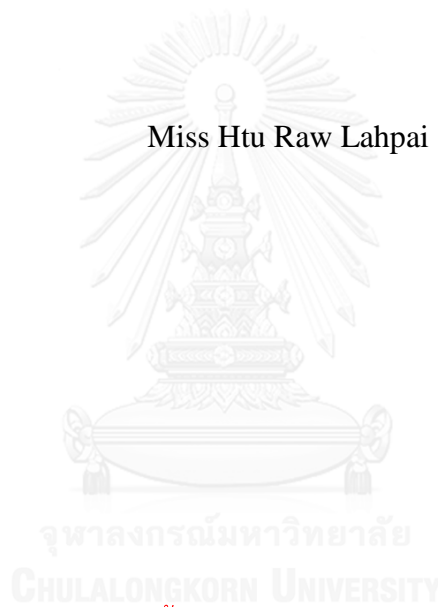


CONTRACT FARMING IN A CONFLICT ZONE: A CASE STUDY OF MANSI
TOWNSHIP, KACHIN STATE, MYANMAR

Miss Htu Raw Lahpai



บทคัดย่อและแฟ้มข้อมูลฉบับเต็มของวิทยานิพนธ์ตั้งแต่ปีการศึกษา 2554 ที่ให้บริการในคลังปัญญาจุฬาฯ (CUIR)
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เกษตรพันธุวิทยาในเขตความขัดแย้ง: กรณีศึกษาเมืองมานซี รัฐคะฉิ่น ประเทศเมียนมาร์



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต

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ทู รอร์ ละห์ไป : เกษตรพันธสัญญาในเขตความขัดแย้ง: กรณีศึกษาเมืองมานซี รัฐคะฉิ่น ประเทศเมียนมาร์ (CONTRACT FARMING IN A CONFLICT ZONE: A CASE STUDY OF MANSI TOWNSHIP, KACHIN STATE, MYANMAR)

อ.ที่ปรึกษาวิทยานิพนธ์หลัก: คาร์ล มิดเดิลตัน, 170 หน้า.

ชาวไร่ในเมืองมานซี ซึ่งเป็นพื้นที่ภายใต้การควบคุมของกลุ่มประชาธิปไตยชนชั้นสูงหรือ KIO ได้มีการทำไร่อ้อยแบบพันธสัญญาภายใต้โครงการเพาะปลูกฝิ่นทดแทนของรัฐบาลจีน ตั้งแต่ปี ค.ศ. 2005 เป็นต้นมา คำถามหลักของงานวิจัยนี้คือ อะไรคือโอกาสและความท้าทายของการทำไร่อ้อยแบบพันธสัญญา ในเมืองมานซี ภายใต้โครงการเพาะปลูกฝิ่นทดแทนของรัฐบาลจีน ในเรื่องการพัฒ นาวิถีชีวิตของชาวไร่ และการพัฒนาที่ทำไร่ได้อย่างสันติ? วิทยานิพนธ์ฉบับนี้ใช้วิธีการวิจัยเชิงคุณภาพ, การวิจัยเชิงสถิติพรรณนา ที่ประกอบไปด้วย การอภิปรายเชิงกลุ่ม, การสัมภาษณ์กลุ่มผู้ให้ข้อมูลหลัก, การสัมภาษณ์เชิงลึก และการสัมภาษณ์แบบกึ่งโครงสร้าง วิทยานิพนธ์ฉบับนี้แสดงให้เห็นว่าการ เปลี่ยนแปลง ในเชิงการพัฒนาเกิดขึ้นอย่างมากในเมืองมานซี ตามรอยชายแดนระหว่างประเทศจีนและรัฐคะฉิ่น ของพม่า เช่น เรื่องโครงสร้างพื้นฐาน, การอพยพย้ายถิ่น, เงื่อนไขทางสังคมและเศรษฐกิจ, พื้นที่การเพาะปลูกและระบบการเมือง เมื่อพิจารณาถึงผลลัพธ์ ของการทำไร่ แบบพันธสัญญา ได้เกิดผลกระทบทั้งทางบวกและทางลบต่อชาวไร่อ้อยรวมถึงพื้นที่ชายแดนทั้งหมด ยกตัวอย่างเช่น ชาวไร่อ้อยสามารถ เข้าถึงเงินในทางสังคมและ เศรษฐกิจที่ดีขึ้น ภายหลังที่มีผลผลิตเกิดขึ้น แต่ชาวไร่อ้อยยังคง เผชิญกับผลกระทบเชิงลบบ้างทั้งในเรื่องสุขภาพและระดับของคุณภาพดินที่เสื่อมลง สถานการณ์เช่นนี้แสดงให้เห็นถึงความย้อนแย้งที่มีต่อชาวไร่ ที่ถึงแม้ว่าการทำไร่อ้อยในปัจจุบันจะไม่เป็นที่น่าพอใจ และยังมีทางเลือก ที่จำกัดมากของโอกาสที่จะมีชีวิตที่ดีในอนาคต แต่การกลับไปใช้ชีวิตแบบในอดีต ลูจะเป็นทางเลือก ก็ที่ไม่เหมาะนักเพราะ ชาวไร่มีรายได้ไม่เพียงพอ

วิทยานิพนธ์ฉบับนี้ใช้แนวคิดเรื่องระบบทุนนิยมในสภาวะการหยุดยิง (Ceasefire Capitalism Concept) ในการวิเคราะห์ ซึ่งเป็น กระบวนการ การสร้างรัฐโดยรัฐบาลกลางและการลงทุนด้านเกษตรกรรมของเงินภายใต้โครงการการปลูกฝิ่นทดแทนของรัฐบาลจีน อย่างไรก็ตาม ในพื้นที่เมืองมานซีบริเวณที่เป็นชายแดนติด ประเทศจีนยังคงถูกควบคุมโดยกลุ่ม KIO ซึ่งมีแนวทางเป็น ของตัวเองในเรื่อง การสร้างรัฐภายใต้การลงทุนของรัฐบาลจีนที่ช่วยให้วิถีชีวิตของชาวไร่ดีขึ้น แต่เนื่องจากเกิด เหตุปะทะกันในปีค.ศ. 2011 การทำไร่จึงอยู่ภายใต้ ความกดดันจาก ความขัดแย้ง อย่างไรก็ตาม ในปัจจุบันพื้นที่ส่วนนี้มีความสงบสุขขึ้นเนื่องจากประเทศจีนและพม่ามีความสัมพันธ์ที่ดี แต่ความสงบสุขนี้อาจจะคาดการณ์ไม่ได้ในระยะยาว โดยสรุป สถานการณ์ของการทำไร่อ้อยแบบพันธสัญญาในเมืองมานซี แสดงให้เห็นอย่างชัดเจนถึงผลประโยชน์ มากมายต่อชาวไร่อ้อย อย่างไรก็ตาม ยังมีความเสียหายจำนวนมากเกิดขึ้นกับชาวไร่ อีกทั้งยังมีความกังวลในเรื่อง ความปลอดภัยในพื้นที่ชายแ คนทั้งหมด วิทยานิพนธ์ฉบับนี้แสดงให้เห็นอีกว่าความเป็นอยู่ของชาวไร่อ้อยและสันติสุขคือปัจจัยที่สำคัญและเกี่ยวเนื่องกันมากที่สุด ในการสร้าง ความท้าทายและโอกาสทั้งในสภาวะ ภายใต้สถานการณ์ความขัดแย้งในปัจจุบันเช่นเดียวกับการหยุดยิงที่อาจเกิดขึ้นใหม่อีกครั้งในอนาคต



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ปีการศึกษา 2559

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Farmers from Mansi Township under KIO-controlled area have been doing sugarcane contract farming under China's Opium Substitution Programme since 2005 up until the present. The main thesis question is: what are the opportunities and challenges for sugarcane contract farming in Mansi Township under China's Opium Substitution Programme, in terms of improving farmer livelihoods and enabling peaceful development? The thesis is based on both qualitative and descriptive statistical research that involved focus group discussions, key informant interviews, in-depth interviews, and semi-structured interviews.

The thesis finds that there have been major development changes in the Mansi Township Kachin-China border in terms of infrastructure, migration, socio-economic conditions, farming land, and the political system. Regarding the results of contract farming, there have been both positive and negative impacts on farmers and on the whole border area. For instance, farmers have had access to better social and economic conditions since sugarcane production began, but face some significant negative impacts on their health and the level of soil degradation. This situation presents a dilemma to farmers; although currently sugarcane farming is not satisfying, there is a very limited choice of future livelihood opportunities and going back to the past is not favourable since there was not enough income.

The thesis is framed by the ceasefire capitalism concept, which was a process of state building by the central government with Chinese agricultural investment under China's Opium Substitution Programme. However, the Mansi Township area on the border with China area is controlled by KIO and has its own way to approach state building under Chinese investment, which has encouraged farmers' livelihoods. Due to conflict breaking out in 2011, farming is under the pressure of conflict. However, currently the area is peaceful as there is a constant relationship between Chinese and Myanmar, even though it is not sure to remain peaceful.

Overall, the status of sugarcane contract farming in Mansi Township clearly offers great benefits to farmers. Nevertheless, many costs remain for farmers and there are security concerns for the whole border. Moreover, the thesis shows that farmers' livelihoods and peace are the most important and interconnecting factors that create challenges and opportunities both under the current conflict situation as well as if there were to be a new ceasefire again in the future.

Field of Study: International Development Studies
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Student's Signature
Advisor's Signature

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List of Abbreviation

ASEAN	Association of Southeast Asian Nations
CPB	Communist Party of Burma
CF	Contract Farming
CCF	Conflict Contract Farming
CP	Charoen Pokphand
DBANR	Development of Border Areas and National Races
IDPs	Internally Displaced People
KIO	Kachin Independence Organization
KIA	Kachin Independence Army
MOAI	Ministry of Agriculture and Irrigation
NGOs	Non-governmental Organization
NDA-K	New Democratic Army, Kachin
NC	National Convention
NLD	National League for Democracy
NCA	Nationwide Ceasefire Agreement
RSCPF	Ruili Sugarcane Production Factory
SLORC	State Law and Order Restoration Council
SPDC	State Peace and Development Council
UN	United Nations
UNDP	Nations Development Programme
USDEA	US Drug Enforcement Administration
UNODC	United Nation Office on Drugs and Crime
UNFDAC	United Nation Fund for Drug Abuse and Control
UNGASS	United Nations General Assembly Special Session
UNIDCP	United Nations International Drug Control Programme
WFP	World Food Programme

List of Key terms and Definitions

Acre	A unit of land area equal to 4,840 square yards (0.405 hectare)
Burman	The Burmese ethnic group of Myanmar
Ceasefire Capitalism	This refers to military-state building of central government through trans-national businessmen, ethnic political elites that together reconstruct a political-economy. Moreover, this involves the capture of finance, landscape production, governance and military state formation within the ceasefire space.
Mu	Refers to Chinese mu, with one mu equal to 666.7 square meters
Nung Wu Yen	The middlemen of the Ruili Sugarcane Production Factory (RSPF)
RMB	Chinese currency
Tsu Jang	The village sugarcane contact person

CHAPTER I INTRODUCTION

1.1 Thesis Statement

This thesis is about sugarcane conflict contract farming in Mansi Township, Kachin State, Myanmar and it focuses specifically on KIO controlled area. One can say that the contract farming area, however, is located between Chinese and central government (Tatmadaw) controlled areas. The thesis focuses on the periods before contract farming, during the ceasefire agreement and until the present.

The main argument that this thesis makes is, firstly, that the major development changes over the land and the people in this area started after the 1994 ceasefire agreement and the sugarcane contract farming is a key factor that changed farmers' livelihoods. The second argument is that farmers had transformed from subsistence to contract farming and begun to gain some income, which helped their socio-economic development. However, the biggest costs involved in sugarcane production were in particular land degradation and health impacts. Therefore, there is a dilemma for farmers at the moment because sugarcane causes many undesirable consequences during the production process, while there is not much choice and it is also impossible to go back to the past with subsistence farming and no opportunity for income generation. Finally, the thesis argues that after the 2011 conflict, while some parts of Mansi Township had been under conflict, this border area remains peaceful at the moment. This is especially due to the peaceful Chinese-Myanmar relationship, but it is unsure whether the Tatmadaw will respect and maintain this relationship or if the Tatmadaw will choose to fight with the intention to control the border territory.

1.2 Background of the Study

After Burma's¹ independence from Britain in 1948, in the 1950s and 1960s the ethnic minorities rebelled amid growing discontent. A sense of betrayal prevailed amid perceptions that the central government was ignoring their interests and realities due to the failed 1947 Panglong Agreement that promised autonomy and wealth

¹ Myanmar is also known by its earlier name of Burma. In 1989, the country's official name changed to Myanmar.

sharing. Moreover, in 1962, General Ne Win's military coup created further mistrust of the central government (Burmese military government) among several ethnic groups and led to decades of conflict (Jaquet, 2015). The Tatmadaw² deployed military forces and fought all across Kachin State, along with other ethnic areas. As a result, Myanmar became known worldwide for hosting the longest running civil war in the world. This conflict lasted approximately six decades until right before the quasi-civilian democratic government was nominated in 2011. The Burmese military government did not occupy and win over the ethnic political armed groups' territory throughout the fighting years. Rather, the ceasefire agreements brought the Burmese military government greater control over the land and the people, especially in the China border in northern Burma (Woods, 2011)³.

Regarding armed groups in Kachin State, there were two main ethnic armed groups; the New Democratic Army - Kachin (NDA-K) and the Kachin Independence Organization (KIO)⁴. Ceasefire agreements resulted in changes in politics in Kachin State, because the Burmese military government built a close relationship with armed groups and sought to build their influence during the ceasefire, including through expanding markets (in particular for timber) with links to cross-border trade with Chinese companies. Moreover, the Tatmadaw expansion into Kachin State increased more following the ceasefire than before. At the same time, since the year 2000, the Burmese military government also extended its business interests beyond logging to include control over the use of land, including existing agricultural land and upland systems, through industrial agriculture concession arrangements such as China's Opium Substitution Programme (Kramer & Woods, 2012).

The people of Mansi Township Kachin-China border have experienced three periods of change over the past thirty years. Before 1991, opium was produced as a

² The name for the Myanmar Armed Forces.

³ It refers to southeastern Kachin State (around Myitkyina and Bhamo), northern Shan State (around Lashio and Kutkai) and northeastern Shan State (Wa and Kokang areas), all of which border Yunnan Province, China.

⁴ The KIO is one of the ethnic political armed groups fighting for self-determination for their people and state. The KIO was founded in 1961. From 1961-1993 they were fighting against Tatmadaw in Kachin and Northern Shan State, until the KIO signed a cease-fire agreement in 1994. The ceasefire ended in 2011, when a new armed conflict broke out between the Tatmadaw and KIA.

traditional farming activity in the area. However, from 1991 to 2005, farmers were forcefully required to stop opium production by the KIO and became subsistence farmers growing rice. From 2005 to the present, farmers have moved to sugarcane production according to new features of China's Opium Substitution Programme. In regards to sugarcane farming, this shift raises the question that this thesis will address: *What are the opportunities and challenges to farmers, including the related environmental, economic, societal impacts, armed conflict and peace?*

With regards to opium production, this has long been a major part of agricultural practices in the past. The Kachins are predominantly agrarian people, who practice highland swidden agriculture. In other words, they practice traditional farmland shifting in agro-forest upland areas⁵. This is a major reason why many Kachins have traditionally chosen to grow opium. During the colonial era, opium was illegal on paper and farmers growing it could not evade paying bribes to colonial government administration for opium production⁶. After the colonial era, opium remained a major cash crop along the Chinese Border Mountains (Lintner, 1997). Opium production was not practiced by Kachin farmers solely for their livelihoods. Opium production was also related to the political armed conflict legacies of the Kachin State. For example, between 1986 and 1996, the infamous political armed group Communist Party of Burma (CPB) had developed the opium and heroin plantations in the northern Burma border area. As a result, opium and heroin production in Myanmar increased dramatically and the now disbanded CPB became the "most heavily-armed drug trafficking organization in Southeast Asia" at that time (Smith, 2012, p. 24).

Therefore, from 1961-1994, the KIO was fighting several enemies simultaneously, including the fight for opium eradication and against the Tatmadaw. Even though opium production provided a small income benefit to farmers, the civilians were addicted to it. Thus, KIO introduced a ban on opium production in

⁵ E.g. taungya in Burmese.

⁶ It was less work and resulted in a good income from cash sales to buy rice and other necessities from the lowland, which were incentive enough for them to grow opium.

1991, as it recognized that opium created social problems and hindered their commitment to justice and development. Moreover, KIO and Tatmadaw were fighting in the area, with the civilians suffering the brunt of the conflicts which produced casualties, displacement, abuse and instability (Dean, 2012; Smith, 2012). Despite the conflict, the KIO administration maintained civilians' health, education, justice and development (Smith, 2012). In government controlled areas, although Burma's military government administration was under-resourced and lacked commitment, basic services had been provided with the most visible interventions in education and healthcare sector.

In the years from 1991 to 2005, several momentous transformations happened in Kachin State, and these changes seriously affected its landscape and the people. Firstly, the KIO and Burmese military government signed a ceasefire agreement in Myitkyina⁷ in 1994. The agreement involved a range of political, economic, and legal ties between the Burmese and Kachin authorities. This resulted in a dramatic increase in the extraction of natural resources and exploitation through open trade with the Chinese. As mentioned above, the Burmese military expansion of the Tatmadaw resulted in human rights violations against the Kachin by the Tatmadaw, including forced labour, rape, land confiscation, murder, torture and other abuses, mostly in the shared territory areas and areas under Burmese military government control (Gravers & Ytzen, 2014; Smith, 2012). Even as the Burmese military government provoked Kachins, the KIO tried to be patient and did not react to human rights violations inflicted by the Tatmadaw on Kachin civilians and KIO soldiers, as the KIO was trying to respect the ceasefire agreement.

Moreover, despite the opium ban, production has unfortunately been gradually increasing since the ceasefire in some parts of Kachin State in areas under the control of the Tatmadaw (Dean, 2012). The terms of the Tatmadaw control of the opium production have attracted Chinese businessmen into Kachin State from neighbouring Yunnan province to also illegally invest in opium (Dean, 2012). In terms of opium eradication, the Burmese military government did not initiate its own

⁷ Capital of Kachin State.

solution to eradicate it, but rather China's Opium Substitution Programme was introduced as a solution in Kachin State. Under this programme, many different mono-crops were introduced to be grown as alternatives to opium, such as sugarcane, watermelon, rice, banana, tea and large-scale rubber plantations according to the characteristics of the landscape (Kramer & Woods, 2012).

The Mansi Township Kachin-China border started growing sugarcane under a Chinese government agency named 'Opium Substitution to Plant Varieties of Sugarcane'.⁸ Within this agency, the Yunnan provincial sugarcane office operates a company named the 'Yunnan Dehong Yingmao Sugar Co. Ltd'.⁹ In turn, this company coordinates with the Ruili Sugarcane Production Factory (RSPF),¹⁰ which operates in Mansi Township. Contracts to grow sugarcane between the farmers and KIO/RSPF have been signed since 2005 and exist under China's Opium Substitution Programme. However, it is important to note that this area of Mansi Township Kachin-China border has not actually been growing opium since 1991, due to forced eradication according to a KIO policy.

Whilst there was generally good implementation of the Opium Substitution Programme, the ceasefire agreement was broken and ended between the Tatmadaw and the KIO on June 9, 2011 (Gravers & Ytzen, 2014)¹¹. Due to the conflict, some agricultural plantations fell within the war zone. However, more than 76,000 mu of Mansi Township's sugarcane production area have continued to produce, even though the conflict continues to overwhelm Kachin State (Interview KIO -2, 3 May, 2016).

The purpose of this research is to study the effects on farmers' livelihoods in Mansi Township Kachin-China border of contract farming under China's Opium Substitution Programme. Moreover, this research will cover the perspectives of socio-

⁸The Chinese translation is 罂粟替代种植品种甘蔗, pronounced as "Yingli Tidai Zhonzhi Pinzhon Gan Zhe" in Chinese.

⁹ The Chinese translation is 云南德宏英茂糖业有限公司, pronounced as "Yunnan Dehong Yingmao Tangye Youxian Gongsi" in Chinese.

¹⁰ The Chinese translation is 瑞丽糖厂. Ruili Sugarcane Production Factory is pronounced in as "Ruili Tang Chang" in Chinese.

¹¹ This was less than three months after the new, nominally civilian Myanmar government took power.

economic, environmental and political transformation as a result of significant changes to the agricultural methods in this area. The research will understand and evaluate what differences are present now that sugarcane farming is practiced, as both the landscape and peoples' lifestyles are very different than during the past three decades when opium and then rice were grown. The research will seek to understand and evaluate what cost and benefit outcomes have been seen currently in this remote area of Mansi Township Kachin-China border.



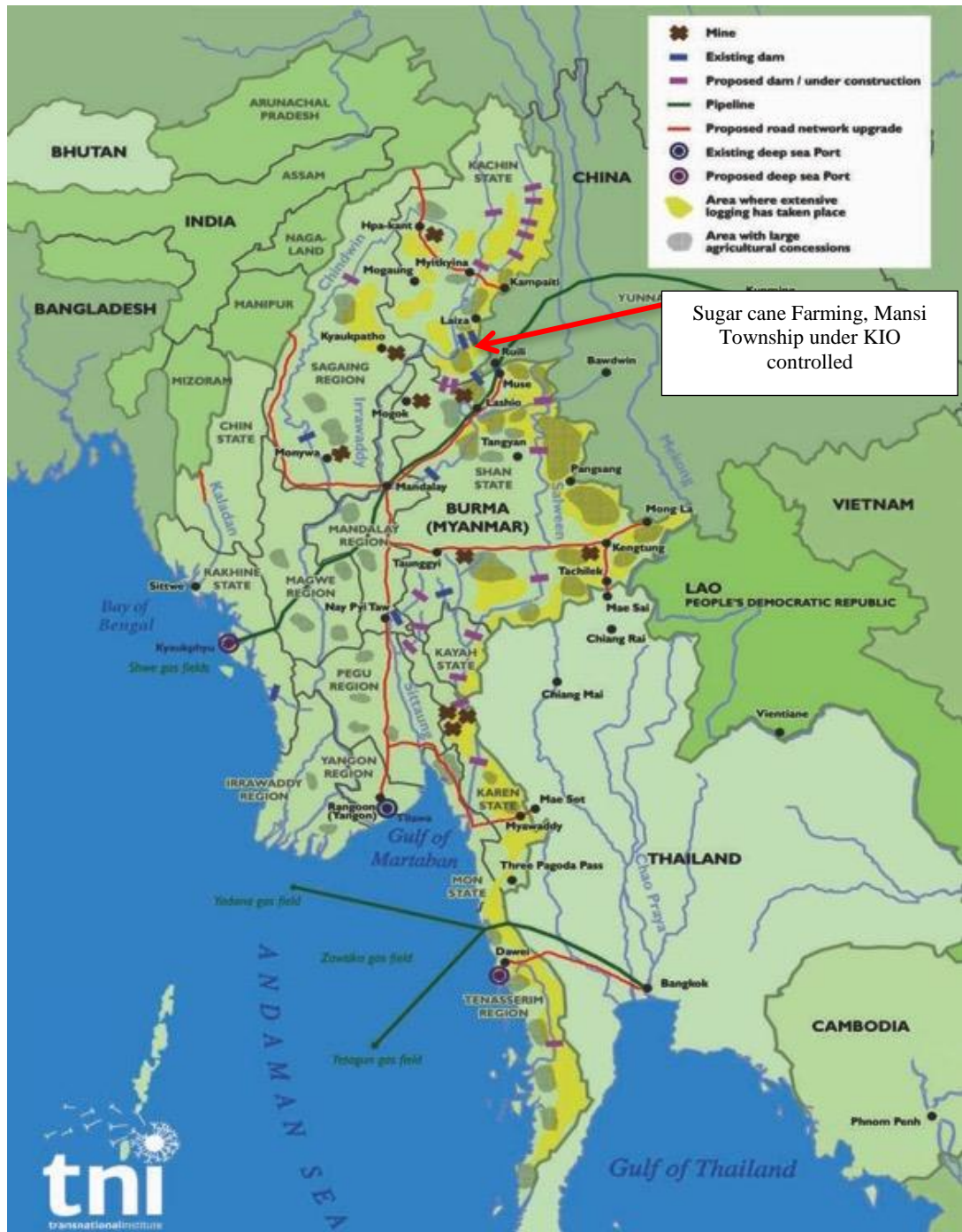


Figure 1 Map of Myanmar Kachin-China borders, including resources, agricultural concessions, and existing and planned development projects

Source: TNI website <https://www.tni.org/en/publication/map-of-myanmar-borderlands>

(Last accessed on 20 March, 2016)

1.3 Research Question

The main research question that this thesis will address is, “What are the opportunities and challenges for sugarcane contract farming in Mansi Township under China’s Opium Substitution Programme, in terms of improving farmer livelihoods and enabling peaceful development?”. This will include asking the following questions:

1. What have been the major developmental changes in Mansi Township over the past thirty years?
2. What is the contract structure for sugarcane production and how is it implemented?
3. What are the costs and benefits of the recent sugarcane farming cultivation including environmental and social impacts, and why were farmers growing it?
4. How is sugarcane contract farming shaping (the absence of) conflict in the Mansi Township Kachin-China border, taking account of the interests and roles of the KIO, the Myanmar government and the Chinese government?¹²

1.4 Objective of the Study

The key objective of this research is to address the opportunities and challenges for sugarcane contract farming in Mansi Township under China’s Opium Substitution Programme, in terms of improving farmer livelihoods and enabling peaceful development.

