and environmental implications of urbanization strategies and domestic land grabbing in China."
———. 2014. "Rural‐Urban Migration and Domestic Land Grabbing in China." *Population, Space and Place* no. 20 (4):333-351.
Sikor, T. 2011. *Financing household tree plantations in Vietnam: Current programmes and future options*. Bogor, Indonesia: Center for International Forestry Research (CIFOR).
Unger, Jonathan. 2002. *The transformation of rural China*: ME Sharpe.
Visser, O., N. Mamonova, and M. Spoor. 2012. "Oligarchs, megafarms and land reserves: understanding land grabbing in Russia." *Journal of Peasant Studies* no. 39 (3-4):899-931. doi: Doi 10.1080/03066150.2012.675574.
Wen, Tiejun. 2012. Ba ci weiji yu ruan zhuoluo [Eight crises and soft landing]. In *Renwen yu shehui*.
World Bank. 1988. China - State Farms Commercialization Project. In *World Development Sources*. Washington, DC.
Ye, J. Z., C. Y. Wang, H. F. Wu, C. Z. He, and J. Liu. 2013. "Internal migration and left-behind populations in China." *Journal of Peasant Studies* no. 40 (6):1119-1146. doi: Doi 10.1080/03066150.2013.861421.
Zhang, Q. F., and J. A. Donaldson. 2010. "From Peasants to Farmers: Peasant Differentiation, Labor Regimes, and Land-Rights Institutions in China's Agrarian Transition." *Politics & Society* no. 38 (4):458-489. doi: Doi 10.1177/0032329210381236.

## 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

**Yunan Xu** is a PhD Candidate at the International Institute of Social Studies (ISS) in The Netherlands, funded by the China Scholarship Council (CSC). Her research interests include industrial tree plantations, land, agrarian development, rural capitalism and food safety. Email: yunan@iss.nl.