The research also aims to;

1. To determine the major developmental changes in Mansi Township over the past thirty years.
2. To identify the contract farming structure for sugarcane production and its implementation process. .
3. To find out the costs and benefits of the recent sugarcane farming cultivation including its environmental and social impacts and the reason farmers are growing it.

¹² For security reason, the researcher was not able to have an interview with the China or Myanmar government, but relied on secondary sources (see Table 2).

4. To examine how sugarcane contract farming is shaping (the absence of) conflict in the Mansi Township Kachin-China border, taking account of the interests and roles of the KIO, the Myanmar government and the Chinese government.

1.5 Conceptual Framework: Conflict Contract Farming

Two key ideas will be used in the conceptual framework of this research; firstly contract farming (see section 1.5.1) and secondly ‘ceasefire capitalism’ (see section 1.5.2).

1.5.1 Contract Farming

The broad definition of contract farming is described as the existence of pre-agreed supply agreements between farmers and a given company. It typically involves bundles of separate contracts between a company and (a grouping of) local farmers. Contract farming arrangements vary widely depending on the countries, crops and companies involved. Usually, local farmers grow and deliver agricultural produce at specified quantities and quality levels by an agreed date. In exchange, the company provides upfront inputs, such as credits, seeds, fertilisers, pesticides and technical advice, all of which may be charged against the final purchase price. In addition, contract farming includes an agreement by the company to buy the produce supplied, usually at a specified price. The price is usually fixed through an amount indicated in the contract, but is in some cases determined by reference to spot-market prices (Vermeulen & Cotula, 2010). The two parties are interdependent and risk is allocated between farmers and the company in all the processing and exporting. The farmers have an obligation to produce and supply the volumes and qualities as specified. On the other hand, the company also has to respond by purchasing the goods and realising payments as agreed. Thus, in a sense contract farming can be defined more as a partnership business between farmers and companies (Eaton & Shepherd, 2001).

The literature contains numerous definitions of contract farming. The following are two definitions:

“a binding arrangement between a firm (contractor) and an individual producer (contractee) in the form of a ‘forward agreement’ with well-defined obligations and remuneration for tasks done, often with specifications on product properties such as volume, quality, and timing of delivery” (Catelo and Castales, 2008; cited by Prowse, 2012:10).

“an institutional agreement that links farmers to consumers in foreign and domestic markets and links farmers to vital inputs. Under a typical contract agreement, the contracting firm agrees to purchase a specific commodity at an agreed up on price and time, while the farmer agrees to supply the contracted quantities at the specific quality standards. The contracting firm also agrees to provide the farmer with production inputs and in-kind credit, to be reimbursed by the farmer at the time of sale” (Sununtar et al. 2008:1; cited by Antonella, 2008:11).

Contract farming does not necessarily only take place between farmers and a company, but may also involve the role of government. In this case, contract farming can be understood as a political incentive plan. This is evident in the case of Laos and Myanmar, whereby border contract farming under China’s Opium Substitution Programme was enabled through agriculture concession policies in order to eradicate opium cultivation with the intent to share peaceful borders, including agri-business ties with neighbouring countries (Kramer & Woods, 2012). Antonella (2008) argues that the recent surge of contract farming in Luang Namthan in Laos created new agricultural sector policies by the Laos national government and trans-national policies between Laos and China in matters of foreign investment, drug control, and import-export agreements. A similar argument might apply to the Mansi Township Kachin-China border.

1.5.1.1 Contract Farming Model

Contract farming can be structured according to the different variety of crops involved, depending upon the objectives and resources of the company and the experience of the farmers (Eaton & Shepherd, 2001). The following contract farming

models were documented by Vermeulen and Cotula (2010) and Eaton and Shepherd (2001).

1. **Highly centralized models**, where an agribusiness company buys produce from a large number of smallholders, with tight controls over quality and quantity.
2. **The nucleus estate model**, where the agribusiness company combines contract farming (“out-growers”) with direct involvement in production through a plantation estate.
3. **The multipartite model**, whereby farmers sign contracts with a joint venture established between an agribusiness company and a local entity (i.e. a government agency, a local company, or a corporate body representing local farmers).
4. **The informal model**, where more informal verbal purchase agreements are signed on a seasonal basis, with inputs provided by the company often being restricted to seeds and fertilizers, and;
5. **The intermediary model**, whereby an agribusiness company may have contracts with intermediaries, who then sign contracts with a larger number of farmers.

Ideally contract farming is based on an agribusiness model where farmers are voluntary participants. The company designs the business to gain benefits from the crop production and investment of inputs into farming (Eaton & Shepherd, 2001). Under China’s Opium Substitution Programme, however, contract farming is not always mutual, constant and successful (Antonella, 2008). Furthermore, in Kachin State the conflict could pose problems for farmers as well as to the company. In other words, contract farming in a conflict area (including under China’s Opium Substitution Programme) presents quite a unique situation compared to normal arrangements for contract farming.

In the case of China’s Opium Substitution Programme for contract farming in Laos, Antonella (2008) states that there is both informal contract farming with small investors and/or ‘phi-nong’ (relatives and peers), as well as formal contract farming with (foreign) investors. Antonella (2008) also shows the contract farming hierarchy

and the agreement-making process in which the provincial level contracts, district level contracts, and village level contracts are prepared.

In the following diagram, there are two different types of sugarcane production models to compare and analyse. Figure 2 is a “*multipartite model*” which is commonly used in China. In this model, there are some similarities with the Mansi Township conflict contract model, such as the project and village committees (responsible for farmer selection), and the committee selection of representatives for villages. Figure 3 has been termed for this research as the *conflict contract farming model*. In this model, the programme policy is enacted first by the Yunnan provincial government, and secondly by the Ruili Sugarcane Production Factory (RSPF) that is assigned to co-operate with the government. The RSPF manager then signs the contract with the Division Authority of the KIO administration. The middlemen from the factory, called *Nung Wu Yen*, continue to deal with the village sugarcane contact person, who is selected as the representative of sugarcane farming households, called-*Tsu Jang*. Finally the sugarcane farmers work under the *Tsu Jang*, who undertakes all processing in terms of sharing fertilizer, data collection and arranging for harvesting, amongst other functions.

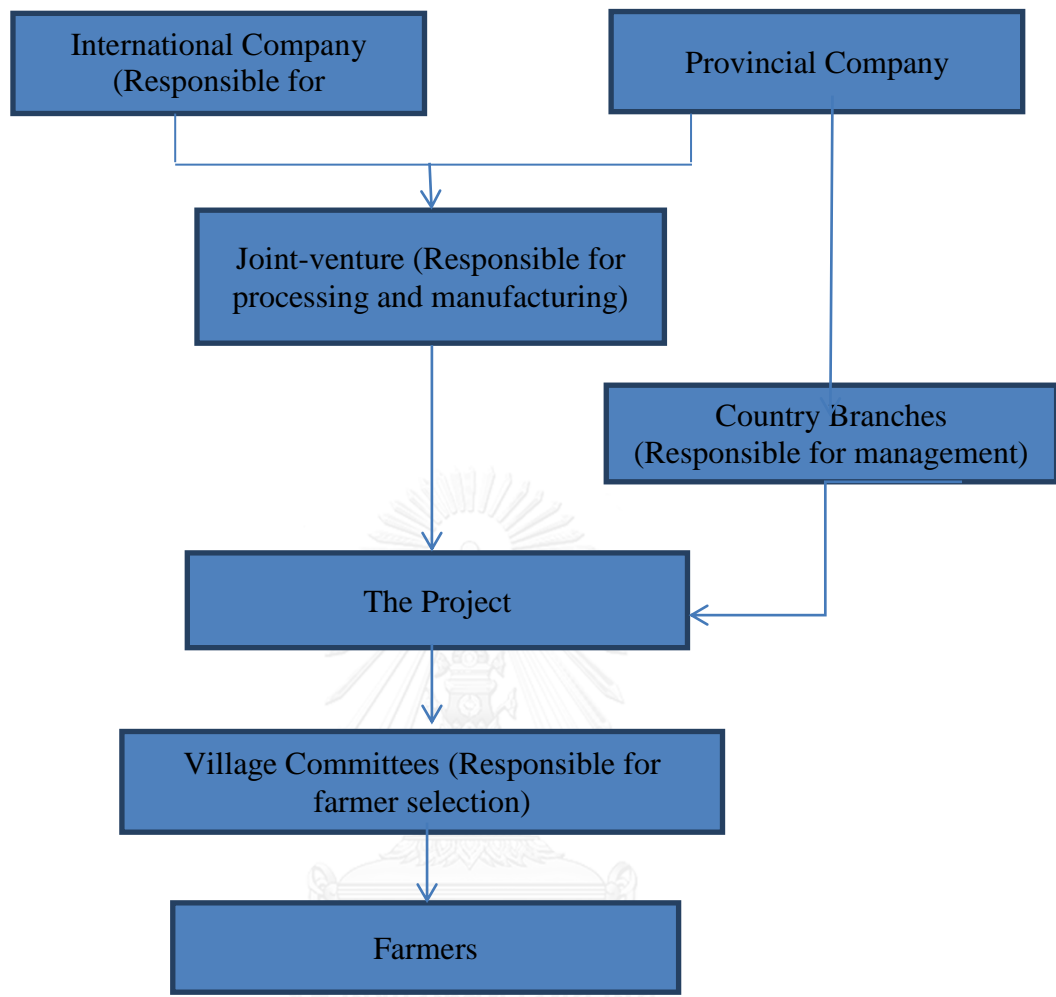


Figure 2 The Multipartite Model (Eaton & Shepherd, 2001, p. 51)

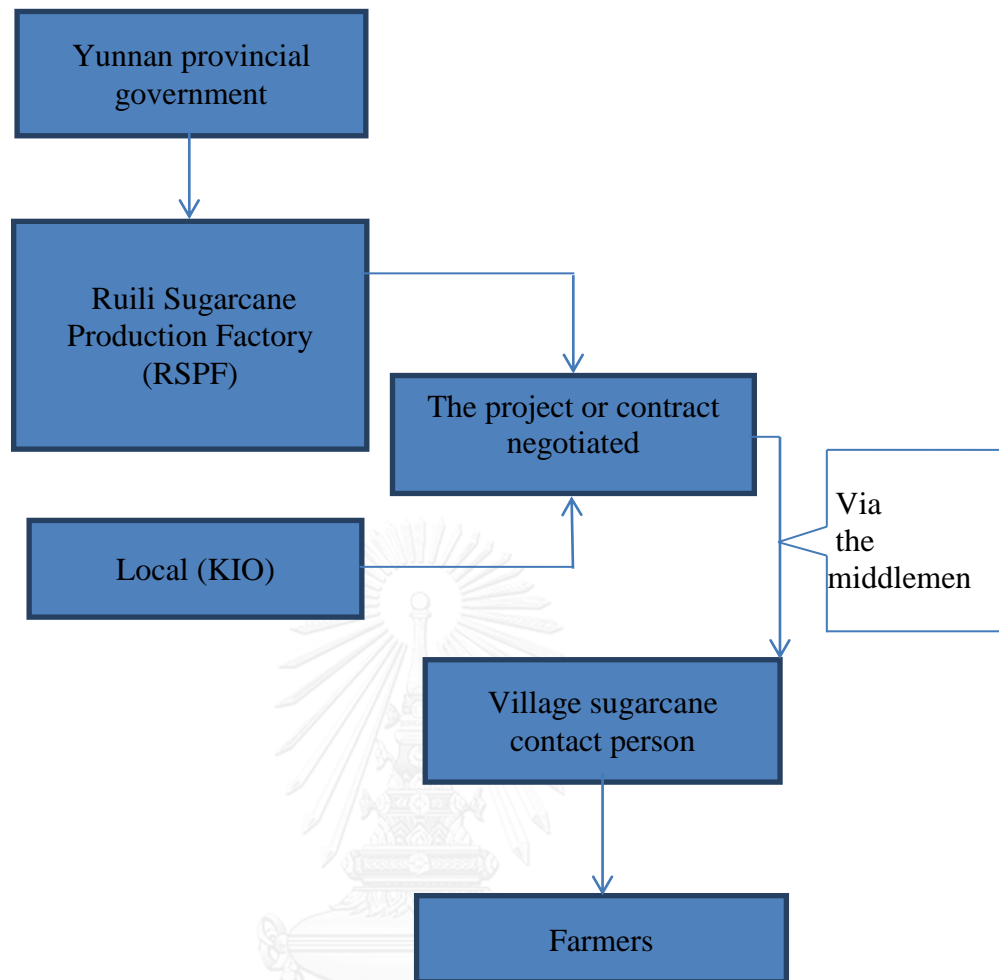


Figure 3 Conflict Contract Farming Model

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1.5.1.2 The Costs and Benefits (for farmers, the company and government)

Contract farming's primary objective is to improve the income and productivity of farmers by ensuring risk minimization, access to markets and economies of scale (Nguyen, Dzator, & Nadolny, 2015). However, there are many existing literature documents which have elaborated on the costs and benefits to contract farmers, companies and the government of general small-scale contract farming (see Table 1).

Table 1 Costs and Benefits to Farmers, the Company and Governments.

<i>Benefits of contract farming to farmers</i>	<ul style="list-style-type: none"> • To participate in new high value product markets • May stabilise farmers' income • Credit may be accessed as collateral • Farmers may gain access to seeds and technologies
<i>Costs of contract farming to farmers</i>	<ul style="list-style-type: none"> • Process of deciding quality, quantity, characteristics and timing may be dominated by the company • The crop buying process may be exploited by the middlemen, or suppliers themselves may be corrupt and dishonest • The market could become unstable and collapse • Farmers can face challenges when a new crop is introduced • Risk of health violations due to the use of lots of chemicals • Risk of going into debt due to failed production • Some companies ignore the possibility of dealing with small-scale farmers
<i>Benefits of contract farming to the company</i>	<ul style="list-style-type: none"> • Small-scale production may be more cost effective than large-scale production • Small-scale farmers can produce high quality produce • The company can control the production process in order to meet standardised quality requirements • Farmers take responsibility and share risk with the company
<i>Costs of contract farming to the company</i>	<ul style="list-style-type: none"> • Possibility of landlord disputes and evictions • Farmers may withdraw from the contract • Market competition can increase, especially when the outside market price is high
<i>Benefits of contract farming to the</i>	<ul style="list-style-type: none"> • Increased income through tax revenue • Increased land taxes from production farming

<i>government</i>	
<i>Costs of contract farming to the government</i>	<ul style="list-style-type: none"> • Land degradation in the specific areas • May affect sovereignty issues

Sources: (daSilva, 2005; Eaton & Shepherd, 2001; Glover & Kusterer, 1990; Miyata, Minot, & HU, 2009; Prowse, 2012; Vermeulen & Cotula, 2010).

1.5.2 Ceasefire Capitalism

Ceasefire capitalism emerges through collaborative actions between the central government, (trans-) national businessmen and ethnic political elites that together reconstruct a political-economic and biophysical frontier landscape increasingly conducive to military-state control (Woods, 2011). In the case of Kachin State, after the ceasefire, the state has controlled the Kachin-China border through the creation of market and finance capital networks with the Chinese, especially through the creation of logging and industrial agriculture concessions by building relationships with local elites and local businessmen for business-partnerships in governing the Kachin-China border. Many Chinese investors came into Kachin State that previously could not have operated until the ceasefire agreement was formally signed (Woods, 2011).

The first path to ceasefire capitalism was the logging concession; this was done with cooperation between the local elites of China and Myanmar. The timber trade widely started in the 1990s, and resulted in high levels of deforestation in Kachin State forest. Logging turned large areas of Kachin State into barren land and seriously damaged the environment as a result of political-business transactions (Kramer & Woods, 2012).

Overall, the Burmese regime has the ambition to strengthen its military-state presence in the ethnic border areas (Woods, 2011). Therefore, the second step towards ceasefire capitalism was the creation of agriculture. The deforestation created through logging concessions became a root cause to subsequently invest in agricultural concessions instead, and this further allowed the Burmese military government to influence the border area. Rubber was the main commodity used to establish sedentary agriculture to control Kachin-China border. The purpose of rubber

production was to stabilise the land and the people in the same place working under Chinese and Myanmar business elites as well as local elites to govern together. In other words, the central government can control and regulate the area on a long-term basis.

Ceasefire capitalism captures modes of finance, landscape production, governance, and military state formation within the ceasefire space (Woods, 2011). The Burmese military government influences the land through logging concessions and agriculture that result in it gaining more territory, not only through the extraction of natural resources but also through the increased migration and settlement of the Burman population in Kachin State. Thus, the ceasefire has brought many problems for the local Kachin people rather than a true progression towards peace, and has only strengthened the military government's influence after the ceasefire (Woods, 2011).

Whilst the process of ceasefire capitalism occurred in most areas of Kachin State, it did not happen in this was in the Mansi Township Kachin-China border. However, the concept provides some useful insights, and is thus relevant. The process of ceasefire capitalism described above explains how rubber concessions replaced the logging concessions that had created barren land. However, in Mansi Township, sugarcane farming spread as a form of sedentary agriculture but there were no logging concessions first and sugarcane production was not governed by the Burmese military government. Nonetheless, the ceasefire was still important, as it was during this period that the landscape changed due to Chinese agricultural concessions under China's Opium Substitution Programme and governed under the KIO. That is to say, without the ceasefire and the peace it brought there would have been no Chinese investment in the Kachin-China border.

To understand the Mansi Township Kachin-China border, insights can be drawn from ceasefire capitalism in two ways. First, Mansi Township is an illegal timber trade route benefiting the Chinese, the Burmese military government and the

KIO.¹³ Since 2011, conflict broke out in Kachin State, but cooperation continued between business elites and the Burmese military government to undertake logging and then export the logs across the KIO border area into China. This route helps to conceal the role of the Burmese government in the trade from the international community's attention because the route is a periphery border area defined as an illegal trade route beyond the central government's control. However, in practice, the Burmese military through this informal arrangement have some control over the territory because they permit access to it.

Secondly, in contrast to 'ceasefire capitalism' areas where there is a three-way relationship between the Tatmadaw, Chinese investors and the KIO around agricultural concessions (mainly rubber), in Mansi township the arrangement is mainly between the KIO and the Chinese investors with the farmers in the form of contract farming. In this case, the Tatmadaw in the post-ceasefire period appears unwilling to push for territorial control because it would now entail fighting with the KIA, in the process seriously affecting Chinese investment, Chinese citizens, and China's opium substitution programme. Ultimately, it would harm China-Myanmar relations, and weaken the Myanmar central government's position. In other words, under the current conditions, the stronger form of state building from the Myanmar central government's perspective is to *not* control the border. Thus, the sugarcane contract farming in Mansi Township is particularly important to understand the current situation, which is here called 'conflict contract farming', introduced above in section 1.5.1.1 and Figure 3.

1.6 Research Methodology

1.6.1 Overview of Method

In this research both qualitative and descriptive statistic methods were used on collected data and analysed (Table 2). Field research was conducted in two different

¹³ Some interviewees argued that the benefits of logging extraction benefit are gained mainly by businessmen of China/Myanmar and the Burmese military, and the KIO receives only limited benefits in the form of a customs stamp fee (Interview KIO-2, 3 May, 2016).

villages, namely Gai Daw and Dum Buk.¹⁴ These villages have participated in contract farming since the beginning of the project, are located next to the China border and both have similar landscapes. For the qualitative research, data was collected first using open-ended questions in focus group discussion, then in-depth interviews to gain a deeper understanding about the area and impact of sugarcane production. Additional data was collected through key informant interviews and field observation. For research using descriptive statistic methods, semi-structured questionnaires were used for random individual interviews. Research was conducted from 27 April to 19 May, 2016. During data collection, the researcher worked with two youth from the villages, who served as guides and facilitators.

- The semi-structured interview of farmers' households involved twenty-five people per village, in total fifty people in two different villages.
- Regarding focus group discussions, the respondents included between five to six participants in each group discussion, resulting in 40 participants in total.
- The in-depth interviews were done with four people per village, involving in total 8 people from two different villages.
- Overall 18 key informants were interviewed. The targeted key informants included the KIO, elderly, community chief, village sugar contact persons, NGOs, and the middlemen of sugarcane production factory.
- The field observation was conducted mostly during focus group discussions and in-depth interviews as well as by spending time with the community during the three-week research period.

Table 2 Methodology Matrix and Interview Strategy

Research Questions	Data Needed	From where	Tools of data collection
What have been the major developmental changes in	Major Development changes - Socio-economic, environmental, and	- Farmers	- Focus group interview - Individual interview

¹⁴ Dum Buk is the official name of the Military Government and also called "Bum Tsit Pa" by KIO.

Mansi Township over the past thirty years?	local economy changes - Agricultural changes (type of crop, extent of crops, how many farmers, why farming changed) - Migration and movement of people - Local infrastructure - Political changes	- KIO	- Expert Interview - Secondary data and report
		- Elders, religious leaders, village heads, sugarcane contact persons and middlemen.	- Expert Interview
What is the contract structure for sugarcane production and how is it implemented?	Process of farming production - Contractual arrangements - Sugarcane farming process from beginning to end	- Farmers	- Focus group interview - Individual interview
		- KIO	- Expert Interview - Secondary data, contract papers and report
		- Elders, religious leaders, village heads, sugarcane contact persons, and middlemen.	- Expert Interview
What are the costs and benefits of the recent sugarcane farming cultivation	The impact of farming - What are positive and negative changes? - How does it support families? - Why did farmers	- Farmers	- Focus group interview - Individual interview
		- KIO	- Expert Interview - Secondary Data, contract papers

including environmental and social impacts, and why were farmers growing it?	decide to grow it? - What are the resulting social changes? -What are the environmental changes?		and report - Expert Interview
How is sugarcane contract farming shaping (the absence of) conflict in the Mansi Township Kachin-China border (see section 1.3)	Perspective of Ceasefire - Relationship between the ceasefire and sugarcane production - Kachin-China border changes	- Farmers	- Focus group interview - Individual interview
	Ceasefire Interests	-KIO	- Expert Interview - Secondary Data, contract papers and report
	- Interests and roles of KIO - Interests and roles of the Chinese government and Myanmar government		- Secondary Data
		- Elders, religious leaders, village heads, sugarcane contact persons, and middlemen.	- Expert Interview



Figure 4 This photo shows Gai Daw Village. (Photograph by researcher, 19 May 2016).

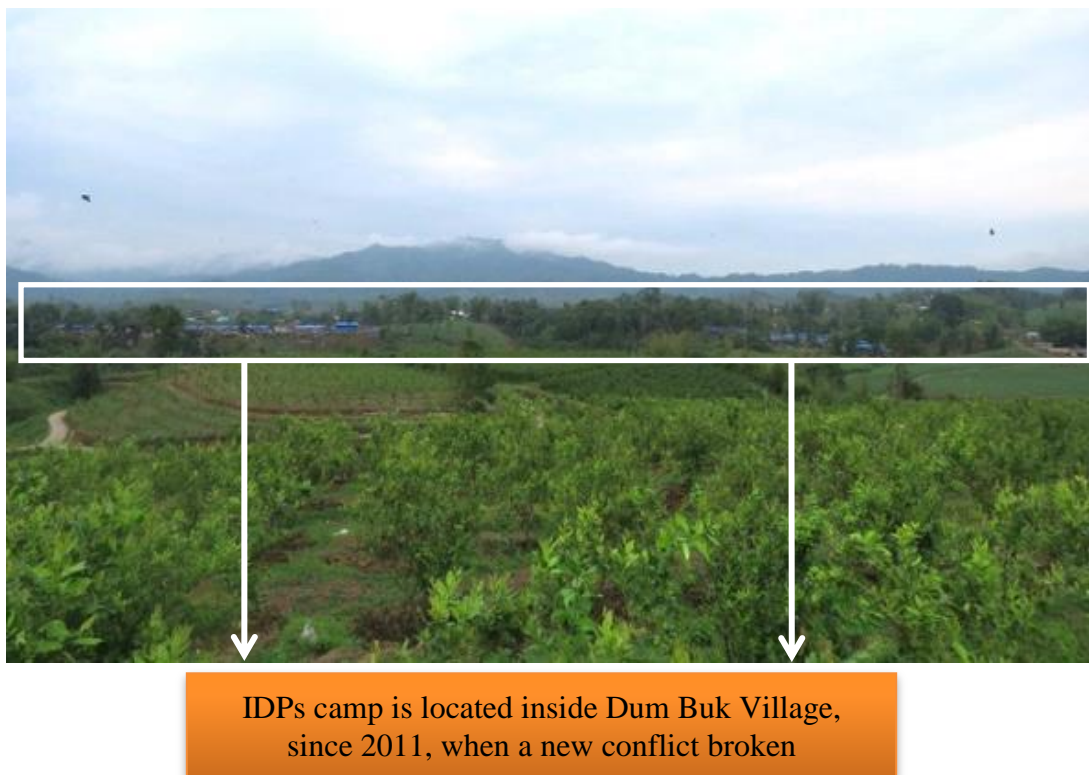


Figure 5 This photo shows Dum Buk Village. (Photograph by researcher, 17 May 2016).

1.6.2 Scope and Unit of Analysis

The scope of this research was the Mansi Township Kachin-China border, in the eastern part of Kachin State, where sugarcane farming has been carried out under KIO control, and where approximately twenty villages or more are growing sugarcane. In order to represent the situation of sugarcane farming in Mansi Township Kachin-China border, two different villages, namely Gai Daw and Dum Buk (successful and unsuccessful in growing sugarcane respectively) were selected. The unit of analysis in this research is contract farming households rather than an individual or a group of farmers.

Gai Daw village is located next to the China border. Overall, the village has about 120 households involved in both contract and non-contract farming. Approximately 3000 mu of sugarcane farming land exists according to 2016 statistics, which is owned by both Kachin and Chinese migrant farmers. The area of farming land owned by Chinese and Kachins is almost equal, but migrant farmers from China are producing larger amounts of sugarcane by fewer families. In contrast, Kachins cultivate small-scale areas and production involves many households. In terms of land, the soil quality is more suitable to growing sugarcane compared to other areas of sugarcane farming villages. Therefore, Gai Daw village is one of the most successful sugarcane producing villages in this area.

Dum Buk village is also next to the Kachin-China border, and includes approximately 100 households overall, slightly less than Gai Daw village. The majority of sugarcane farming area is owned by migrant farmers from China, who own in total 70% of land, while only 30% of sugarcane farmland is owned by Kachins. According to 2016 data, the sugarcane farming area reached more than 2000 mu in total. In terms of soil quality, this area is not very suitable for growing sugarcane, which has lead this village to be less successful in sugarcane production compared to Gai Daw village.

1.6.3 Method: tools and sampling

Primary data collection was conducted with sugarcane contract farmers' households in the Mansi Township Kachin-China border. The following methods were used as field research tools: focus group discussions (section 1.6.3.1); in-depth interviews (section 1.6.3.2); semi-structured interviews (section 1.6.3.3); non-participant and field observations (section 1.6.3.4); key informant interviews (section 1.6.3.5); secondary data collection (section 1.6.3.6); and data analysis (section 1.6.3.7).

1.6.3.1 Focus Group Discussions

The research findings were confirmed through four focus group discussions with both younger and older women and men separately in each village, totalling eight focus group discussions overall. The objective of separate gender and age groups was to evaluate the costs and benefits to the farmers of sugarcane production, to understand the power dynamics among older and younger family members, and to understand the role of women and men related to farming. Participants were actively involved, including participants aged 30 to 60 years in the older group and 18 to 29 years for younger group.

Through focus group discussions, the groups shared the different perspectives and experiences of the farmers based on their lives before sugarcane production and after contract farming was introduced into the villages. The groups also shared their experiences of the transformation of the Mansi Township Kachin-China border over the past thirty years of significant development changes.

Table 3 List of Respondents from Focus Group Discussion

Group Identity	Villages	Male	Female
Younger Men	Gai Daw	6	
Older Men	Gai Daw	5	
Younger Women	Gai Daw		4
Older Women	Gai Daw		5

Younger Men	Dum Buk	5	
Older Men	Dum Buk	5	
Younger Women	Dum Buk		5
Older Women	Dum Buk		5

1.6.3.2 In-depth interviews

In-depth interviews were conducted with eight farmers, including two men and two women from each village, based on their particular experiences. Participants selected included individuals aged between 25 and 60 years for both women and men in order to understand their different experiences over the thirty-year period. The interviews lasted a maximum of one hour for each person, and used informal and open-ended questions based on the research objectives. The interviews were held in a causal manner with a free flow of conversation.

1.6.3.3 Semi-Structured Interviews

The semi-structured questionnaires were used for random individual interviews with 25 sugarcane contract farming households in each village. The questionnaires covered approximately 25% of households, from around 100-120 households in each village. Two particular villages were chosen out of over more than twenty sugarcane farming villages as they have similar backgrounds and stories (see section 1.6.2). The purpose of choosing two different villages was: first, to analyse the costs and benefits to farmers effectively; secondly, to compare any differences between the two villages and why they exist; and finally, to find the differences between high levels of success and low levels of success and to evaluate these differences.

1.6.3.4 Non-Participant Field Observation

Field observations were carried out by the researcher staying together with the community during the whole three-week research period for both villages. This helped the researcher to understand the impacts on households, the community, society, and the environmental impacts after sugarcane was grown, as well as to observe the changes in the Kachin-China border through conducting research in the

villages' neighbouring area. Moreover, sensitive questions were covered through the field observation method in this data collection.

1.6.3.5 Key Informant Interviews

In this research, a total of 18 informants were questioned, including village elders, religious leaders, KIO, NGOs, village sugarcane contact persons and middlemen, who shared the overall situation of current sugarcane contract farming production. Moreover, informants also confirmed their experiences related to major changes in conditions in the Mansi Township Kachin-China border during the three decades, including those related to the landscape, environment, and development.

Table 4 List of Key Informant Respondents and the Topics Discussed

Interviewee	Number of respondents	Topic of discussion
KIO	2	<ul style="list-style-type: none"> - Obtained contract structure information, objectives, and implementation process. - Learned of the significant development changes in Mansi Township: why, how, and when. - Understood the role of KIO's perspective on the ceasefire.
Middlemen of Factory	2	<ul style="list-style-type: none"> - Understood the contract and farming process between farmers, KIO and the factory. - Learnt middlemen's roles and responsibilities. - Understood their perspective in terms of benefits/costs. - Learnt some clues as to how sugarcane farming is related to the ceasefire and border security.
Village heads	2	<ul style="list-style-type: none"> - Clarified the farming production timeline stories; why and how they changed - Knew the overall household farming situation and the impact of sugarcane farming (costs, benefits,

		risks, including social and environmental impacts).
Village sugar factory contact person	2	<ul style="list-style-type: none"> - Learnt contact person's responsibilities. - Clarified the process of sugarcane contract farming. - Confirmed related sugarcane statistics, including fertiliser fees, pesticides, and the number of contract farmers.
Elder people	5	<ul style="list-style-type: none"> - Confirmed the major development changes over three decades. - Overall costs and benefits both to farmers and society, after sugarcane contract farming was introduced. - Knew their perspective on the ceasefire.
Religious leaders	3	<ul style="list-style-type: none"> - Confirmed the major development changes over three decades. - Overall costs and benefits both to farmers and society, especially related to religion. - Knew their perspective on the ceasefire.
NGOs	2	- Learned the overall viewpoint of the Kachin-China border area and costs and benefits of sugarcane contract farming.

1.6.3.6 Secondary Data/Document Collection

The secondary data collection process gathered all relevant literature, including academic and non-academic papers, formal publications and not-yet-published reports, updated NGO reports and UN agencies' reports, books and journals. The data collection process also gathered information from KIO official documents and other local newspapers and written documents, including copies of contracts relevant to the research.

1.6.3.7 Data Analysis

All field researched was done in Kachin language and recorded electronically. The transcriptions were conducted in the Kachin language and entered into software, before being then translated into English only after the recording was analysed. For the descriptive statistical data, the analysis of semi-structured interviews used basic statistical Excels tools. In terms of focus group discussions, in-depth interviews, and expert interviews, qualitative data analysis was conducted. Data was coded and grouped according to the themes, and then analysed according to the research questions.

1.7 Research Ethics

Alongside field research, the researcher took into account the importance of mutual respect for the local authority KIO and contract farmers. First and foremost, consent was ensured from the beginning to the end of interviews and was recorded. The objectives of research were introduced in all interviews. Moreover, information shared and participants' names were kept anonymous in light of security concerns, and no photographs are used where people could be identified in this thesis. The researcher asked key informants to consent to putting their name with quotes, where needed. The respondents were given an opportunity to stop the interview at any time if they felt inconvenienced, and they were asked to give their consent to take recordings. The meetings were held in a place that was safe from scrutiny for group discussions and at a time that also respected farmers' work schedules to avoid busy times.

1.8 Significance of the Research

This research aims to be the first academic research regarding the matter of sugarcane contract farming in the Mansi Township Kachin-China border. There are not yet written academic papers on this topic, since the area is a remote area where outside researchers are not able to conduct field research. In the ceasefire zone, people have far less access to normal livelihood opportunities, and so sugarcane is one of the few options for local farmers in this area. This thesis aims to determine what is working and what is not working for the farmers, the factory and the KIO in terms of

contract farming. Moreover, the research could serve as a sample to continue learning how to improve livelihoods for people, as well as to evaluate and monitor the relations between all parties involved. In addition, the research also examined the costs and benefits at present, which will in turn become a learning point in how to address risks and make improvements needed in the future.

Another reason for this research was to examine what major development changes are linked to the context of sugarcane contract farming in Mansi Township Kachin-China border. The area has transformed in many different ways over the past few decades such as through the introduction of electricity, local economic expansion, the improvement of local infrastructure and the increasing population.

While contract farming in both Laos and Myanmar stemmed from China's Opium Substitution Programme, contract farming in Laos was adopted in a peaceful situation. The Kachin State is thus different from Laos, since contract farming was implemented first under a ceasefire zone, which is now surrounded by conflict. Studies related to contract farming in Kachin State have emphasized rubber plantations, such as in the studies conducted by Kramer and Woods (2012) and Woods (2011). However, in such research little has been mentioned about sugarcane contract farming, which a large number of small scale farmers are involved in and which is different from the situation of rubber concessions.

Woods (2011) conducted much research using the perspective of "ceasefire capitalism" to examine rubber plantations. This study will help to understand how "ceasefire capitalism" concepts relate to the circumstances of sugarcane farmers in the Mansi Township Kachin-China border.

1.9 Limitations of the Research

Several limitations were encountered during the research. Firstly, during the search for the literature review, there were not many academic reviews related to contract farming in conflict border areas. Secondly, not all documents are in the public domain, for example the contract document between the local KIO and Ruili

Sugarcane production factory. Thirdly, in Kachin State, since 2011, the KIA and Tatmadaw were fighting again, including in some areas of Mansi Township. During field research, the fighting was taking place approximately only 18 miles from Dum Buk village, creating tension for the researcher to rush to finish the research quickly. Fourthly, given the commercial arrangements, some expert interviews with middlemen of the factory could not answer all questions fully. However, the farmers were willing to share their experiences, although they were busy and needed to negotiate timing. Therefore, the semi-structured interview had to be done in the early morning and lunchtime in order to avoid working time. All focus group discussions were conducted at nights and on Sundays, because during the daytime it was hard to gather people to hold group discussions. For some in-depth interviews, the researcher followed individuals to the farms and the conversation took place at the farm.

1.10 Thesis Structure

The thesis is separated into six chapters. The first chapter introduces the background to the study, research questions and objectives of the thesis, as well as the conceptual framework, research methodology, significance and limitations of the research. Following this, Chapter Two serves as the literature review, including a brief history of Kachin State and KIO, Chinese border concerns, different approaches of opium substitution programmes, and contract farming in Myanmar and Kachin State. Chapter Three describes the major development changes in Mansi Township Kachin-China border related to migration, the political system, farming land, infrastructure, and socio-economic conditions over the thirty year period. Next, Chapter Four presents the sugarcane contract farming structures and the costs and benefits for contract farmers' livelihoods after sugarcane is carried introduced. Chapter Five analyses what set of relationship in Mansi Township is shaping conflict and peace in the Kachin-China border with regards to the KIO, the central government and the Chinese government. Chapter Six is the conclusion of this thesis, which sums up all findings, applies the main argument of thesis to the perspective of livelihoods and peace under the current situation and a future ceasefire scenario, and finally makes recommendations and suggestions for the future direction for research needs.

CHAPTER II

LITERATURE REVIEW

This section will discuss the existing literature related to this research and will seek to understand more about where the information gaps are about this topic. The literature review here will focus on relevant written academic papers and other NGOs' reports on contract farming schemes from in peace and conflict situations. This chapter mainly focuses on the history of Kachin State and different actors related to control of the area including the Chinese perspective on border concerns. It also highlights opium and substitution as well as the contract farming in Myanmar and Kachin State. The following topics will be discussed: a brief history of Kachin State Kachin-China border and KIO (section 2.1); Chinese border security, and the relationship between Myanmar and KIO over the Kachin-China border (section 2.2); Opium Substitution Programme approaches (section 2.3); the impact of China's Opium Substitution Programme in Myanmar (section 2.3.1); the impact of the UN's Opium Substitution Programme in upland Thailand, Laos and Myanmar (section 2.3.2); contrasting UN and Chinese approaches in Kachin State, and ways forward (section 2.3.3); contract farming in Myanmar (section 2.4); contract farming in Kachin State (section 2.4.1); and overall knowledge gaps (section 2.5).

2.1 A Brief history of Kachin State Kachin-China border and KIO

Kachin State is located between northeast India and China's Yunnan province. The area became a conflict zone after independence in 1948 due to the outbreak of conflict between the newly independent central government and ethnic groups. The objectives of the ethnic armed groups were to achieve autonomous rights and a federal nation democracy. The KIO also formed a political group in 1961 on behalf of the Kachin State and its people. In addition, the Kachin Independence Army (KIA) served as the military wing of the KIO (Gravers & Ytzen, 2014). Between 1961-1993, the KIA fought the Tatmadaw, and as Smith (2012, p. 23) states, "Kachin State has been a fierce battleground since the founding of the KIO in 1961, with periods of armed conflict among several armed groups". The KIO fought not only the Tatmadaw, but also engaged in an eight-year war with the Communist Party of Burma

(CPB) (Kramer & Aranson, 2009; Smith, 2012). However, in 1976 the KIO leadership concluded a truce with the CPB to end the fighting. The KIO began to receive Chinese arms, but only through the CPB (Kramer & Aranson, 2009). Before the CPB disbanded in 1989, the KIA and CPB allied and fought the Tatmadaw together for a while (Smith, 2012). As result of many decades of conflict, the Kachin people's socio-economic situation was harmed, especially along the China Kachin-China border.

As the CPB crumbled¹⁵, this helped precipitate the formal ceasefire negotiations between the KIO and Burmese military government in 1993 and 1994 (Smith, 2012). After the 1994 ceasefire, the Kachin State Kachin-China border changed dramatically due to closer ties with the Burmese military government and Kachin armed groups. As a response to the ceasefire, the Burmese military government set up a programme for the Development of Border Areas and National Races (DBANR). The programme operated in 19 border regions, including the KIO and New Democratic Army-Kachin (NDA-K) regions.¹⁶ The main activities under the programme included transportation, education, health and agricultural activities, including opium eradication and substitution (UNDP, 2015). The Burmese military government used 65 percent of the programme budget on road construction, which became a means to interact with the KIO and their controlled territory. Moreover, the newly constructed roads helped extractive businesses to have greater access to the entire state, while Tatmadaw soldiers could also easily travel as migrant workers or visitors do across the Kachin State Kachin-China border (Callahan, 2007). In addition, the Burman population also increased in Kachin State, although there was little opportunity for new employment for local people. Furthermore, under China's Opium Substitution Programme, labourers were only hired from lower Myanmar and China in rubber plantations (Callahan, 2007; Kramer & Woods, 2012).

The Kachin State suffered not only because of the political armed conflict, but also because of the Burmese military government's promotion of extractive

¹⁵ The end of the Cold War meant that international support for insurgency groups had disappeared.

¹⁶ New Democratic Army- Kachin (NDA-K) was gain ceasefire agreement in 1989.

businesses and cross-border trade that did not benefit most local people (Woods, 2011). Large areas of the state's land and many resources were now controlled by the Burmese military government, including jade, gold, forest area and hydro-energy (Dean, 2012). In 2009, the government also initiated the Myitsone Dam project, the biggest infrastructure project in Kachin State, which became and remains an important flashpoint of contention until now.

No political solution to the conflict has yet emerged even though the KIO attended regular National Convention (NC) meetings during the ceasefire agreement process in order to prepare the 2008 constitution (Callahan, 2007). Disputes arose in 2009 because the Burmese military government forced the KIA to transform into the Border Guard Force (BGF), ending the 17 year-long ceasefire (Gravers & Ytzen, 2014; Smith, 2012). Consequently, the ceasefire agreement ended on June 9, 2011, turning the area into a new armed-conflict zone. As a result of fighting, many civilians left their homes and fled to the border area, resulting in many casualties. From 2011 to 2013, there have been an estimated 100,000 internally displaced people (IDPs), while villages have been destroyed, at least 66 churches and 55 schools have been destroyed, crops have been burned, and many new bridges wrecked due to the Tatmadaw arbitrarily attacking the village (Gravers & Ytzen, 2014).

2.2 Chinese Border Security and the Relationship between Myanmar and KIO over the Kachin-China border.

The Myanmar-China border is estimated to be 2,204 kilometres long (Hao & Chou, 2011). The Myanmar border is mostly under the control of ethnic armed groups' territory. Thus the central Myanmar government does not effectively control the area, which in turn creates a challenge for China to ensure security on the ground. China's foremost concern is to ensure the stability of its shared border, especially with regards to non-traditional security issues such as drug trafficking, gambling, migration, disease transmission, transnational crimes, smuggling and money laundering, all of which exist along the border (Hao & Chou, 2011).

Among many non-traditional security problems, one important example has been the opium and heroin trade into China across the Yunnan province border, from the Golden Triangle, Myanmar. Since 1997, the production of these drugs has reduced in Myanmar, however from 2006-2009 it briefly shot up again due to the high price increase and the lack of viable alternative livelihoods, especially in the Kayah and Shan hills. Therefore, China considers drug related problems a threat to social stability and has delivered food and crop substitution aid (Hao & Chou, 2011).

Although non-traditional security issues existed in the border area, the wider relationship between the Burmese military government and the Chinese was strong during the State Law and Order Restoration Council (SLORC) and State Peace and Development Council (SPDC) from 1988-2010. China became the single most important economic and military supporter of the Burmese government. In terms of military assistance, China gave more than 3 billion US dollars over this period (Steinberg, 2013). Economic assistance including roads, railroads, ports, dams, and irrigation facilities, was also supported by the Chinese (Steinberg, 2013). Myanmar was important for Yunnan Provincial economic interests (Kramer & Woods, 2012). Therefore, Myanmar has set a record for Yunnan's largest trading partner among the Association of Southeast Asian Nations (ASEAN) countries. Moreover, business cooperation between China and Myanmar has involved mining, oil, gas, and hydropower. China's investment is mainly in infrastructure, minerals, hydropower, agriculture, oil, and gas (Hao & Chou, 2011). China's investment was particularly strong in the 1990s and 2000s, but then dropped significantly after the election of President Thein Sein's government.

Regarding drug cultivation control, the Opium Substitution Programme is designed for a variety of crops in the regions of Laos and Myanmar bordering China. In Myanmar, similar to in Laos, the Chinese government encourages companies to invest under the programme by giving incentives. Different types of subsidies offered are: interest free loans and expanded credit access at domestic commercial banks; freedom in cross-border movements of labour, equipment, and vehicles; and

exemption from tariff and import VAT¹⁷ on opium substitution products and outputs (Shi, 2008, cited by Antonella, 2008).

The relationship between the Myanmar border area and the Chinese government is close, especially in Yunnan prefecture where the local government has a direct relationship with cross border local authorities, including ethnic armed opposition groups. In 1990, the Chinese government issued a special policy towards these armed groups. Even though the Chinese government will not give political recognition, military support or economic assistance to these groups, they see such ethnic groups as Myanmar's local authorities and therefore conduct general business activities, mostly with their leaders (Kramer & Woods, 2012). Therefore, under this kind of relationship, border trading enterprises from Yunnan still continue to sign contracts with the ethnic minority groups (Hao & Chou, 2011).

As mentioned in section 2.1, the KIO and Myanmar government had an official relationship after the 1994 ceasefire agreement in the name of development. As a consequence, the Burmese military government influenced control over the Kachin State Kachin-China border and had an official relationship with KIO during peacetime. However, when a new conflict broke out in 2011, both parties returned to their prior position that had existed before the 1994 status.

2.3 Opium Substitution Programme Approaches

Opium production not only causes local and national problems, but also impacts cross-border areas and has an international impact through addiction, smuggling, trafficking and increased illegal trade. In light of this, China is concerned about opium production in Myanmar. The reason why farmers grow opium is because it is a reliable cash crop, where the cash is used to purchase rice and family items. In some areas, opium is also used as a traditional medicine. As a result, opium is in high demand with a high economic benefit and low investment for farmers. In Southeast Asia, Myanmar and Laos are the main growers, where a shared border with China thereby forces the Chinese government to try to solve the problem through a crop

¹⁷ Value-Added Tax.

substitute policy. International agencies, in particular the United Nation Office on Drugs and Crime (UNODC), also work to find solutions for opium eradication by supporting alternative development projects in Laos and Myanmar. In order to evaluate different approaches to eradicating opium, the objectives and implementation of these approaches are described below.

2.3.1 The Impact of China's Opium Substitution Programme in Myanmar

China has not yet found effective solutions to reduce domestic drug consumption, leading the central government to try to reduce cultivation in the region and support a campaign called the 'War Against Drugs and AIDS' in 2004. The aim of the campaign was to stimulate and organise Chinese companies to invest in crop substitution plantations in Myanmar, similar to in northern Laos. In 2006, the substitution development programme was revamped and responsibility for implementation was shifted to the Yunnan provincial government (Kramer & Woods, 2012). By the end of 2000, the Yunnan provincial government provided over 300 million R.M.B¹⁸ for the crop substitution programme including for seeds, purchasing crops grown, and providing large amounts of food during the agricultural transition period (UNIDCP, 2001). This substitution programme approach aims to help mitigate opium cultivation through bilateral relations across borders, including through trade (Kramer & Woods, 2012).

In order to receive subsidies, selected Chinese companies must not only perform well economically but must also contribute to farmers' security and social development in the programme area. Other regulations and incentives that support project implementation include "easing bureaucratic hurdles for investment, relaxation of labour regulations, subsidies and import tax and VAT waivers, and most importantly, permission to import crops produced under the scheme" (Kramer & Woods, 2012, p. 23). There has been some success in the implementation of the programme including: upgraded infrastructure, importing knowledge and agricultural production methods, putting into practice new theories on the fight against drugs, and enhancing good neighbourly relations with adjacent countries (Kramer & Woods,

¹⁸ More than 58 million USD.

2012). Overall, however, China's opium substitution programme did not directly result in decreased opium production, because most opium cultivation fields are located in remote areas which do not allow easy access for contract farming (Kramer & Woods, 2012).

China's opium substitution programme encouraged farmers to grow a diverse range of crops such as rubber, sugarcane, banana, watermelon, tea, and cassava (Kramer & Woods, 2012). However, in contrast to the UNODC approach (see section 2.3.2), this Chinese model of development and aid in Myanmar promotes top-down regional economic development by giving incentives to Chinese companies to invest in large-scale commercial agricultural projects without any rural livelihoods component (Kramer & Woods, 2012). In the case of Kachin State, the approach also mainly focused on large rubber concessions, rather than small-scale farming such as sugarcane. As a result, rubber concessions benefit only the joint venture holders in terms of local business elites, Chinese companies and state agencies (Kramer & Woods, 2012). There are several reasons why rubber cultivation in particular has boomed, including the need to fulfil the Myanmar government's 2030 rubber plantation expansion goal (Kramer & Woods, 2012). Moreover, through expanding rubber plantations, Myanmar's military junta tried to gain greater access to and control of the Kachin-China border and expected to sell the rubber on the market in China.

To encourage opium substitution in Myanmar and northern Laos, the Chinese government formed 135 Chinese companies, which have led to the production of different crops in the region. In Myanmar, the substitution programme's implementation was officially initiated by the Burmese military government, as well as by the local authorities of political armed groups and militant groups. The KIO and NDA-K also promoted agriculture under the programme. Regarding sugarcane contract farming, the implementation process is different from rubber plantation. Whilst rubber was mainly planted in the shared territory between the KIO and Burmese military, and mostly involved Burmese companies, for sugarcane it is mainly in KIO controlled areas and so works through the local KIO authority. In

addition, sugarcane contract farming directly involves a large number of local farmers. This programme has not been studied before, including regarding how it is presented to farmers and the relationship between the factory and local authorities. Therefore, this research study will investigate the results of China's Opium Substitution Programme as a part of Kachin State contract farming.

2.3.2 The Impact of the UNODC Opium Substitution Programme in Upland Thailand, Laos and Myanmar

Sustainable, or alternative, development projects were pioneered by the United Nations Office on Drug and Crime (UNODC), with shared responsibility by the United Nation Fund for Drug Abuse and Control (UNFDAC) and the United Nations International Drug Control Programme (UNIDCP). Some other agencies got involved in the process; for example, the United Nations Development Programme (UNDP) and World Food Programme (WFP) had carried out some development related activities around the opium growing areas, involving short-term assistance such as food distribution, cash for work, and infrastructure support. These approaches focus on: the substitution of crops by farmers; strengthening development; demand reduction; and law enforcement, all of which address issues of poverty, addiction, and criminal behaviour (UNODC, 2008).

However, the approaches taken to sustainable development are different between Myanmar, Laos, and Thailand.¹⁹ Thailand has adapted the alternative development principle through government- and monarchy-supported projects; in Laos, the alternative development concept has been integrated into the National Growth and Poverty Reduction Strategy and the work of several government agencies; and in Myanmar, such work is conducted by government through the Ministry for the Progress of Border Areas, National Races and Development Affairs, which was founded in 1994 (UNODC, 2008). In Myanmar, the UNODC project is implemented in hard to reach areas since opium farming exists mostly in remote highland and conflict zones. Furthermore, the Myanmar government struggles to work in these border areas due to insecurity in these regions and the security requirements

¹⁹ Thailand has achieved opium elimination at present.

of the UNODC with whom it partners. An additional significant challenge to eradicating opium growing in these regions of Myanmar has been that *“the government lacked the financial, technical and human resources to do the job in ways that would provide new appropriate livelihoods for the ex-growers”* (UNODC, 2008, p. 9).

The UN agencies’ policies and implementation of the opium substitution programme itself have left some gaps during the process; the primary gap is the lack of unity among the UN, national governments and ethnic minority groups. According to the UN, the main opium growing areas in Myanmar are in Shan State, northern and western parts of Laos, and northern regions of Thailand, where ethnic groups living scattered in the mountain grow the crop (UNIDCP, 2001; UNODC, 2008).

The UN agencies, such as UNODC, and the US Drug Enforcement Administration (USDEA) targeted northern Myanmar, and focused on implementing opium eradication projects. However, in Kachin State they did not extensively implement alternative livelihoods projects.

2.3.3 Contrasting UN and Chinese Approaches in Kachin State, and Ways

Forward

Both the Chinese and UN’s target - to eradicate opium - is the same, but their strategies are different. The Chinese approach is try to use the private sector, have a stronger market-based approach and encourage improved socio-economic conditions, as well as providing subsidies. In contrast, UNODC uses a subsidy strategy dealing with the farmers, whereby villagers are essentially paid to switch production to another lower value crop whilst ensuring a strong role for the government. Put more simply, the Chinese follow a contract farming scheme, whilst the UN adopts a traditional subsidy approach.

The opium cultivating areas are always shaped by circumstances of conflict, insecurity, vulnerability and marginalisation. To address the need to eradicate opium, there is a need for proper approaches incorporating the perspectives of human rights protection, conflict resolution, poverty alleviation and human security. Moreover,

interventions should be considered using a participatory approach in order to respect cultures, traditions, and values, which are necessary to help create sustainable livelihoods through sustainable human development (Kramer and Woods, 2012).

2.4. Contract Farming in Myanmar

Contract farming systems were introduced gradually in Myanmar when the transitional socialist system opened up a more market-oriented economy after 1991. However, large-scale commercial farming remains more common in Myanmar than small-holder farming (Baker, 2011).

Generally, smallholder farmer contract farming is not yet well developed in Myanmar, although some instances have emerged. In the case of northern Shan State, for example, the Charoen Pokphand (CP) group signed a contract with farmers to grow CP maize under a contract farming system (Woods, 2015). People from this area provided their land and labourers to engage in contract farming. However, farmers continue to face difficulties with a shortage of capital to run the farm operations due to the limited availability of advanced credit from CP. This insufficient farming credit available to farmers often results in farmers being forced to borrow money from local moneylenders at very high interest rates. These challenges continue to exist, in part because the government does not have a clear smallholder farming policy and has instead focused on encouraging larger-scale contract farming and plantations. These companies come from Bangladesh, Thailand, China, and Myanmar and were incorporating large farm areas. CP group is also involved in these large-scale concessions, including for the production of maize and other animal feed crops that account for 75% of the market in Myanmar (Baker, 2011).

2.4.1 Contract Farming in Kachin State

In northern Burma, the contract farming system has predominantly come into being since the 2000s. This shift has been driven not only by an economic incentive, but is also due to other political interests of the Burmese military government and business elites. As mentioned above (section 2.3.1), contract farming initially mainly concerned rubber farming under China's opium substitution programme. In this way,

the rubber plantations in Kachin State were widely cultivated from 2006 onwards (Kramer and Woods, 2012). However, rubber plantations had been in existence in the early 1990s near Myitkyina and were run by individual local business people. It should be recognized that rubber plantations in Kachin State are owned by both individuals and private companies under China's opium substitution programme. In other words, Kachin State contract farming is also part of a large-scale contract farming scheme.

The largest and most infamous contract farming scheme in Kachin State is that conducted by the Burmese-owned Yuzana Company, which seized an estimated 200,000 acres of land in 2006 from farmers in the Hugawng Valley to plant cassava and sugarcane destined for the Chinese bio-fuel market (Woods, 2011). This land grab was a severe violation of Kachin farmers' rights that was supervised under the Burmese regional military commander at the time.

2.5 Knowledge Gaps

With regards to China's Opium Substitution Programme, the case of contract farming in Laos has been studied by several researchers, including Antonella (2008) who studied programme implementation and engagement under the Chinese interests and policies related to a shared border and opium concerns, as well as examining the Laos government's roles in contract farming. Moreover, Antonella (2008) explores the contract model that Laos is practicing and which is evolving to include new crops like sugarcane. Contract farming in Laos is even run under China's Opium Substitution Programme, similar to in Myanmar, but it is recognised here that this is under a more stable situation, unlike that in Kachin State. Due to the conflict in Myanmar, there has been less research conducted on China's Opium Substitution Programme in Myanmar compared to in Laos.

Woods (2011) and Kramer and Woods (2012) both emphasise rubber plantations rather than other crops under China's Opium Substitution Programme. However, they do mention some information about other crops which grow in the

hillsides of the Kachin State, such as watermelon, banana, paddy, tea, and sugarcane, but only briefly. For example, they write:

“The sugarcane concession is being established through contract farming arrangements right on the Yunnan border in south eastern Kachin State”
(Kramer & Woods, 2012, p. 57).

However, there has not yet been specific research on sugarcane, and therefore there is a need for more work to see how insights from the concept of ceasefire capitalism relate to sugarcane production under KIO control. The rubber plantation research presents the larger picture of ‘ceasefire capitalism’ concepts linked with China’s Opium Substitution Programme, but there are still many other crops not researched as yet. In this light, it would be useful to know how ceasefire capitalism is related to sugarcane production processes in this area or not.

With regards to the concept of contract farming, literature reviews exist on a variety of perspectives related to contract farming in peaceful conditions through agricultural concessions. These include the contract farming system, definitions, and contract models. On the one hand, detailed information is well described and can help illuminate how contract farming schemes and theory have been working in general. On the other hand, the contract farming model in conflict areas has not yet been researched, and therefore the question remains: ‘What is contract farming like in a conflict situation’?

CHAPTER III

MAJOR DEVELOPMENT CHANGES IN MANSI TOWNSHIP KACHIN- CHINA BORDER OVER THE PAST THIRTY YEARS

This chapter answers the first research question on the major development changes in Mansi Township in the Chinese border area, under the direct control of the KIO over the past thirty years. The chapter focuses on changes during the period from 1986 to the present in 2016. This chapter is going to argue that Mansi Township border has been shaped with the political movement neither peace nor war. The major development changes occurred after 1994 ceasefire agreement, including those affecting the people and the land. Sugarcane contract farming was also a major change in this area to farmers' lives. Before the ceasefire, as the whole Mansi Township KIO area had been under conflict, this created a lack of socio-economic opportunities in this very remote area. The chapter examines the overall geography of the area, before looking more deeply at the two representative villages. Therefore, the chapter will look at the overall Mansi Township-Chinese Kachin-China border geography (section 3.1); political system changes (section 3.2); the overall socio-economic situation (section 3.3); the socio-economic situation in Gai Daw village (section 3.3.1); the socio-economic situation in Dum Buk village (section 3.3.2); migration (section 3.4); natural resources and local infrastructure deals (section 3.5); land use and land ownership changes (section 3.6); the evolution of farming land (section 3.7), including the decline of rice farming after sugarcane was introduced (3.7.1); and a final summary (section 3.8).

3.1 Overall Mansi Township-Chinese Kachin-China border Geography

Mansi Township is separated into three main areas: conflict territory; territory under the Burmese military government; and KIO-controlled areas. The Kachin-China border area has been under KIO control for more than four decades. There has not been conflict in this area since 1994, and even the 2011 conflict occurred further away from the border in Mansi Township. The land in this area resembles the more mountainous areas across this Kachin-China border. The villages are scattered and can be separated into two main groups: the villages next to and or closer to the China

side, called lowland areas, and villages further away from the border called upland areas (see Figure 6).

The lowland area has a greater population than the upland area, because it was in this area that the local KIO authority worked to develop and upgrade the villages. Facilities such as a public hospital, market, and high school were set up there; one such town is Nba Pa. Another such town is Lana Zup Ja, which was established by the KIO during the ceasefire period as a development zone, following which Chinese business people open a casino ground.²⁰ As a consequence, various shops and restaurants have been established. These two places became a centre for Mansi Township Kachin-China border villages to access materials and other services. In addition, these two towns are linked with this research on Gai Daw and Dum Buk villages; major development changes in the Mansi Township Kachin-China border cannot be described without reference to these two areas, for instance noting issues of Internally Displaced Persons (IDPs, who provide labour for sugarcane production) and migration issues in this thesis. The IDPs mostly are from Mansi Township and the majority are Kachin. They moved to the border area for security as their villages had been under a conflict area or war zone since the 2011 conflict.

Regarding the geography of farming in Mansi Township, more than twenty lowland villages became involved in sugarcane contract farming, while the upland villages continued to use traditional practices of subsistence farming, such as shifting rice farming.²¹ In all, an area of more than approximately 76,000- mu is involved in sugarcane production according to 2016 statistics (Interview KIO- 2, 3 May, 2016).

²⁰ The casino opened around 2004 and shut down in 2007.

²¹ Upland areas include deep forest, which protects water sources and provides security for the local authority, while making transportation for effective sugarcane farming difficult.

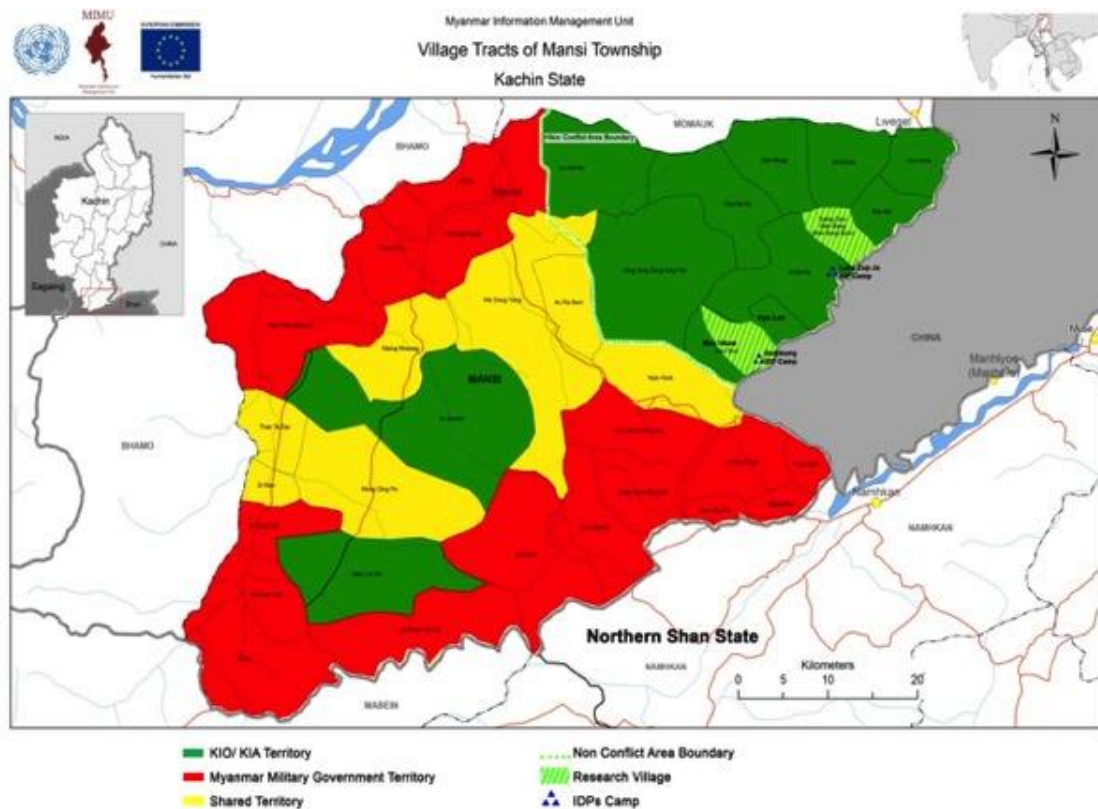


Figure 6 Mansi Township Map

Source: The Author, based on interviews; Base map from Myanmar Information Management Unit, December 2011.

This map details the research area, as well as the conflict and non-conflict territories of the Mansi Township Kachin-China border.

3.2 Political System Changes

The Mansi Township Kachin-China border was under KIO administration beginning around 1962. Before this, Kachin societies, including this Mansi Township Kachin-China border, were governed by different clans or so-called ‘Gum Chying Gum Sa Du’ within their recognized territories and with authority passed from generation to generation. However, after 1963 the role of the clan systems was diminished according to KIO’s mandate, because KIO thought the system was against democracy and hindered equality and development altogether. Mansi Township

Kachin-China border is a key stronghold of KIO, which entered the area around November 1961.

Subsequently, the Burmese military government forces first came to Mansi Township in 1962, as they were concerned that Kachin people were organizing against them in the area. Thus, the Burmese military forces deployed battalions around 1964 in the central area of the Mansi Township Kachin-China border. As a consequence, the Burmese military started to forcefully relocate scattered villages around Nba Pa in order to cut financial support for the KIA. The Burmese battalion withdrew from the Kachin-China border in 1978, but Tatmadaw insurgent groups occasionally continued back and forth fighting with KIA from the central Mansi city until the ceasefire was agreed in 1994.

After the ceasefire, KIO's structure and administration became more active and effective as fighting had stopped and the focus was on local development. The Mansi Township is located in the Eastern Division of KIO's Administration Department. Under the administration, KIO civil servants are assigned at township and district level, and work closely with the village head on civic affairs. KIO applies its own ways of regulation and administrative policies and structures. Across their territory scattered across Kachin State, the KIO manages and is in charge of all services including the education sector, health sector, markets, water, electricity and prosperity of livelihood opportunities for civilians, in line with to KIO's objectives of "democracy, patriotism, and civilian prosperity" (Interview KIO 2, 3 May, 2016; Interview Local NGO-GD, 19 May, 2016). The scattered villages of less than 30 households each were grouped together or relocated to become one village in the most appropriate area in order to provide effective services; this is an example of KIO development in Mansi Township Kachin-China border during the ceasefire (Interview KIO 2, 3 May, 2016).

KIO and the Burmese military government jointly administrated some sectors since they had built a relationship during peacetime (see section 2.1). The most significant engagement included the education sector under the direct control of

Mansi Township's main city, Mansi (see section 3.3.1 and 3.3.2). Moreover, the Burmese military government's immigration department frequently came and arranged for Myanmar citizenship cards. The area belonged to the Burmese government's official territory, the so-called "Nba Pa village group";²² however, the central government did not have direct control over administration as the area was under KIO control.²³

Regarding the relationship between KIO and China, China has not officially given recognition to KIO as a government (see section 2.2). However, China has engaged with and interacted with KIO for business purposes and border development. In the case of Mansi Township Kachin-China border, China is involved in local development (see section 3.1); for example, electricity and telecommunications in this area are from China, as the Chinese sold these to the Kachin side of the border. The telecommunication services accessible from China have long been more advanced than in the city of Mansi and compared to other villages in the military government controlled area. For instance, in the early 2000s, during the early stages of the spread of mobile phone usage in Myanmar, one SIM card cost more than 2000 USD, while a SIM card for a China network, which also covered the border area, was only 10 USD, and as a result people from this area used Chinese communication services.²⁴

Peacetime came to an end in 2011 when conflict restarted. The local KIO authority took on additional work related to resisting fighting, while at the same time the IDPs from villages in other parts of Mansi Township moved into this Kachin-China border under KIO control according to their voluntary decision, instead of being displaced into Mansi City which the Burmese government controlled.

Overall, KIO is the main governing authority in this Kachin-China border area. The Burmese military government took responsibility for some basic needs for

²² In Burmese, □□□□□□□□□□□□□□□□□□

²³ Related to the territory's official name, the villages under KIO controlled areas are also put under Burmese military government control, because the KIO is not recognized an official organization.

²⁴ The network from the Burmese military government is not available in this Kachin-China border area.

civilians in cooperation with KIO in the area during peacetime. The Chinese were also involved in local development, especially after 1994, by providing electricity and telecommunication services. However, since 2011 when a new armed conflict emerged, the political situation became unstable again, making it hard for KIO to govern the area

3.3 The Overall Socio-economic Situation

Socio-economic conditions in the Kachin-China border area depend on the political legacies of Myanmar, especially those of civil war. Overall Kachin State, including Mansi Township and the Kachin-China border area, suffered from warfare that seriously affected the people (see section 3.2). As a consequence, as shown by what Gai Daw and Dum Buk villages experienced, socio-economic conditions deteriorated and people were unable to meet even their basic needs. People lived through direct fighting until right before the ceasefire agreement in 1994.

However, major socio-economic changes began just after the ceasefire in 1994. The political situation became more stable, meaning that people had greater opportunity to start thinking about how to fulfil their family needs and access other services related to well-being for themselves and the KIO, who governed the area. In order to improve the local economy, KIO arranged business channels with the Chinese and opened up border trade with neighbouring provinces. China imported many resources from locals in the area, including livestock, logging, bamboo, and herbal medicine roots such as wide orchards. Since China paid good prices, everything became valuable and this promoted the local economy.

Moreover, the main socio-economic changes occurred later when sugarcane contract farming was introduced in 2005. Farmers now had the chance to earn a large amount of income from the sugarcane farming process. This section will describe how socio-economic changes happened in the Mansi Township Kachin-China border based on the experiences of Gai Daw and Dum Buk villages as described below.

3.3.1 The Socio-economic Situation in Gai Daw Village

Gai Daw village is located in Mansi Township, Bhamo division, Kachin State, next to Yunnan Province, China. The landscape is mountainous and the soil is highly suited to agriculture. The village has an area of approximately 20,000 acres, including the village and farming lands.²⁵ Gai Daw was established in around 1900 by the 'Lahtaw Du Wa' clan. . Initially, there were no households in the area, even though the name Gai Daw had been used before founded the village. Gai Daw became a village in 1967, when four small villages from more upland areas, namely Wa Baw Hkyet, Bau Hkyi Hkaraw, Hkam Bang Hkaraw and Tu Tu (Htapyu), moved to settle down in Gai Daw.

In fact, the village increased in size after the 1994 ceasefire agreement, when another upland village relocated to the same area. Currently the village includes around 120 households and has a total population reaching approximately 600. Almost all residents are Kachins and are Christian.²⁶ The main resources of the village are the forest and land, and villagers have their own approach to managing natural resources for use locally by individuals and the commons. Some villagers gain benefits from the forest, especially through logging from their own farm, as well as selling charcoal for income and for use as a housing material commonly since the 2000s. A mineral coal has also been found, although it has not yet been extracted. Villagers' livelihoods mainly depend on farming and domestic livestock rearing. Farming activities are rice farming, sugarcane production in particular, and a few people have started growing perennial trees. However, there have scarcely been livelihood opportunities for farmers that linked them to markets, such as small income from livestock, tea and Tung-oil tree²⁷ supported in families. These two crops provide some benefit during the harvest time in each year, but the income gained is not more than 3,000 RMB in one year, for those who sell their own product. In addition, a few families have engaged in logging concessions in the past. The greatest difficulty

²⁵ This figure is not issued officially, but the statistic depends on estimates by village elders.

²⁶ The majority of people are Protestant, and Roman Catholics are a minority group in this village.

²⁷ Tung oil is made from pressed seeds from the nut of the tung tree. In the 14th century, Chinese merchants were noted for using tung oil to waterproof and protect wooden ships from the eroding powers of the sea.

experienced by Gai Daw villagers was during wartime; the following is some evidence provided by villagers about how livelihoods were hard them at that time;

“In the past families cannot even afford enough clothes to wear, because of the lack of economic livelihood linked to conflict; people fled all the time, which could not help support the family economically and others” (Focus Group 2-GD, 8 May, 2016).

However, Gai Daw village’s socio-economic situation has been improving since the village became involved in sugarcane contract farming (see Table 8 in Chapter 4 for more details on income).

Regarding social conditions, such as education, healthcare and standards of living, there have been significant improvements since the ceasefire, even though these are not sufficient enough compare to the city of Mansi. The education system run under the Burmese military government opens for grade IX (see Figure 7)²⁸. However, there is no other higher public school in Gai Daw village or neighbouring villages. Thus, parents have to send children to the cities²⁹ in order to access high school and join a public university after finishing eleventh grade. However, the problem remains that not everyone is able to afford to send children to access higher levels of education, and so instead some continue to the KIO high school. These students lose access to university unless they choose nursing school or the pre-college programme called MaiJa Yang Institute of Education and just opened a new college called-Mai Ja Yang college. Therefore, the lack of access to higher education is a barrier in this Kachin-China border. As a result, parents spend a lot of money on education; because the cost of sending children to other places outside the village is very high, this impacts the family’s economic situation.

²⁸ which constructed by Burmese military government and villager’s contribution

²⁹ Namkham, Mu Se (northern Shan State), Mansi, Momauwk, Bhamo, Loi Je (Kachin State)



Figure 7 This photo shows the Gai Daw higher primary school of the Burmese military government. (Photograph by researcher, 19 May 2016).



Figure 8 This shows the Gai Daw village clinic of KIO, founded after the ceasefire. (Photograph by researcher, 9 May 2016).

Regarding health care, KIO set up a clinic during peacetime (see Figure 8) that provides basic healthcare. The main KIO small public hospital is located at Nba Pa, approximately 8 miles from Gai Daw, which can also be accessed for more serious cases.

With regards to housing and people's well being, there have also been improvements up until now. Overall the village has changed thatched roofing to zinc roofing sheets, with some villagers having even stronger housing materials. According to the observations of the researcher, there are only a few households left without zinc roofing sheets and even more semi-permanent housing can currently be seen in Gai Daw village (see Figure 9).



Figure 9 A small concrete house built during data collection with sugarcane income in Gai Daw village. (Photograph by researcher, 19 May 2016).

3.3.2 The Socio-economic Situation in Dum Buk Village

Dum Buk village, like Gai Daw, is located next to the China border; the landscape is also mountainous like that of Gai Daw. The scale of the village is approximately 20,000 Chinese mu including village and farming lands. Prior to the

establishment of Dum Buk village, Kachins from China migrated and found an area called Manhkaw Chyinghtawng, approximately 3 miles from Dum Buk village. The area was a large village at that time, but over time most people migrated to Myitkyina³⁰, while a few people moved to Dum Buk village. The village was established in the 1940s by the ‘Lahtaw Du Wa’ clan. The village gradually expanded when several other small villages moved to Dum Buk, namely Na Jau and Manhkaw, as well as Kachin from the China side who migrated to Dum Buk in 1958.

The name of Dum Buk village has changed several times; the village was initially called Masa Yang village, but this was later changed to Bum Tsit Pa village (see Figure 10) by KIO in the 1980s.³¹ Currently Dum Buk has around 90 households and has a total population reaching almost 500. All residents are Kachins and almost all are Protestant Christian. The population increased when IDP camps were set up in 2011, with the population reaching around 3,000 in total (see Figure 11). The village’s existing resources include deep forest, upland and paddy land or farmland. The villagers are agrarian; their livelihood relies on cultivating rice, planting some tress, and sugarcane production.

Dum Buk also suffered due to the conflict, like Gai Daw village, resulting in people fleeing across the border to China and some running into the jungle. As a result, survival was a challenge and there was no security at all. Significant socio-economic changes have occurred since the ceasefire, especially following the involvement of sugarcane contract farming (see Table 8 in Chapter 4 for more detail on income).

³⁰ Capital city of Kachin State.

³¹ This research will use the village name Dum Buk, which is the oldest name of the village and that is also used by the Burmese Government. However, the village is also known as Bum Tsit Pa in Kachin. Both names are used locally.



Figure 10 The village board with the name Bum Tsit Pa. (Photograph by researcher, 13 May 2016).



Figure 11 IDP Camp at Dum Buk village. (Photograph by researcher, 18 May 2016).

Education, healthcare and standards of living have improved significantly since the ceasefire agreement. Dum Buk School opened for grade five under the Burmese military government education department until right before 2011, while later it was converted and upgraded to an IDP high school run under KIO administration (see Figure 12). However, the weakness of KIO schools is that the government has not allowed testing for the matriculation exam since the 2011 conflict, and as a result the students from this area have had no opportunity to continue to university education. This situation is causing the socio-economic gap between central Myanmar and the Kachin area to grow even wider. Therefore, some parents send their children to the cities, the same situation found in Gai Daw Village.

The village clinic was opened by KIO in 1995. Villagers also can access Nba Pa public hospital which is approximately 10 miles from Dum Buk village. In terms of housing and the well being of the people, there have been improvements over time. However, there remains more thatched housing (see Figure 13) in Dum Buk village compared to Gai Daw village.



Figure 12 This photo shows Dum Buk IDP high school of the KIO. (Photograph by researcher, 18 May 2016).



Figure 13 Houses with thatched roofing in Dum Buk; before the ceasefire most Kachin used to live in homes like this house in Mansi Township Kachin-China border. (Photograph by researcher, 18 May 2016).



Figure 14 Dum Buk village and the surrounding landscape; similar to Gai Daw, most roofs are now zinc and have replaced thatched roofs. (Photograph by researcher, 18 May 2016).



Figure 15 Gai Daw village and the surrounding landscape; nowadays, almost no houses have a thatched roof and instead the roofs are mostly zinc. (Photograph by researcher, 19 May 2016).

In conclusion, before the ceasefire was agreed in 1994, socio-economic conditions in both Gai Daw and Dum Buk villages were unable to meet people's basic needs; there was not enough food, people were materially poor and there was a high level of insecurity due to conflict. After the ceasefire, the situation became stable for a while and during this time villagers had an opportunity to meet their family needs and services, and overall conditions quickly changed for the better (see Figure 14 and 15). However, the situation again deteriorated after conflict broke out in 2011.

3.4 Migration

The people living in Mansi Township Kachin-China border were almost all Kachins until right before the ceasefire, as this was a remote and isolated conflict area. A few Chinese from the China side of the border and Shan ethnic people from northern Shan State had come for local trade purposes.

The significant movement and migration of people started after the ceasefire in 1994; when KIO focused on local development, the trend towards increasing

migration began. First was the construction of the Lana Zup Ja development zone (see Figure 16),³² which brought many Chinese business migrants from China. Second, access to Nba Pa market areas was expanded, an area where the Shan ethnic group and Chinese opened shops regularly, initially on market days of the week but later this also became a fulltime market. Thirdly, with regards to sugarcane contract farming, this has brought Chinese migrant farmers and temporary labourers to all border villages including in Gai Daw and Dum Buk villages since 2005. Finally, almost 6,000 IDPs from Mansi Township village moved into this Kachin-China border in 2011. There are two camps in the area, one camp located in Dum Buk village with around 3,000 IDPs and another in Lana Zup Ja³³ with nearly 3,000 IDPs (see Figure 16).



Figure 16. This is Lana Zup Ja Development Zone building (foreground) in which IDPs previously stayed for almost two years and in which some still stay. The majority of IDPs are now living in the new buildings with blue roofing (in the background). (Photograph by researcher, 19 May 2016).

In Lana Zup Ja, many Chinese business migrants began to settle down to open businesses such as grocery shops, mini super markets, phone and services shops,

³² This zone was a casino ground, opened by Chinese businessmen under the authority of KIO during 2004-2007.

³³ The camp is close to Gai Daw village.

clinics, guesthouses, restaurants, utensils shops and selling vegetables and fruits (see Figure 17). The majority returned to China when the casino closed in 2007, but some families remained to continue business in the area. The area has again increased its population since IDPs have arrived. Local Kachins, including villagers of both Gai Daw and Dum Buk, rely on Chinese shops because everything is available there in a small downtown area. Although this seems convenient, the situation frustrated Kachins, with one villager saying that:

“The foreigner came and became owner of business, we knew nothing, no capital for investment, and they are the only holder of marker” (Interview Local NGO-GD, 19 May, 2016).

However, some people see that the local people and IDPs were learning how to do business and became gradually more socialized. Due to increasing numbers of migrants, KIO planned to expand more markets. At the same time, living together with people of diverse nationalities may have helped people gain knowledge and changed the mind set of local Kachin people to be more open to engaging with other groups and cultures. Moreover, through improved relationships and better communication, local trading will improve through people interacting with each other (Interview KIO -2, 3 May, 2016).



Figure 17 Many Chinese business migrants from China open varieties of shops in Lana Zup Ja. (Photograph by researcher, 18 May 2016).

This Mansi Township Kachin-China border is defined as an illegal border route by both the Chinese government and the Burmese military government. As a result there are no border guards or immigration departments officially on the China side.³⁴ This situation allowed people to easily cross the border to get into the Mansi Township side and the China side. The main route used is close to Lana Zup Ja (on the Myanmar side) and Bang Bing (on the China side). Around the cross border bridge, what is different now from in the past is that Chinese police rarely check their side and have inquired about border passports³⁵ since the 2011 conflict (see Figure 18). However, people continue to use illegal small bridges to cross between the China and Kachin sides (see Figure 19).

³⁴ As the area is under the administrative control of the KIO, there is a KIO checkpoint at the border.

³⁵ The border passport is done by the Myanmar government, and allows access to another Mansi Township border area called Man Wing Gyi and Loi Je- Mo Mauk Township border towns; these two areas are approximately 20 miles from this Kachin-China border.



Figure 18 The bridge is the main border road, which connects Mansi Township to China. (Photograph by researcher, 18 May 2016).



Figure 19 A bamboo bridge across the border from Dum Buk to China. (Photograph by researcher, 18 May 2016).

Due to the increased number of diverse migrants, criminality, gambling and other drug issues increased during the period from 2004 to 2007 and affected local people. However, over the last few years, this has reduced due to KIO policy against drugs.

According to the experiences of Gai Daw and Dum Buk villages, there have been both positive and negative impacts from migration. Since the 2000s, almost 30 Chinese households from Namkham in northern Shan State who were looking for better lives moved into Gai Daw village to become official villagers. Now, only around eight households are left for official residents. Originally, these groups were migrating around here and there since before they came to Gai Daw they grew opium in northern Shan State; however, they can no longer grow and benefit from opium due to higher illegal opium bribes from the Burmese military government and militia in northern Shan State. Due to this situation, people migrated to Gai Daw, but when the situation improved for opium production, they returned back to their own hometown. This only accounts for official residents moving from outside to the village. They were easily accepted to be official residents because they were born in Myanmar, even though they are Chinese (Focus Group 4-GD, 16 May, 2016). Another significant impact related to Chinese companies' investments is that near Gai Daw village, there is a small paper factory which causes pollution and a bad smell effect for the nearby people; however, the local people also sell bamboo to the paper factory to make paper (Focus Group 1-GD, 8 May, 2016).

In Dum Buk, unlike in Gai Daw, there are no official migrants; however, almost 3,000 IDPs have stayed in the village since 2011. The local residents share resources in terms of firewood, forest vegetables and other housing materials, and this situation sometimes causes a low level of conflict between locals and IDPs. However, locals also depend on IDPs for labour on the farms (Focus Group 1-DB, 13 May, 2016). Some positive results for the local people have been that village women were able to learn to produce soap liquid for their own use (as they teach this skill in the IDP camp), as well as that local people have better schools, and are no longer as isolated as before since the population has been growing (Focus Group 2-DB, 13 May, 2016).

A woman from Dum Buk village said:

“I have found relative in the camp and more friends they came and help me easily whenever in need” (Interview CF17- DB, 17 May, 2016).

Some advantageous changes have been seen in Dum Buk since the arrival of IDPs. Previously, there was no market and almost no shops. After the arrival of the IDP camp, a small village market has been established one morning per week, and some shops have been opened more frequently (Focus Group 3-DB, 14 May, 2016).

Another group of migrants related to sugarcane contract farming is Chinese migrant farmers who are temporary migrants in both Gai Daw and Dum Buk. There Palaung³⁶ ethnic group from northern Shan State worked as daily labourers in the farms in Gai Daw village, including IDPs from Lana Zup Ja camp (Focus Group 2-GD, 8 May, 2016). The IDPs take on the labour roles for sugarcane, working for both Chinese farms and Kachins, and therefore Dum Buk village has almost no other migrants.

To conclude, migration processes in Gai Daw and Dum Buk have created both positive and negative impacts on the people. Kachin people easily access both materials and services. However, business opportunities go to migrants from other countries rather than to local residents since the Kachin need more knowledge and skills in the area of marketing and capital investment. In addition, the policies of the local KIO on migration could be strengthened so as to ensure that migrants that are permitted to work in Mansi Township Kachin-China border better integrate with the local economy and maximize the benefits for the local population.

3.5 Natural Resources and Local Infrastructure Deals

Nowadays, in terms of access, Gai Daw has better connections to the main towns of Lana Zup Ja and Nba Pa than Dum Buk does. Gai Daw village is located

³⁶ Palaung only come for harvest time and labour intensive times, direct from their hometown.

along the road between Loi Je³⁷ and Nba Pa, and KIO built a cobbled road between the two in 2015, automatically allowing the village better road access. Even before this road was constructed, the quality of the pre-existing road was better than the road to Dum Buk. For Dum Buk, the road is muddy and difficult to travel.

Mansi Township Kachin-China border was rich in natural resources right after the ceasefire agreement, due to the conflict having prevented rapid resource extraction. The main natural resources in Gai Daw and Dum Buk villages were deep forest, land, and streams. However, during the ceasefire, resources were used and depleted very quickly, including to pay for new infrastructure, as well as for some illegal extraction. In order to access piped water and electricity, villagers agreed to sell commonly owned forest to a Chinese businessman from Yunnan Province. This was agreed before KIO had the capacity to manage infrastructure well itself at the village level. After the ceasefire, KIO first prioritized overall basic infrastructure, including bridges, clinics, schools, and roads, which were built by the local development department of KIO.

In Gai Daw village, due to the agreement to trade natural resources for electricity, exploitation came along with this exchange. Forest and land were handed over by the villagers for an unlimited time, including approximately -100 acres, but the locals were not aware of how to proceed with land lease agreements and natural resource management under the deal. The businessmen from China cut down some of the trees, and then planted perennial trees such as conifer. Now the landscape is a mixture of planted trees and original, conserved natural trees. Recognizing that the past deal was unfair and in order to obtain a compromise, the village head and elders and the local authority are now trying to bargain for the right of local people.

Dum Buk village is more difficult to access from the central towns of Lana Zup Ja and Nba Pa, and therefore the local infrastructure has not yet improved much. In Dum Buk, similar to Gai Daw, there has already been a deal on natural resources

³⁷ Loi Je is under Momauk Township, where official border gates have been opened by the government and the Chinese.

with a Chinese businessman for water and electricity; however, the land continues to belong to village. The agreement made allowed logging from the communal forest in 2005 in exchange for the water system and in 2008 in exchange for the electricity system respectively (now residents pay in cash for the water and electricity provided). Dum Buk's main road remains as a muddy road, and the sugarcane factory does repairs by rolling sand and stone where the truck cannot pass during rainy season (Focus Group 1-DB, 13 May, 2016).

Even though villages found their own ways to solve infrastructure issues, currently the electricity services are managed by KIO in this area. Gai Daw and Dum Buk negotiated with Chinese businessmen engaged in these two villages. Electricity is generated by the Eastern Division Central KIO, which has a public-private partnership project half owned by Chinese businessman and by KIO (see Figure 20).



Figure 20 The name of KIO electricity services board and office. (Photograph by researcher, 18 May 2016).

3.6 Land Use and Land Ownership Changes.

The right to land in Mansi Township Kachin-China border has also changed over time. The area is far from the central Burmese government, and their land tenure policy did not apply in this remote peripheral area. Therefore, Kachin clans' customary law was commonly practiced and governed the area until KIO ended the clans' control in 1963. This section mentions the changes in rights to land and allocation, especially focusing on two different eras; firstly, the clan-led land use pattern, and secondly that of the KIO, who currently govern the area.

During the time of Kachin clans, clan chiefs owned the land, which meant villagers could access the land within the identified territory of his or her own village clan. If someone wanted to use land that another clan controlled, they were first required to request consent and it was then agreed that they received the right to use the land. There were no written documents in the past, because land was customarily managed and everyone knew whose land was whose, as authorized by the clan chief. People respected and recognized each others' claims to land under the customary land allocation system. The clans also protected the vulnerable groups; for instance, orphans had the right to access their family-owned lands, because the clan chief looked after the land and handed it over when the children came of age. In terms of access to land, the practice was that when the land had been used as a swidden farm by one family, it could be used by another with the permission of the clan chief. Later, the land was still recognized to be the property of the first shifting family, because the land could be used again once the trees grew up again. Gradually, villagers also grew perennial trees after rice cultivation for a year, including tea or Tung-oil trees; other villagers then understood that the land belonged to that family (see Figure 21). Moreover, those who had permanent farmland or paddy land (i.e. not swidden) needed a stable supply of water, which depends on keeping forest cover nearby. Therefore, it was understood that for these farmers the forest nearby their land also belonged to them, and would be used for making fences around the paddy field and to graze cows. Finally, land has been seen as belonging inherently to families from generation to generation, and this is true even now since the clan system has ended.

The Kachin typically follow patrilineal system, however women also did inherit if the family did not have any men during clan period.

KIO also respected the customary clan system when they passed the land law. Even though KIO enacted the land law in the 1970s, it only became widely used in the 1980s. KIO prepared their land title policy so as to ensure autonomous lands and villages in the KIO territory. Under the KIO structure, land allocated fell into two main categories: firstly 'KIO land' that is owned and managed by the KIO; and secondly 'village-owned land' that is owned by villagers. Within village-owned land, land is separated into individual household ownership and communal land for each village. Regarding formal land rights documents issued by KIO to each family for "individual household land", generally these documents allowed the right to access farmland or paddy fields and land with crops (both perennial and short-term crops such as sugarcane). However, swidden agriculture is not allowed, unless the land already has perennial trees growing on it. A land title is not permitted to be issued for virgin land (including swidden land without perennial trees), and this instead is deemed to be village communal land where villagers can take firewood and other non-timber forest products. Farmers have the responsibility to pay tax to KIO every year depending on the scale of land they own. After the issuing of land titles, conflict started to emerge among farmers to gain more territory; however this was not too significant, due to the fact that, as mentioned, KIO recognized the existing ownership of land under the previous clan system. Disputes were resolved by the village elders who knew each farmer's farm territory. Nowadays, both male and female villagers have the right to own and inherit land in Mansi Township China border under KIO controls. This depends upon each family's decision and is not strictly controlled by KIO or society at all.



Figure 21 This photos shows Tung-oil tree and traditional tea planting together, grown after the land was used for shifting farms. (Photograph by researcher, 19 May 2016).

3.7 The Evolution of Farming Land

People from Mansi Township rely solely on farming for their livelihoods. Recent changes in the Kachin-China border can be separated into three periods of significant changes in the context of farming and the land situation over the past thirty years. Before 1991, opium was produced in the area; from 1991 to 2005, farmers were forcefully required to stop opium production by the KIO and became subsistence farmers growing rice; and from 2005 to the present, farmers moved to sugarcane. In this section, the experiences of changes in farming patterns and land ownership will be examined based on Gai Daw and Dum Buk villages, which are representative of Kachin-China border villages under KIO controlled Mansi Township Kachin-China border.

Before 1991, some Kachin cultivated opium in this area including in Gai Daw and Dum Buk villages. In Gai Daw, both Kachin and the Chinese grew opium depending on how much they could invest. Most Kachin worked for daily labour wages in opium cultivation and were also addicted to it, while the Chinese grew opium as a business. (Focus Group 4-GD, 16 May, 2016). People in Dum Buk faced a similar situation. However, for a few people mentioned, opium production supported the family in terms of funding students' education.

A villager from Gai Daw shared his experienced:

“Just for a small opium farm, the income is only enough for salt and a little food. The majority of farms were owned by Chinese. Kachins' farms did not get good quality and were not grown systematically like the Chinese did in order to get a good yield for business” (Interview CF15-GD, 6 May, 2016)

From 1991-2005, there was no opium farming during this period, but rice farming and livestock were continued by the majority of Kachin farmers in Gai Daw and Dum Buk. Rice was grown on farmlands, with some farmers deciding to use swidden farming based on their family size and their land situation; however, many farmers grew insufficient rice for the whole year during this period. Traditionally, two other seasonal local crops, Tung-oil tree and tea cultivation, supported family needs in addition to rice in every family. Since the 2000s, a new Chinese source of seeds called 'Za Gyau' became available; these seeds were 'improved' but also required fertiliser. When the farmers changed from traditional rice seed to the new Chinese seed, the household was literally guaranteed rice for the whole year after they grew one crop in the rainy season, even if they only owned a small area of farmland.

Since 2005, the local KIO authority has worked to maintain a more open relationship with China for local development. Sugarcane is a key factor supporting local development in the cross-border region during peacetime. Sugarcane contract farming in this area is planned according to China's Opium Substitution Programme. The implementation is led by Ruili Sugarcane Production Factory, which has introduced significant changes in terms of the farming system. Whilst farmers still

grow paddy rice, the areas that used to grow swidden were converted to sugarcane production.

3.7.1 The Declining of Rice Farming after Sugarcane

Rice was the main farming type in Mansi Township China border area. However, rice is now the second priority for farming as sugarcane has increased. The main root cause of this is the difference in production outcomes, and therefore farmers make the decision to sacrifice to grow sugarcane on their land, where before used to grow rice for entire lives.

There are both paddy filed (low land) and upland (seasonal farm) areas transformed for sugarcane production. The outcome gap between rice and sugarcane is incredibly different even over the same land area. For instance, nowadays farmers can make almost 1000 RMB for sugarcane where they gained only 100 RMB per year for rice in the past. Moreover, the upland was full of Tung-tree oil right before sugarcane. The outcomes of Tung-tree oil also provide less benefit than sugarcane (Focus Group 1-GD, 8 May, 2016). As result, the upland Tung-tree oil was also replaced by sugarcane. Some people were pushed to convert to sugarcane due to their environment. Moreover, some grew sugarcane to make the land more flat. Apart from many push factors, the majority of farmers needed money for their children's education in this area and so decided to grow more sugarcane (see section 3.3). Regarding this issue, one farmer said that:

“I knew sugarcane is hurt a lot, but rice production is hard to support my children education, so I have to grow which more benefit even though I am sick of growing sugarcane not only the people but also the land is hurt” (Interview CF10-GD, 5 May, 2016)

The Dum Buk villagers continue growing rice on some farmland, while sugarcane also grows in upland areas. According to 25 household semi-structured interviews, only 9 stopped rice farming. In Gai Daw among 25 households participating in semi-structured interviews, 11 have totally stopped growing rice field while the other 14 also have very few rice farming now. Therefore, in Gai Daw

village only one third of farmers continue growing rice currently. The majority rely on sugarcane, and farmers now buy rice with sugarcane income (Interview Elder 3- GD, 9 May, 2016). Generally, it could be said that rice sovereignty is less now and farmers buy from outside the area, especially from the China side of the border.

The impact of this is that some farmers use their income to again buy food and not much can be saved by those who don't have rice farming. The local KIO realized that rice farming is important to continue, and therefore KIO is not allowing sugarcane to be grown on paddy fields (see section 4.2.2). However, people are still trying to grow sugarcane in paddy fields and also have leased land to the Chinese to gain more income and yield.

3.8 Summary

This chapter has been argued that that Mansi Township Kachin-China border has been deeply linked with the political movement being neither peace nor war. The major development changes occurred after 1994 ceasefire agreement, affecting both the people and the land. Sugarcane contract farming was also a major change in this area to farmers' lives, as before the ceasefire, the whole Mansi Township KIO area had been under conflict that caused this area to lack socio-economic prosperity and remain as a very remote area.

People in the area have experienced armed conflict between the Tatmadaw and KIA since around 1960s. Later, in 1994 a ceasefire agreement brought peace for 17 years, until a new conflict broke out in 2011. Before the ceasefire agreement in 1994, people from Mansi Township Kachin-China border were highly insecure due to the fact that conflict occurred very often. Consequently, locals could not focus on livelihoods and therefore providing enough food to survive. In addition, at that time, the most materially very poor people did not even have enough to wear. Furthermore, education and healthcare were also unable to meet their basic needs. Overall the socio-economic situation was poor in Gai Daw and Dum Buk villages, similar to in other villages in the area.

However, after the ceasefire the KIO was able to support local development during peacetime to assist civilians who had suffered from conflict to recover. Since then, people were getting an opportunity to develop their family needs and services, and to enjoy a better quality of life. Over time, the local KIO upgraded basic infrastructure such as schools, village clinics, a small public hospital, roads and bridges.

During peacetime, the relationship between Mansi Township and China also changed. KIO allowed Chinese business people from Yunnan, China, to open a casino in 2004, which brought to the area many Chinese migrant business people and Shan ethnic people from northern Shan State, Myanmar. Chinese investors also opened many different shops, supporting the local economy and enabling access to goods and services more easily. However, the local people became frustrated that foreigners became the owners of businesses, as they were not able to do it themselves due to a lack of capital and weak business skills. China became the main local developer engaged with KIO and the local people, involved in local trade. In the beginning, services such as electricity were sold from China to the Mansi Township area, as well as other services such as telecommunications.

In addition to these major developments, sugarcane contract farming is the important key transformation for locals, which changed farming patterns dramatically during peacetime to the present. The locals appreciated contract farming as a key fruitful outcome of the ceasefire that KIO arranged for farmers in this Kachin-China border. As a result, farmers had more incentive to farm the land in order to find a way to make an income, whereas before (since the opium ban) rice farming was the only option and considered not very profitable aside from meeting subsistence needs. Thus, land itself also began to be perceived as more valuable by farmers. Every farmer previously owned land that was recognized and identified during the clan system, and was inherited generation to generation following customary rules. Nowadays, the KIO has issued official land documents to each family following existing customary law and has recognized villagers' own land territory. In Mansi Township nowadays, sugarcane has become the most common form of farming while rice farming is less

common. Furthermore, sugarcane supports the local economy and has become the only source of income for many farmers.

All in all, major development changes occurred after the 1994 ceasefire agreement in both positive and negative ways. The landscape has changed now that there are more buildings, a greater population, upgraded housing in villages and areas full of sugarcane farming in both upland and lowland areas of Mansi Township Kachin-China border.

Since 2011, fighting resumed between the KIA and the Tatmadaw including in Mansi Township, although not in the area studied here. One key impact has been the arrival of around 6,000 IDPs to Dum Buk village, as well as to Lana Zup Ja village. Compared to peacetime, the rate of socio-economic improvement has slowed, and even began to decline because the KIO has had to focus its resources on to the conflict. However, as discussed in Chapter 5, sugarcane contract farming has continued, and is thus still a source of income for farmers.

CHAPTER IV

SUGARCANE CONTRACT FARMING STRUCTURE AND THE COSTS AND BENEFITS FOR CONTRACT FARMERS' LIVELIHOODS

This chapter answers the second and third questions: firstly, “What is the contract structure for sugarcane production and how is it implemented?” and secondly, “What are the costs and benefits of the recent sugarcane farming cultivation including environmental and social impacts, and why were farmers growing it?”

This chapter is makes arguments related two sub-questions. To answer the first question, in this contract farming scheme, the contract agreement was signed between KIO and Ruili Sugarcane Production Factory (RSPF). The farmers, who are responsible for direct implementation, are excluded from the contractual agreement. As a result, there have remained many difficulties that facing in the ground by farmers to moving forward for a better. Therefore, the first part of the chapter on contractual agreements (section 4.1) covers: contract farming structure and the role of KIO, the Ruili sugarcane production factory and farmers (section 4.1.1); and sugarcane farmers' perception of contract farming structures (section 4.1.2).

The second part of the chapter is about the costs and benefits of sugarcane farming. The living conditions of people from Mansi Township China border have been improving because of regular income, which has helped socio-economic development. However, there have also been many challenges for farmers, an example being land degradation and impacts to human health due to the use of high levels of agro-chemical. The dilemma in a sense here is that while current sugarcane farming is undesirable for farmers, in the past there was also no opportunity for income and in the present it is not possible to go back to the past. The section first part analyses the costs and benefits of Mansi Township Kachin-China border sugarcane contract farming (section 4.2), considering: economic aspects (section 4.2.1); environmental aspects (section 4.2.2); social aspects (section 4.2.3); specifically education (section 4.2.3.1); the religious situation (section 4.2.3.2); health (section 4.2.3.3); culture and relationships (section 4.2.3.4); gender and contract

farming (section 4.2.3.5); living standards and well-being (section 4.2.3.6); and land tenure security and access to land (section 4.2.3.7). In addition, the chapter discusses land and future investments (section 4.3). Moreover, it discusses the question of why farmers are growing sugarcane (section 4.4); and the chapter also explores how farmers' lives have changed before and after sugarcane production began (section 4.5); while the last section is a summary of the chapter (section 4.6).

4.1 Contractual Agreement

The sugarcane contract agreement was signed between Bhamo KIO's administration^{38,39} and the Ruili Sugarcane Production Factory (RSPF) manager in 2005, for the period 2005-2015. Farmers were not involved at this stage, as described in the farming model explained earlier in section 1.5.1.1, and in the next section below. Important details were included in the agreement, such as the factory's agreement to take on risk when plantation yields failed, and the agreement that compensation be given to farmers for crops when the factory does not collect all of the crop in the field. The period of the first contract ended in 2016, and a new contract has not yet been signed. However, sugarcane farming continues as both sides negotiated to cultivate sugarcane based on the first contract, and therefore agreed to continue as long as sugarcane is available to grow (Interview KIO 2, 3 May, 2016).

4.1.1 Contract Farming Structure and the Role of KIO, the Ruili Sugarcane Production Factory, and Farmers

The initiation of sugarcane contract farming in the Mansi Township Kachin-China border followed the signing of a contract between Ruili Sugarcane Production Factory (RSPF) and the KIO in 2005. The implementation of the contract is led by the middlemen (termed *Nung Wu Yen*), who connect with the village sugarcane contact persons (called *Tsu Jang*), who in turn connect with the sugarcane farmers themselves. The *Tsu Jang* undertakes all management processes in terms of sharing fertiliser, measuring the cultivation fields and harvest management. However, farmers have the right to talk to the *Nung Wu Yen* when needed. How relationships and

³⁸ Second capital of Kachin State.

³⁹ Mansi Township is one of Township in Bhamo Division.

responsibilities are shared between the three key stakeholders (KIO, RSPF, and farmers) will be discussed below. In this chapter, as the *Nung Wu Yen* and *Tsu Jang* are employed by Ruili Sugarcane Production Factory, they are considered to be part of the factory as a stakeholder.

The KIO is not directly involved in the implementation of contract farming. Instead they look after overall policy regarding implementation. There is a committee to govern sugarcane production under the KIO's administration department, which works with the village sugarcane contact person and village head. However, land and forest conservation are the responsibility of the district administration, and therefore farmers pay land and sugarcane production taxes to the district office (Interview KIO 2, 3 May, 2016).

The RSPF assigned responsibility for implementation to the *Nung Wu Yen*. The *Nung Wu Yen* for Dum Buk village is a Chinese-born individual with Chinese citizenship.⁴⁰ The Gai Daw village *Nung Wu Yen* is a Myanmar-born Chinese individual, who is from this area of Kachin State. The reason for choosing a Chinese middleman is that in order to work with the factory, it is compulsory for the middleman to be able to read and write Chinese language and they should also be fluent in speaking. The factory gives custom fees every year to KIO after harvesting is finished.⁴¹ The *Nung Wu Yen* are a key responsibility of RSPF in the implementation of sugarcane contract farming in Mansi Township Kachin-China border. In addition, the factory provides fertiliser for every contract farmer each year, and the fertiliser bags are distributed under the management of the factory (see Figure 22).

⁴⁰ He can speak Kachin because most villagers are Kachin.

⁴¹ Accurate information of fee amounts is hard to get, it is paid depending upon the final harvest tonnage.



Figure 22 The sugarcane production factory sent fertilizer to Gai Daw village; farmers themselves load out their quotation. (Photograph by researcher, 10 May 2016).

Regarding contract farmers' roles and responsibilities, farmers have to pay land tax to the local KIO authority totalling 30 RMB per mu in farmland and 15 RMB per mu for upland farmland (see Figures 23 and 24 which show lowland and upland farming).⁴² Other payments are summarised in Tables 5 and 6, which show how the costs and responsibilities for the sugarcane farming implementation process are shared between the farmer (Table 5) and Ruili Sugarcane Production Factory (Table 6).

⁴² Payment to KIO by farmers is not strictly enforced; they have an opportunity to negotiate it.

Table 5 Costs to Contract Farmers for Growing Sugarcane (to sell to Ruili Sugarcane Production Factory)

Item	Costs	Note
Land Tax to KIO	<ul style="list-style-type: none"> • 30 RMB/Mu (for lowland farmland) • 15 RMB/Mu (for upland farmland) 	
Border fee or Road Tax	<ul style="list-style-type: none"> • 20 RMB/truck 	<ul style="list-style-type: none"> • Each truck contains 16 tons of sugarcane • Fee started in 2016
Fertilizer	<ul style="list-style-type: none"> • Hpu Hkaw brand = 68–80 RMB/bag • Hpyi Hpyi Hpwi brand = 97 RMB/bag • Nyau Su brand = 75 – 90 RMB/bag 	<ul style="list-style-type: none"> • Fertiliser is arranged by Ruili Sugarcane Production Factory as an advance (see Table 6 below) • Usually one bag is required per Mu • At least three different brands are used
Fertiliser transport	<ul style="list-style-type: none"> • 3 RMB/bag to Gai Daw • 5 RMB/bag to Dum Buk 	
Herbicide (see Figure 25)	<ul style="list-style-type: none"> • Egya si –lu= 14 RMB/button • Hkewu Sung= 25 RMB/button • Ahke la Jin= 25 RMB/button • Hke tin lin = 4.5-5 RMB/package • Ahke htai= 20-30RMB/package • Hu Htau Jin- 3 RMB/package 	<ul style="list-style-type: none"> • Herbicide is arranged by farmers themselves • Usage varies from farm to farm, depending on need
Ploughing	360 RMB/hour	<ul style="list-style-type: none"> • This is required for new farms • The time taken to plough one field varies depending on the particular quality of the land
Seedlings	430 RMB/ton	<ul style="list-style-type: none"> • Seedlings are arranged by farmers themselves • New seeds are required every three or four years • More than 1 ton of seedlings are required per Mu

Factory service fee.	10 RMB/ton	<ul style="list-style-type: none"> • Fee is deducted and managed by the factory • Fee covers road maintenance, salaries for <i>Nung Wu Yen</i>, subsidy for <i>Tsu Jang</i>, and KIO customs
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Table 6. Costs to Ruili Sugarcane Production Factory for Contracting Sugarcane

Item	Costs	Note
Fee to KIO	<ul style="list-style-type: none"> • Unknown 	<ul style="list-style-type: none"> • A fee is required per ton harvested • Cost information is not publicly available
Fertiliser provided to all farmers as an advance	<ul style="list-style-type: none"> • See Table 5 above for costs to farmer 	<ul style="list-style-type: none"> • Ruili Sugarcane Production Factory deducts from the final payment to farmers upon cultivation of crop
Advance 'Pu Zu' ⁴³ payment to both new and old contract farmers	<ul style="list-style-type: none"> • 120 RMB/Mu (for lowland farmland) • 50 RMB/Mu (for upland farmland) 	<ul style="list-style-type: none"> • Farmers consider this 'free money', and the <i>Nung Wu Yen</i> also call it 'free money' • However, this is really an advance payment • This is paid to the farmer during a cultivation year (i.e. once every three to four years)
Advancing money to contract farmers to purchase seedlings	<ul style="list-style-type: none"> • 500 RMB/Mu 	<p>Paid as an advance during a cultivation year (i.e. once every three to four years)</p>

To become a contract farmer with Ruili Sugar Production Factory (RSPF), farmers must first inform the *Nung Wu Yen* or the *Tsu Jang* that they would like to grow sugarcane. The land is then measured by the *Nung Wu Yen* or the *Tsu Jang*.

⁴³ Subsidy for plantations.

Once this is done, the *Nung Wu Yen* provides a voucher that documents the size of the land to start receiving production materials such as fertiliser and plastic. Measuring the land is the trigger point for the farmers to become official contract farmers. There is no formally signed contract, as the contract has already been signed with the KIO, so only a voucher is issued to the farmer. As the next step, the *Nung Wu Yen* sends a detailed information list to the factory and adds the new contract farmer's information to a database. Once recorded in the database, the farmer's name is not removed unless the farmer asks to take their name out. This means that the farmer can grow sugarcane and sell to the factory in some years, but can chose not to in some years as well. In order to receive a credit card from the company, the farmer needs to show their Myanmar citizen ID card. The credit card is important in this process because the Chinese government does not allow farmers to be paid in cash; therefore, the factory transfers the final net income balance to each farmer's bank account, which also helps facilitate easy financial checks by the government's investigation agency to be able to ensure transparency (Interview Middlemen-GD, 18 May, 2016).



Figure 23 This photo shows a typical paddy field being converted to sugarcane, found in Mansi Township (Photo from Nba Pa village) (Photograph by researcher, 19 May 2016).



Figure 24 A successful sugarcane plantation in Gai Daw, growing in an upland area. (Photograph by researcher, 19 May 2016).





Hpyi Hpyi Hpwi

Nyau Su

Hpu Hkaw



Ahkye La Jin

Hkewu Sung

Egya si-lu



Ahkye Htai

Hpu Htau

Hketin Lin

Figure 25 This shows many different fertilisers and pesticides used in sugarcane farming. The photos were taken in Gai Daw village (Photograph by researcher, 10 May 2016).

4.1.2 Sugarcane Farmers' Perception of Contract Farming Structure

The current contract farming system in the Mansi Township Kachin-China border is, as mentioned above, constituted mainly with three stakeholders; RSPF, KIO, and farmers themselves. In order to understand the dynamics of structure and power relationships among these stakeholders, the researcher used a satisfaction indicator research tool (see Table 7).

Table 7 Contract Farmers' Satisfaction with the Current Contract Farming System

Satisfaction (indicator)	No. of respondents	
	<i>Gai Daw</i>	<i>Dum Buk</i>
Not at all		
Just a little	6	9
Well enough	19	16
Very well		
Total	25	25

Source: Semi-structured Interview at Dum Buk and Gai Daw village in May 2016.

In this table, only two responses are evident, the satisfaction levels 'just a little' and 'well enough'. Those who answered 'well enough' felt that *Tsu Jang* treats all farmers equally, and that the contractual system is running fairly well.

There were several reasons why farmers said they were 'just a little' satisfied:

- Some farmers thought that Chinese migrant farmers have privileges, as they are Chinese citizens they can borrow loans from RSPF as well as from their government. As a result, they improve very quickly as they grow sugarcane as a big farm. Meanwhile they are technically also more advanced than Kachin farmers, but Kachin farmers felt they are unwilling to share with them.
- Some said that there are not clearly defined accountability and responsibilities between *Nung Wu Yen* and the *Tsu Jang*. As a result, sometimes farmers face a challenge in trucks late during harvest time; for example, this happened in Gai Daw village and lead to losses in sugarcane weight.
- Due to miscalculations by the *Nung Wu Yen* or *Tsu Jang*, sometimes farmers received inaccurate fertiliser amounts, or sometimes the fertiliser arrived late.

- Some farmers felt that they had never been in touch with the factory directly. If they could communicate face-to-face, they felt they would be able to share their health problems.
- Some sugarcane farmers feel they are excluded from the decision-making process and benefit less than what they deserve. The sugarcane production factory is based in China, Yunnan. It is a trans-national border agricultural investment. From the beginning to the end, sugar production takes place there rather than being established in Kachin State.

4.2 Analysis the Costs and Benefits of Mansi Township Kachin-China border Sugarcane Contract Farming

4.2.1 Economic Aspects

Sugarcane contract farming is boosting the local economy and incomes. There is increased proper income, while some farmers get into debt as result of participating in contract farming.

- ***Incomes***

With regards to income, there is no other regular income for the farmer community as sugarcane is the single local income source and sustains the local economy. Sources of income from sugarcane are separated into three different categories. First, income is from farmers' own sugarcane farming. Second, income is gained from land leased to Chinese migrant farmers, and finally income is earned through sugarcane farming casual labour work.

Table 8 shows calculations of sugarcane farming incomes according to farming production results from 2015-2016 in Gai Daw and Dum Buk villages. It should be recognised that income can be different in each household because some households use family members as labour and some rent outside labour.

Table 8 A combination of Sugarcane Farming Scale Quantity and Income on mu

Farming (mu)	No. of households		GD Income* per mu (RMB)	DB Income* per mu (RMB)
	<i>Gai Daw</i>	<i>Dum Buk</i>		
4-10 mu	4	11	4,000-12,000	4,000-10,000
10-15 mu	4	5	14,000-17,000	12,000-15,000
16-20 mu	7	1 (20 mu)	18,000-22,000	20,000+
21-25 mu	2	3 (25 mu)	24,000-40,000	25,000+
26-30 mu	2	3	40,000-45,000	26,000-30,000
31-35 mu	1 (35 mu)		45,000	
36-40 mu	-	2 (40 mu)		30,000+
41-45 mu	2		50,000- 56,000	
46-50 mu	2		60,000- 70,000	
50+ mu	1 (100 mu)		80,000+	
Total	25	25		

*The income per mu is calculated after deducting fertiliser costs, labour fees, and taxes.

Source: Semi-structured Interview at Dum Buk and Gai Daw villages in May 2016.

Table 8 shows that there are some differences in income between the two villages. The significant differences are the number of households participating and household income. First, the majority of farmer households from Gai Daw village are cultivating 20 Mu, while in Dum Buk the majority of farmers cultivate less than 10 Mu in 2015-2016. In addition, in Gai Daw village, one farmer owns up to 100 Mu, and several other farmers also have large areas of land. However, in Dum Buk, farmers have 40 Mu at most, owned only by a few households. Thus, it could be said that Gai Daw villagers are farming a larger area than Dum Buk farmers. Moreover, income results are slightly different in the two villages; Gai Daw villagers get between 4,000-12,000 RMB per year in hand finally over 4-10 Mu, while in Dum Buk income reached only 4,000-10,000 RMB.

There are a few reasons behind the figures in the table, which result in different outcomes in sugarcane production. Sugarcane yields are a key difference between the two research villages. Sugarcane is better grown on lowland farmland in general. In Dum Buk village, even in lowland farmland, only 6-7 tons maximum per mu can be produced due to the soil quality for sugarcane. In contrast, Gai Daw village

harvests around 11 tons at maximum because the soil quality is better than in Dum Buk village. Therefore, when compared, Gai Daw farmers get almost 3 tons more in lowland farmland areas than Dum Buk farmers. Even in the upland farmland, in Gai Daw farmers produce 6-7 tons when they systematically take care of the land. Thus, the sugarcane production quantity on lowland farmland in Dum Buk village is equivalent to the upland farmland production quantity of Gai Daw village.

However, overall, according to the farmers, the local economy has improved after sugarcane production began in both villages (see Table 9).

Table 9 Contract Farmers' Self-economic Assessment

Condition	No. of Respondent		Note
	<i>Gai Daw</i>	<i>Dum Buk</i>	
Much better		2	
Better	23	23	
Worse	2		Because of ploughing debts
Total	25	25	

Source: Semi-structured Interview at Dum Buk and Gai Daw villages in May 2016.

Regarding the second income category, the land price currently depends upon the characteristics of the land and negotiations between the landowner and lender. Specifically, land lease income is 50-100 RMB per mu/per year in the upland and 300-500 RMB per mu/per year in lowland farmland. Once land is rented, it is leased for a minimum of 3-4 years and a maximum 8-10 years respectively (Interview Contact Person-GD, 10 May, 2016). Therefore, farmers who own plenty of land are getting income from leasing land mostly to Chinese migrant farmers.

The final category of income is casual labour from sugarcane farming. Both contract farmers and non-contract farmers work as casual labourers. During harvest time, between 3,000-4,000 RMB per person per season can be earned.⁴⁴ Labour fees have jumped from 20 RMB to at least 50-60 RMB per day since sugarcane production started, due to a growing demand for labour (Focus Group 3-GD, 16 May, 2016). As a consequence, sugarcane farmers sometimes face challenges in renting labour as well as decreased incomes. Also, for those farmers growing rice and who need to hire labour, sugarcane production has increased costs even though income is less for rice than for sugarcane.

However, one villager who grows sugarcane and also sells her labour to others, said that sugarcane had changed her life:

“Because of sugarcane, something changed for me, no need to go to the market to sell vegetables found in the forest, no need to struggle for rice, there is a place to earn at least” (Interview CF27- DB, 15 May, 2016).

- **Debts**

Regarding debts, there are two key situations involved; the first is related to factory capital advancement and the second is the ploughing fee. The factory supports farmers with capital and fertiliser in advance, with the costs deducted during harvest season, but if farmers cannot pay this back, the risks are undertaken by farmers themselves. Due to this risk, contract farmers work hard to get good yields each year. As a result, except for a few farmers, most farmers are free from debts in Gai Daw and Dum Buk villages.

According to the KIO contract, the factory had agreed to take on the risk if crop production failed (see section 4.1), however in practice the risk has been transferred to the farmers themselves on the ground. For example, during the field research, it was found that a family from Dum Buk village had debt due to a drought in 2011 where they had to pay back 12,000 RMB to the factory. To cover the debt, the

⁴⁴ There is one harvest season per year.

family sold buffalo, and also sold hard wood to organisations helping IDPs with housing construction in 2012.

A second issue related to debt is how debt is recovered by the factory. In the first few years of contract farming, if one family experienced a failed crop, usually the *Nung Wu Yen* would first cover the debt payment to the factory, and then the other villagers from the community would negotiate together to help cover the cost of the debt for that family and to pay back the *Nung Wu Yen*. However, more recently, the factory started deducting the debt directly from other successful farmers' credit card accounts in that village. They advised the farmers that they should recover the payment directly from the farmer who had gone into debt. This happened, for example, in the case of the family described above. In both ways, the risk is transferred from the factory to the farmers directly for the debt. This has caused a lot of frustration amongst the farmers, who consider it unfair for the factory to manage the debt in this way. Furthermore, they feel that the KIO could do more to protect the farmers about this problem. (Interview Contact Person-DB, 16 May, 2016; Interview Middlemen- DB, 17 May, 2016; Focus Group 3-DB, 14 May, 2016).

The second kind of debt is due to ploughing the farmland in order to have a wider and flatter land area, according to voluntary decision of farmers. The ploughing cost is high, and therefore farmers face a burden to pay the ploughing machine fee. Research has found 6 households out of 25 have to pay approximately between 40,000-60,000 RMB in Gai Daw village. In Dum Buk village, farmers have almost no debt from ploughing because most are farming in the upland area where ploughing machines are rarely required. Therefore, in Dum Buk, only one out of twenty five farmers has this type of debt, totalling around 20,000 RMB. Before sugarcane production, people from this area hadn't experienced large amounts of debt. The debt has started for farmers especially after sugarcane due to sugarcane contract farming processes as mentioned above. The farmers recognise this is a new challenge, however if they stopped sugarcane production, then farmers remember from the past that there would be no opportunity for income. This dilemma is terrible in the sense that farmers may recognise this is problem for them but they do not want to go back

to the situation of the past either. While, farmers are anticipating the challenges and trying sugarcane contract farming, neither the past nor the presents has offered a satisfactory solution yet.

Ploughing is needed only the first time farmers prepare their land for sugarcane and therefore they pay the ploughing fee once at this time. Once it is paid back, they do not need to do so again. However, during the time that they first enter into sugarcane production, this is a significant cost for farmers because they must wait at least three years to start gaining income from sugarcane. The ploughing machine is rented by individual owners from the China side of the border. The owner usually agrees to plough as a loan, because they believe farmers can pay it back once they grow sugarcane. The village head and *Tsu Jang* persons mediate between the machine owner and farmers as a witness.

4.2.2 Environmental Aspects

The environment is being damaged due to the use of lots of fertiliser and pesticides during sugarcane production in order to get good yields. Soil degradation has now appeared, and this creates a demand for more fertiliser. Due to the dependency on chemicals, fertiliser must be used not only for sugarcane, but also for any other crops such as corn, vegetables and rice farming. This agro-chemical use for sugarcane contract farming, due to land degradation, tends to weaken the long-term sustainability of farmers' livelihoods. Moreover, the use of chemicals harms people's health over time, especially since the long-term cumulative effects on the human body can cause suffering years later (see section 4.2.3.3).

As farming soil is being degraded, yields have decreased even though the amount of fertiliser doses used is increasing. For Kachin farmers, this has been a particular problem when they have rented land to Chinese farmers and then receive it back after use. In order to fix the damage to the land, the first layer of soil must be removed with a machine. Currently, some farmers are trying to use this technique, meaning farmers have to fix the land, which costs extra money (Interview CF7-GD, 5 May, 2016).

In addition, due to water pollution, villagers cannot drink water from everywhere in the village they used to drink from before, even from near the village stream, due to the presence of chemicals (Interview CF7-GD, 5 May, 2016).

Regarding environmental protection, the local KIO authority is trying to make improvements by not allowing the cutting and growing of sugarcane at watershed resource areas, avoiding area within 50 meters from common ground, and encouraging rice cultivation for food security on lowland farmland or paddy fields. This is good start, but it would be more helpful to think about alternatives such as short-term seasonal vegetables, long term crops, and livestock, to prevent long term environmental impacts.

In summary, Ruili Sugarcane Production Factory benefits as the environment becomes degraded in Kachin State. Yet people from this area also lack livelihood opportunities, which is what sugarcane contract farming offers. Therefore, sugarcane is good in the short term as long as farmers gain an income, but on the other hand, issues such as soil degradation, water pollution, and deforestation impacts farmers' livelihoods again.

4.2.3 Social Aspects

In terms of social aspects, there have been significant changes since sugarcane farming was first practiced, both in positive and negative ways. The main social impacts are found in the area of education, religion, health, culture and relationships, gender equality and farming, living standards and well-being, and land tenure security and access to land.

4.2.3.1 Education

There is no public high school run by the central Myanmar government in this Mansi Township Kachin-China border (section 3.3). As a result, parents often send their children to nearby cities by spending lots of money for them to be able to access better education and then public university. Sugarcane is the only source of income supporting students' education. Education for the students from this Kachin-China

border costs more than for the students from the city, because everything is paid including the tuition fee, food, accommodation, learning materials and transportation. This high cost of education is found not only in the researched villages, but is faced by all parents in this Kachin-China border.

Eventually, parents make sacrifices for their children since the sugarcane production process is not easy in that it requires hard work, the use of high risk chemicals, and demands hard labour to get good yields and incomes. Gai Daw village data shows that 15 individual households out of 25 are supporting children's education with a large amount of income; households spend between a maximum of between 10000-25000 RMB and minimum of between 1000-7000 RMB per year. Dum Buk parents spent less money on education, with only 5 households out of 25 supporting education; these households spent between 1000-6000 RMB, with a few households spending an estimated maximum of 15000 RMB. Dum Buk farmers are less able to afford supporting children's education compared to Gai Daw village due to income constraints (see Table 8), so most children attend the village IDPs' school. In addition, most families' children are young, under around twelve years, so parents are not keen to send their children far away from home.⁴⁵

A significant outcome of financially supporting children's education is that the children can stay at boarding houses with expensive costs and under guidance and tuition similar to the students from the city. Before people from this area could not afford a similar education situation. As a result, students reached at most grade eleven, while only a few students could afford to attend university in the central government controlled area. However, nowadays the number of graduating students has increased gradually.

To sum up, farmers from this Kachin-China border spend their sugarcane income mainly on their children's education. Therefore, overall, sugarcane contract farmers are left poor. This is due to the lack of higher education system support from the central government in the border areas, which is harmful to not only to families

⁴⁵ According to random semi-structured household interview.

and but also prevents children from getting equal opportunities with the students from the cities.

4.2.3.2 The Religious Situation

As for religious beliefs, all villagers are devout Christians. The introduction of sugarcane farming brought both positive and negative impacts in terms of their religious situation.

As a negative impact, tensions have arisen when trucks are sent even on Sundays during harvest time,⁴⁶ following the factory's structure (see section 4.1.2). The roots of the tension is the fact that sugarcane easily loses weight – and therefore value - after cutting, if it is not sent to the factory immediately. The tension began first when, in harvesting season, farmers created a working group called-Zu in which ten to twenty members are combined as one. The group worked routinely, for instance when the trucks arrived in a member's family on Sunday, they would load sugarcane on the truck together. Therefore the group's members were less able to attend churches.

Transportation trucks have arrived the same day, on Sunday, to those farmers who are not participating in the Zu group, so the family must arrange to load sugarcane on the trucks on this day. If the family is absent to use the truck during this time, it is hard to find a different time to do so. Therefore, these tensions create for people a feeling of being far away from religion (church) and they are unhappy with the situation. A village elder confirmed his experiences:

“Sugarcane [cultivation] affects our religious practices, because of factory tasks, sugarcane must be loaded on the truck when the truck comes for instance, even though it is time for prayer in our family, I have to go to work”
(Interview Elder 3- GD, 9 May, 2016)

However, the giving of donations has increased since sugarcane cultivation began, such as giving regular tithes and material offerings. A church is being built in

⁴⁶ Harvesting season is December to March/April and is the most rushed time for farmers.

Dum Buk with some villagers' contributions from sugarcane income (see Figure 26).

A village woman from Dum Buk said:

“Giving Donation to the Church has been improved, became a better society, only loading day must work on Sunday” (Interview CF14- DB, 13 May, 2016).

To sum up, materially the situation has improved for religious institutions, but spiritually has the situation has become weaker, because many farmers are unable to spare time to worship and gather together as before. The dilemma for farmers here also suggests that if farmers' incomes are weakened, donations would decrease but they could have more time to worship.



Figure 26 Construction of a church underway, made possible with some contributions of sugarcane income in Dum Buk Village. (Photograph by researcher, 18 May, 2016)

4.2.3.3 Health

People from Mansi Township Kachin-China border are provided basic health care by KIO. However, farmers can now manage even serious health problems due to their participation in sugarcane contract farming. According to these research findings, some contract farmers are able to receive emergency operations even though they do not have money in hand. They can borrow easily from others in their neighbourhood; in this case the promise of future income from sugarcane is presented as a guarantee. Moreover, people can buy healthier food because of the sugarcane income. Before sugarcane cultivation, daily expenses were hard to keep up with and food was hard to come by, which led to people becoming physically and mentally depressed. However, as people's income has increased, they are easily obtaining enough food and becoming healthier, and even when they get sick they can afford treatment (Interview Middlemen-GD, 18 May, 2016).

With regards to new health impacts, there is a frightening health concern among farmers related to frequently using chemicals during sugarcane production. Many different types of pesticides are needed, but all the instructions are written in Chinese (see Figure 25), which Kachin farmers cannot read well, therefore leading them to unsystematically use the pesticides (Focus Group 4-DB, 14 May, 2016). In the beginning of contract farming, the factory worked to increase awareness about safe clothes to protect people from serious impacts. At the same time, the KIO health department also provides information about how to use pesticides and waste management. However, almost all community members are not following these guidelines (see Figure 27), since it requires time and people feel it creates a lot of extra work. This is dangerous work, so wealthier farmers, especially Chinese farmers who have large sugarcane plantations, often hire IDPs who do not have access to land and have no regular and decent jobs (Interview Village Head- DB, 18 May, 2016).

Although there is no proper health assessment, some symptoms are observed by farmers. The symptoms include headaches, eye problems, dizziness, shaking, unknown diseases and decreased resistance to sickness. A sugarcane farmer said that:

“Unpredictable diseases have happened because of spraying chemicals. This drains people’s energy but is not serious enough to go to hospital; it makes people weak and unwilling to eat food, getting old faster before aging, and the body becomes degraded similar to the land” (Interview CF3-GD, 10 May, 2016).

Another piece of evidence is that a strong adult man used to spray 10-20 gallons pesticides on sugarcane farms in only one day in recent years. However, now it is hard to finish 5 gallons in a day, showing the resistance level is decreasing. In addition, most people take an intravenous drip of sugar solution before harvest time arrives. Therefore, villagers predict that lives can be shortened from ten years to seven years (Interview Village Head-GD, 10 May, 2016; Focus Group 3- GD, 16 May, 2016; Focus Group 1-DB, 13 May, 2016).

To conclude, on the one hand there is improved healthcare compared to before sugarcane cultivation, as farmers can access heartier food using their sugarcane income. However, agro-chemicals have been found to cause damage to the human body and all contract farmers are concerned for their health. People from Mansi Township under KIO before depend for food on only rice, vegetable found in the forest and backyard gardening as they have no extra money to buy nutritious food. Nowadays, they can buy and eat food, but health problems have increased significantly after sugarcane production began due to chemical use; while farmers felt sad about it, there have no other choice. This is a hard choice and a big dilemma for farmers at the moment, yet there are no any other options and there could be trouble for livelihoods. Therefore, farmers invest in health for their family by doing sugarcane production through contract farming schemes.



Figure 27 A Chinese migrant farmer from Dum Buk sprays pesticides on her sugarcane crops without any safety clothes. (Photograph by researcher, 17 May 2016).

4.2.3.4 Culture and Relationships

Kachin people have many cultural events, including weddings, house-blessing prayers, church on Sunday, and other gathering occasions. Before sugarcane cultivation was introduced in the area, it was possible to make decisions year-round based upon each family's plan. However, nowadays, only April and May are free months, as during this time there is no work on the sugarcane plantation. The rest of the year, time is now scarcer because the sugarcane plantations require much more care than rice farming, and also needs specific step by step processes to be done on time since timing is important for success in sugarcane production.

On the other hand, cash gifts exchanged at ceremonies have increased since sugarcane production has improved incomes.⁴⁷ Moreover, close relatives are helping each other with cash support when a family has a special occasion. On the other hand, at least money is available to borrow for the family. Therefore, generally speaking, social life has improved compared to before. As a result, this is reflected in better relationships among relatives and also with other communities. A Chinese citizen from the China side of the border, who is also working as a middleman in Dum Buk, shared about differences in relationships before and after sugarcane production began:

“Before sugarcane, my relatives from the Kachin side found it difficult to treat others with a good meal, even they were afraid to come as a guest, because they had no curry to cook and offer, now I experienced they can offer such a good meal” (Interview Middlemen- DB, 17 May, 2016).

In conclusion, culture and relationships in both Gai Daw and Dum Buk villages are improving and becoming more unified through individuals supporting each other, even though there are now greater limitations on their time.

4.2.3.5 Gender and contract farming

There are some differences between men and women in the process of contract farming. According to the findings, contract farming registration heads are men, except for some widow women, woman-headed families, and in cases where the husband does not have registered citizenship.⁴⁸ Field data shows that for 17 of the 25 interviewed households in Gai Daw village, the contract farming registration was signed by men, while in Dum Buk village for 19 of 25 interviewed households the contract farming registration was signed by men. The registration is a means to the credit card that is important for every contract family (see section 4.1.1 and Figure

⁴⁷ Before families gave each other between 5-10RMB per event; this has now generally increased to 30RMB and up.

⁴⁸ Citizenship is given by Burmese Military Government Immigration.

28). According to Kachin culture in these communities, it is generally accepted for men to take on this leadership role.⁴⁹



Figure 28 A credit card given by the factory to each contract farming household. (Photograph by researcher, 12 May 2016)

The sugarcane cultivation process is one of labour intensive work, especially during harvest time and the spraying of pesticides, which are mostly the responsibility of men. Other responsibilities such as caring for plantations, including weeding, spreading fertiliser and turning the soil, are mostly undertaken by women rather than men. According to the research finding, 19 and 17 households out of 25 respectively from Dum Buk and Gai Daw village respectively observed that there were more women than men in the sugarcane farms working in full time jobs (see Figure 29).

In sum, women and men seem to be balancing the tasks and responsibilities of contract farming work; women undertake regular farm activities while men do more physically demanding work in terms of loading sugarcane on the trucks and spraying pesticides. In terms of registration, farming is put mostly under men's names. However, there are no strict roles within the family regarding who should make decisions for family events.

⁴⁹In Kachin culture, the leadership roles in family and village level are mostly occupied by men, although there are no cultural restrictions on women's participation. However, women mostly undertake housework.



Figure 29 Only 3 men were working among 10 people in a Kachin sugarcane farm in Gai Daw, during the data collection day. (Photograph by researcher, 19 May 2016).

4.2.3.6 Living Standards and Well-being

According to interviews, both Gai Daw and Dum Buk villages' contract farmers experienced improved livelihoods since they began participating in contract farming due to their increased income. Farmers felt it will take a long time to see significant changes. However, only sugarcane income has changed livelihoods since there are no other sources of income.

With regard to housing, roofing has changed from thatches to mostly zinc roofing; furthermore, some people can build more concrete and stronger houses. Spending on housing construction is the second largest household expense after education. During data collection, 7 out of 25 interviewed households in Gai Daw village spent on housing construction, with their expenditure accounting for approximately 20,000-40,000 RMB from 2015-2016 (including some savings from

previous years). Meanwhile, in Dum Buk village, 4 out of 25 households used money for housing, with expenditure reaching between 3,000-15,000 RMB. Moreover, there has been progress in people's material well being, such as ownership of motorbikes, TVs, hand phones and other household furniture which have been purchased. People replaced buffaloes with hand tractors with their income. A woman from Dum Buk shared how the impact of access to these material possessions is reflected in her daily life:

“I am really satisfied that I can communicate with my children easily [by hand phone], and also now I am more comfortable transportation because of my motorbike (Interview CF3- DB, 17 May, 2016).

As sugarcane production requires many different tasks, and keeps farmers busy the whole year, sometimes people have less social and gathering time. However, sugarcane production has changed society's working behaviour. In particular, men have worked at sugarcane farming to support their families' business, whereas before they used to spend their time hunting animals in the jungle since they didn't have regular jobs. Generally, all communities are more interested in working hard (Interview Religious Leader1-GD, 7 May, 2016).

However, some contract farmers said that farmers do not always gain a better livelihood from sugarcane cultivation because although they get a high income from the factory, the sugarcane needs investment again using this income. For a typical farmer who earns a total of 10,000 RMB gross income from a harvest, 4,000 RMB will need to be invested in the next season of sugarcane farming. Therefore, they are left with a net income of 6,000 RMB. One farmer shared his point of view related to this situation:

“Sugarcane income goes into sugarcane farming again, so we do not gain much benefit” (Interview CF1- DB, 16 May, 2016).

However, another villager shared how she sees the impact of sugarcane in her family according to her experience:

“Sugarcane income helps families in need and prevents shortages of money in my family, we can always be able to rely on this; even though some income is used for next term’s farming investment, some is still useful for family needs”
(Interview CF-4, 10 May, 2016).

4.2.3.7 Land Tenure Security and Access to Land

The Ruili Sugarcane Production Factory does not ask about or require land certificates for farmers to begin contract farming. However, the KIO issued land ownership to each family (see section 3.6). The villagers have their own approach to natural resource management and have the right to decide what to do with their identified and recognised land. However, KIO land policy does not allow land to be sold to foreigners, but locals are still able to sell to each other and transfer land. The land in this area became valuable after sugarcane began to be widely grown because the right to access land encouraged livelihood opportunities and has increased economic growth. Moreover, the land ownership under the clans system could bear in mind which recognized to be private and while some belongs to communal. When it comes to KIO era, the land ownership was encouraged for more individuals and KIO issued the land document to each family (see section 3.6). This is important to govern the land. First, it is a necessary function of administration for the KIO that has the responsibility to govern the area. Second, issuing land certificates help prevent land conflicts and land grabbing. People from this area mostly have access to at least some land (apart from the IDPs, unless they have relatives in the area), and there are not many serious cases of land conflict.

However, in the beginning of contract farming in 2005, the KIO stipulated that if a Kachin land owner wanted to rent their land to Chinese sugarcane investors, they could only rent the land at 30 RMB per mu. Typically, one land rental contract was for three years. However, some farmers thought this was unfair and they wanted to be able to negotiate a higher price, but were not permitted. It should be noted, however,

that some farmers were inexperienced regarding renting land at that time, and so followed the instructions. Arguably, the KIO and Kachin farmers did not realize how much the land was worth at that time and agreed to these contracts. The objective was to create a 'model sugarcane farm' run by Chinese migrant farmers in the area and to therefore teach the villagers (Interview KIO 2, 3 May, 2016). As a consequence, Chinese migrant farmers at that time undertook the majority of the sugarcane farming, because Kachin farmers leased their lands to Chinese migrants.

The lands that remained available to Kachin farmers were in comprised areas that were difficult for cultivation and farming, and became scattered. Kachin farmers felt this made sugarcane contract farming on the remaining land difficult (Focus Group 1- GD, 8 May, 2016). However, Kachin farmers admired and learnt from the Chinese in order to participate more in the farming process gradually, as they had seen the successful experience of Chinese migrant farmers. As a result, Kachins are now actively participating in contract farming, especially in Gai Daw where villagers are getting back land from Chinese migrant farmers that they previously leased. Thus, Chinese and Kachin farm areas are now almost equal in size.

As farmers continue renting land to Chinese migrant farmers, local communities obtain renting fees as one income source every year (see section 4.2.1). There is no official form or document for renting land, but rather, farmers use both oral agreements and written agreements. The village head and village sugarcane contact persons must be involved as witness during the renting process.

The renting fees have skyrocketed compared to when the KIO passed this rule (see section 4.2). On one hand, this is good for farmers as they get higher rent prices as the original rent price of 30 RMB per Mu has gradually increased. On the other hand, the higher land prices, the faster the land might degrade. It could happen that Chinese migrant farmers used a lots of chemical, more than the Ruili Sugarcane Production Factory procedure recommends and limits, as they might have been under more pressure to cover the input costs such as the renting fee, capital costs and labourer fees. As a consequence, this might destroy the soil, but the owner does not

have the right to intervene since the land as already been rented. When owner gets back the land from Chinese, more fertiliser are needed. Meanwhile, Kachin farmers keep their own land by using fertiliser following factory instruction, which keeps the land protected from rapid soil degradation. Figures 30 and 31 compare the growth of Chinese and Kachin sugarcane planted at the same time on similar field-types. These ownership and ways of land use might affect and threaten future livelihoods because the land becomes dry and barren very fast.

Land degradation is one big problem after sugarcane contract farming. Farmers are unhappy about the land is being in this situation. The dilemma over here is land could be able to keep green but the land seem to be waste if they don't cultivate sugarcane, where was mostly used to grow rice and seasonal crop only. At that time, it produced very little income and weakens to farmers' livelihood. On one hand, if farmers are willingness to sustain the land, then there might need a new farming scheme, but at currently there is hard to come easily.



Figure 30 A Chinese migrant farmer's sugarcane farm in Dum Buk looks better overall in terms of the crop size. (Photograph by researcher, 18 May 2016)



Figure 31 A Kachin sugarcane farmer in Dum Buk has less yield from his crop compared to the Chinese farmer in Figure 30. (Photograph by Researcher, 16 May 2016).

4.3 Land and Future Investments

After the ceasefire, many Chinese investments came into Kachin State both in central government and KIO control areas. In some Kachin areas, Chinese and Burmese from lowland areas came to buy or grasp the land, especially under central government control, with the permission of regional commanders (see section 1.5.2). This section will focus on the Mansi Township Kachin-China border under KIO control in terms of the relationship with Chinese investment at the present and will speculate toward future scenario.

The KIO has been working with Chinese widely after ceasefire. The KIO under Kachin allow lots of Chinese investment, including in the Mansi Township border area, but over time the KIO has actually limited Chinese control in the Kachin area. In the case in Mansi Township Kachin-China border, the Chinese are not

allowed to buy the land even though they access the land to use for sugarcane farming. The land leased to the Chinese is also limited in that KIO grants permission only 6 to 7 years at maximum.

If we compare with northern Laos, where there has been lots of Chinese investment and migration, this could be possible in Kachin State although probably not desirable in future. Moreover, it might mean investment coming into Kachin State from lowland and people coming to buy the land. This is a horrible idea that Mansi Township might be bought away from local people. Therefore, it could happen that the rest of future investment in Mansi Township from both China and low land.

It is important to ensure control of land area by Kachin people in Mansi Township. Currently, the KIO is protecting locals by limiting Chinese investment. There should be sustainable plans built upon both for domestic investment and Chinese investment coming into the area. Therefore, the KIO should ensure that local people in Kachin are not misguided to selling their land in the short term because in the long term, the land is their lives.

4.4 Why Farmers are Growing Sugarcane?

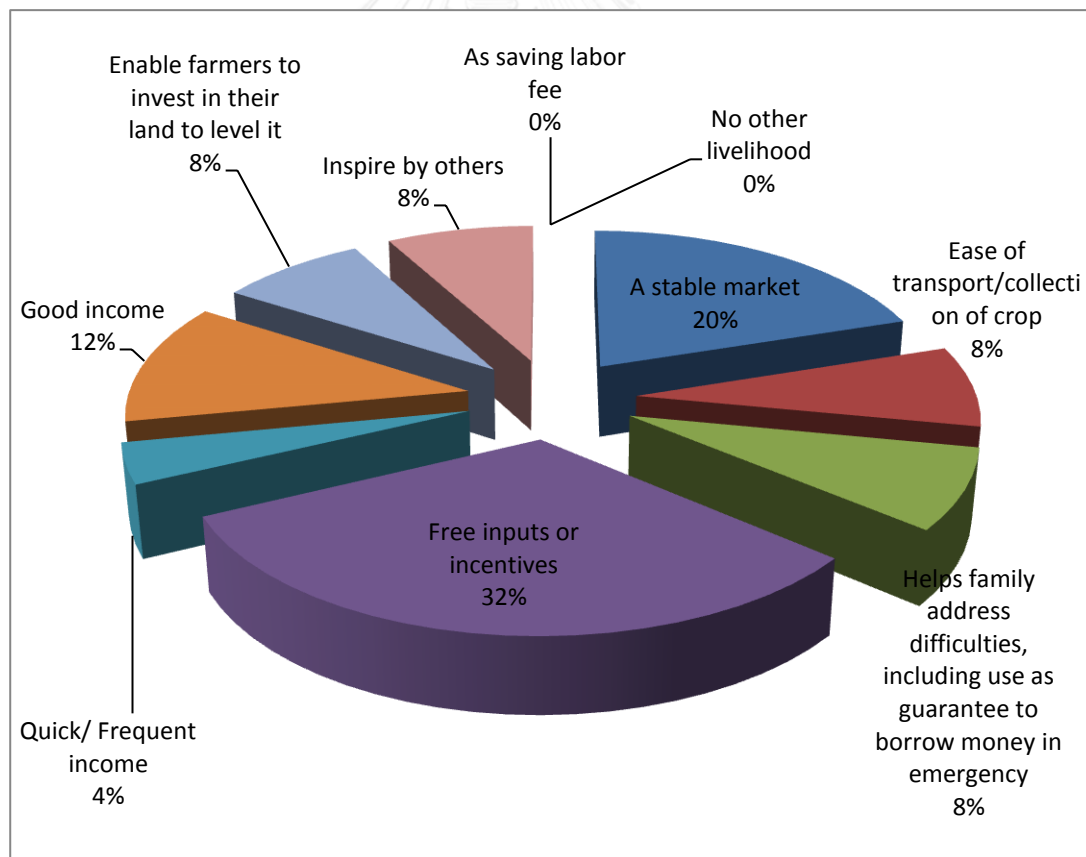
Participation in contract farming is a voluntary decision of farmers. The research findings show that overall there are ten most common reasons for farmers being involved in contract farming according to the experience of Gai Daw and Dum Buk villages (see Chart 1). These are: 1) a stable market; 2) ease of transport/collection of crop; 3) free inputs or incentives; 4) it helps family address difficulties including use as a guarantee to borrow money in an emergency; 5) it enables farmers to invest in their land to level it; 6) being inspired by others; 7) saving for labour fees; 8) lack of other livelihoods; 9) good income; and 10) quick/frequent income.

Apart from these ten issues, farmers in Gai Daw village are participating due to free inputs or incentives that are provided by the factory. This accounts for a peak of 32% of farmers, while a stable market follows, accounting for 20%. However,

there were no households participating because of a need to save for the labour fee or due to a lack of other livelihood opportunities being available.

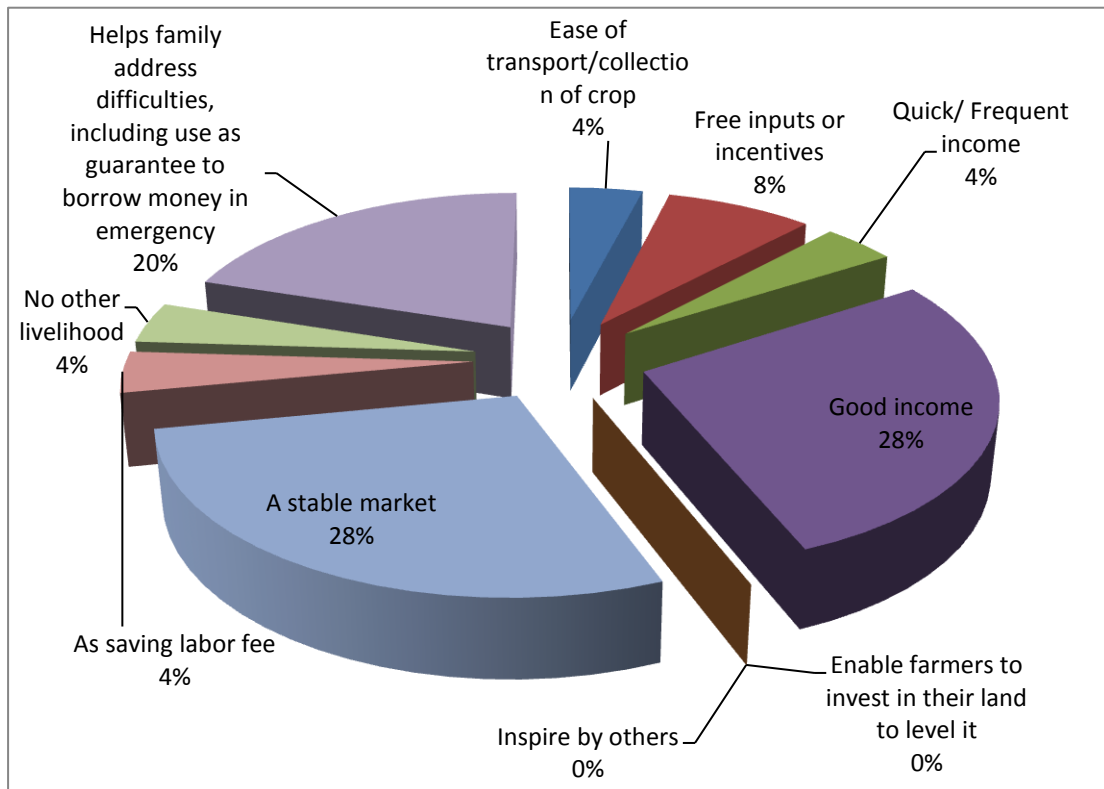
The reasons for farmers' involvement in sugarcane production in Dum Buk village (Chart 2) are similar to Gai Daw village; the opportunity to access free inputs was also mentioned as a reason for sugarcane production as it was in Gai Daw, while the potential for good income was the most commonly cited reason in Dum Buk, for 28% of farmers. Moreover, the ability for sugarcane to be used as the guarantee material to borrow money whenever farmers face difficulties is the second most common reason, reaching 20%. There were also no households who responded that they were inspired by others and or prompted to grow sugarcane because it would enable farmers to invest in their land to level it.

Chart 1. Why farmers are participating in sugarcane farming in Gai Daw village.



Source: Semi-structured Interview at Dum Buk and Gai Daw village in May 2016.

Chart 2. Why farmers are participating in sugarcane farming in Dum Buk village.



Source: Semi-structured Interview at Dum Buk and Gai Daw village in May 2016.

4.5 How Farmers Lives Have Changed Before and After Sugarcane Production Began

There have been mentioned above farmers' experiences after sugarcane based on the economic aspects, environmental aspects, and social aspects. This section is talking about the story of farmers in order to observe their situation before and after to know whether it is harder or better. This narrative story telling represents the families of Gai Daw and Dum Buk village. Therefore, Box 1 is story of farmers from Gai Daw and Box 2 from Dum Buk village.

Box 1: The Story of Naw Seng

Naw Seng comes from Gai Daw village. He used to live with his family who lives there. His family was starting sugarcane farming in 2008. He told me his family experiences about life before and after sugarcane. Before sugarcane contract farming, his family didn't enough food because there was no opportunity to earn income at all, even though he was willing to work hard. As a whole, the Mansi Township border area community was subsistence farmers until right before sugarcane contract farming.

Regarding to rice farming experiences he explained that *"we just grew traditional rice farming in the rainy season and the rest of summer and winter stayed without doing anything"*. In this situation, the family has more free time because rice farming was the only major work and there was no other sources of income to earn, as a result the family mostly was starving because with only rice alone it was hard to cover the cost of food, family supplements and supporting children's education. His family faced the most difficulties until around 2000. The livestock was hard and slow to materialise to support family needs.

However, after he started growing sugarcane, he became able to arrange his family's needs more easily even though he felt that *"I am not very satisfied to grow sugarcane, but I must do, I have no other choice to get income to fulfil my family need"*. He realized the soil is degraded and health impact makes his family suffer; on the one hand, he is supporting children's education with income and also spending on other needs. He explained with an example what he observed related to soil drought after sugarcane *"the land can't grow any other crops when sugarcane were grown almost 6 years, only sugarcane can be"*.

There are also some challenges of doing sugarcane with his farms *"the land what my family owned is not smooth enough, as result it need to try to do more hard work and put more time than other people, otherwise, hardly to get product"*. Moreover, the capital investment is a barrier in sugarcane contract farming even

though the factory borrows money that is insufficient enough to run farming; the factory paid in advance 500 RMB/per mu, but actually in the ground it requires almost 900 RMB per mu. This means that approximately 400RMB need to be arranged by the family. If the family uses much money on hiring labour then the benefits outcome is less. Therefore, the family now works harder than in the past time as sugarcane require much more care.

Finally, he said that even though income from sugarcane manages his family needs at the moment, he sees that in the long-term this is not guaranteed, therefore he is trying to think of substitutions for sugarcane. *“Sugarcane money is not given much chance to our lives, I can’t see any ways to get long term livelihood improvement, and sugarcane income goes into sugarcane again except some money use to support mainly children education in my family”*.

Box 2 The Story of Bawk Ra

Bawk Ra comes from Dum Buk village. Her family was starting sugarcane farming in 2010. She explained about her family life story from before the 1994 ceasefire situation and throughout the sugarcane farming experience.

She said *“before ceasefire didn’t focus on farming due to conflict, at that time my family was new and only depend on casual labour work, but gradually owned some farmland and started to grow rice after ceasefire”*. This was the first step that changed in her life. However, it was not perfect just for rice production at that time. She used to compare her experiences and current IDPs of Dum Buk village. According to her time, there was not humanitarian assistance and they took care of themselves when they had fled from the village during the conflict.

Nowadays, she is involved in sugarcane and her life has started changing much more. She pointing out that the most significant difference before sugarcane and after is income. In the past, the only a small sources of income came from the Tung-tree oil seed (during season) and vegetable found in the forest. Therefore,

her family is trying to engage with contract farming due to the need for money in the family. *“sugarcane is the only and the most easily to gaining income, even though I felt sick of chemical, this is the only can get income immediately, so I don’t want to say that I am sick because I need money for my children education”*. Moreover, she has to save money for her children’s education because she has 7 children; if there is no income or no sugarcane she said that she can not imagine how to continue her children’s education in the future. At the moment she seemed satisfied that sugarcane is favourable to her family because the money problem is reduced due to income whereas before she had many difficulties to make money.

On the other hand, what she observed as the impact on the whole village related to chemical emissions is that *“I am really upset that for our villages that the chemical emission explore around our village as there is many Chinese migrants farmers, because they use many different chemical, while the local people lives carelessly”*.

Even though her family is doing big farming, she cannot save a big amount, she can just cover daily expenses. She has many children, so there is no need to make much investment because the labour used is her children, while some neighbouring families need the money to invest. Therefore some farmers sold livestock and invested in sugarcane farming and it can be said this created a burden after sugarcane.

4.6 Summary

This chapter has argued that, regarding the contract farming structure, the contract agreement was signed between KIO and the factory. The farmers, who are concerned with direct implementation, are excluded from the contractual agreement. As a result, there have remained many difficulties that farmers are facing on the ground to move forward for a better life. Second, the chapter talked about the costs and benefits of sugarcane farming. People from the area have been improving because of regular income other benefits to socio-economic development. However,

apart from many risks, there are two big issues have been raised, which are land degradation and the impacts on human health due to the use of high levels of agro-chemical. The dilemma in a sense here is that while current sugarcane farming is undesirable for farmers, in the past they also had no opportunity for income and also there is no other option instead for a different option in future.

The Mansi Township Kachin-China border sugarcane contractual agreement is a mostly government-to-government approach. The KIO looks after the overall policy throughout the implementation process, and gives farmers the voluntary decision to participate, while the factory also assigns *Nung Wu Yen* to implement farming. The contractual system works well general because farmers are not losing from participating in contract farming. However, there are some weaknesses in the relationship between KIO, the factory and contract farmers that could be strengthened. In particular, the KIO is not fully involved in the implementation process, and some authority is delegated to *Nung Wu Yen* and villages. In addition, the factory also gives full power to *Nung Wu Yen*. As a result, on the ground is there are not clear, well defined responsibilities among contact persons and *Nung Wu Yen* that farmers can understand and follow the structure. Therefore, farmers face several difficulties from this unclear situation, such as trucks not arriving when needed, resulting in sugarcane losing weight and value, as well as information gaps and sometimes feeling excluded from negotiations.

Regarding the costs and benefits of contract farming, this research has analysed the economic aspects, environmental aspects, and social aspects. Concerning economic aspects, sugarcane production is the only income source for farmers, which includes from their own farming and land leased to Chinese migrant farmers. The members of Gai Daw and Dum Buk villages become a closer-knit community after sugarcane was grown (see Table 9). The debts incurred by farmers are a result of paying for capital inputs and fertiliser, but farmers can generally pay these back during harvest time. However, if farmers are not able to afford to pay back their debts, this risk is undertaken by the farmers themselves, while the factory does not share risk at all.

With regard to environmental impacts, due to the requirements of chemicals in sugarcane farming, the land has become more reliant on fertilisers. Moreover, other negative effects such as soil degradation, water pollution, and deforestation problems have occurred after sugarcane farming began. The farmers worry that their land could be affected by drought over the coming years, which would destroy their future livelihoods when sugarcane production is stopped. In this scenario, the risk that it would be difficult to cultivate any other crop is the most serious consequence or problem for farmers.

With respect to social impacts, there has been a lot of change. As farmers gain income, supporting children's education is the most valuable and highest proportion of sugarcane income expenditure. However, farmers are often absent during worship on Sundays especially during harvest time, which is a negative impact with farmers. However, farmers' material situation has improved a little because of increased donations. Regarding health, most of society became healthier than before due to increased access to nutritious food, but the use of chemicals has hurt people and created concern for people's health. However, farmers have no other livelihoods to choose that provide income sufficient to support their family. There consists the dilemma for farmers, overall here some strengthening points from contract farming, but many are unhappy how things have shaped up for farmers. In terms of gender equality in farming, both women and men are working equally, except household registration is limited to men. Living standards and overall well-being improved after sugarcane farming began, and access to material goods has increased. This success is also connected to land ownership and how farmers access land to implement sugarcane farming. In this Kachin-China border, the villagers have the right to their own approach to manage their resources. Therefore, farmers' access to land for sugarcane production has brought benefits to farmers' livelihoods and the local economy.

CHAPTER V
POLITICAL-ECONOMY, LAND SOVEREIGNTY OF MANSI TOWNSHIP
KACHIN-CHINA BORDER AND CONFLICT CONTRACT FARMING

This chapter answers the fourth research question: How is sugarcane contract farming shaping (the absence of) conflict in the Mansi Township Kachin-China border, taking account of the interests and roles of the KIO, the Myanmar government and the Chinese government?

This chapter is going to argue that the concept of ceasefire capitalism is not really happening the same in Mansi Township, because the area is governed by KIO, which has its own way of state building. It especially focuses on farmers' improved livelihoods. However, regarding the current conflict and contract farming, the research observed that the relationship between the Chinese and Myanmar is bringing protection to the land, including sugarcane farming. If there is conflict, it would implicate and disturb the China-Myanmar relationship, therefore the Tatmadaw wants to maintain good relationships with the Chinese, which could be a reason for peace so far.

This chapter is separated into four main themes. First is the theme of identifying ceasefire capitalism and conflict contract farming processes (section 5.1), including differences in the processes of ceasefire capitalism and conflict contract farming (section 5.1.1). The second part analyses land sovereignty and border security in the Mansi Township Kachin-China border (section 5.2), from the perspective of: the interests and role of KIO (section 5.2.1); the interests and role of the Myanmar central government (section 5.2.2); and the interests and role of the Chinese government and companies (section 5.2.3). The third part of the chapter is the perception of farmers over conflict and contract farming (5.3). The fourth section focuses on the peace process, current conflict and conflict contract farming (section 5.4) Finally, the fourth section examines the differences between normal contract farming (CF) and the conflict contract farming (CCF) (section 5.5); while the last section is a summary (section 5.6).

5.1 Identifying Ceasefire Capitalism and Conflict Contract Farming Processes

In this thesis, the concept of ceasefire capitalism is taken as a starting point (see section 1.4.1). However, Mansi Township faces a different situation to most border areas of Kachin State meaning that ceasefire capitalism did not happen in the same way as in other parts of Kachin State. Therefore, this section will contrast the relationship and processes between ceasefire capitalism and conflict contract farming.

5.1.1 Differences in the Processes of Ceasefire Capitalism and Conflict Contract Farming

Process of Ceasefire capitalism: According to Woods (2011), after the 1994 ceasefire in Kachin State, the central government utilised the ceasefire as an opportunity for state building through increasing Chinese agricultural investment. This happened mainly in the government-governed territory of Kachin State. The state-building process works through cooperation between Chinese investors, Burmese business elites, and local Kachin elites. The Chinese investments become a mechanism for central government to control and govern the territory in the long term. Principally, this process was achieved first through logging and then through creating rubber concessions and this changed the landscape. The rubber concessions were also supported through China's opium substitution programme.

Process of conflict contract farming: In the Mansi Township Kachin-China border, the central government does not have direct authority over the land and the people. The KIO has governed the land since 1961. Therefore, Chinese-backed sugarcane farming in Mansi Township is not subject to the same processes of ceasefire capitalism state building, backed by the central government, as happens in other areas of Kachin State and explained by Wood (2011). This is also true for agricultural investments after ceasefire for cross border trade through China's opium substitution programme. However, KIO adapted the way forward to improve livelihoods for the people. In a sense, the KIO utilised conflict contract farming for its own state building purposes.

Table 10 Compare and contrast between ceasefire capitalism and conflict contract farming.

Territory	Who benefits	Type of Farming	Purpose	Timing
Central government control area	Burmese companies; Chinese investors; regional military commanders; and local Kachin elites	Mainly rubber concession under China's opium substitution programme	Central government state-building; economic development mainly benefiting investors	From the 1994 ceasefire until 2011, when the ceasefire ended ⁵⁰
KIO control area	KIO, farmers, and Ruili Sugarcane Production Factory	Sugarcane farming under China's opium substitution programme	KIO state building; also to improve people's livelihoods in Mansi Township Kachin-China border	After the 1994 ceasefire was signed, throughout the ceasefire, and until the present after the end of ceasefire in 2011

5.2 Land Sovereignty and Border Security in the Mansi Township Kachin-China border

The Mansi Township Kachin-China border sovereignty and border security are linked with different set of relationship of actors such as KIO, Chinese, and central government. Their interests and relationship are important for land sovereignty and border security concerns. Therefore, this section will analyse these concerns,

⁵⁰ After 2011, some areas of rubber concession have since become warzones. Therefore, it is not clear whether they still continue to grow rubber under China's Opium Substitution Programme or not.

including those of the KIO (section 5.2.1), central government (section 5.2.2) and the Chinese (section 5.2.3). The focus in particular is on the period after 2011, when the ceasefire ended.

5.2.1 The Interests and Role of KIO

As mentioned above, the Mansi Township Kachin-China border is under the direct control of the KIO. This area is a stronghold of KIO, who have governed since 1961 (see section 3.2). Regarding to conflict contract farming, the KIO does certain relationship with Chinese as cross-border investment. The KIO initiated sugarcane only to support the improvement of subsistence farmers' livelihoods as the area was suffering from the conflict and lacked any other livelihood opportunities. Moreover, the landscape itself is mostly mountainous and with very little lowland spaces, and thus not every household owns farmland or paddy fields. To put it more simply, sugarcane can grow even in upland areas which supports even those who do not have farmland as they are able to cultivate sugarcane upland and all gain benefits from it (Interview KIO-2, 3 May, 2016). However, the area has become unstable since 2011 as fighting spread across Kachin State, including in some parts of Mansi Township. Consequently, this Kachin-China border faced high level security risks as Tatmadaw military forces fought and pushed gradually nearer the area (see Figure 6 and 32). Nevertheless, this small piece of Kachin-China border has been mostly peaceful until now.



Figure 32 An area of Mansi Township, where fighting was taking place, approximately 18 miles from Dum Buk Village. (Photograph by researcher, 16 May 2016).

Regards with current relationship, the KIO has ‘indirect relationship’ here at the movement in illegal logging that passes through the area. There is illegal transportation and cross-border trade of illegally felled logs occurring throughout this area in summer time, during which the lack of rains allows logs to be transported on the local unpaved roads. This business, from beginning to end, is an informal arrangement between the central government and both Chinese and Burmese business elites. The KIO does not have any engagement with business elites needed to get concessions, as logs are from the central government controlled area. In other words, KIO has not actively allowed or been involved in this informal business arrangement. However, the KIO consents to the logs being transported through their territory as they also get some customs revenue when the logs trucks pass through their territory. The timber revenue has been an income after ceasefire in Kachin State-China border (Woods, 2011) One reason for this arrangement is because this Kachin-China border area is located along the road between the central government controlled territory and

China, specifically Yunnan province. Therefore, this Kachin-China border became an important illegal trade route, especially for the Chinese and Burmese central governments and Chinese business elites; even though the KIO gains a small income from the logs, the biggest benefit from logging concessions goes to these two parties according to their involvement. Due to this fact, the central government is happy that conditions along the border remain as before 2011

This kind of relationship, especially with central government and Chinese was starting since after ceasefire for extracting logging at central government control area or ceasefire capitalism area. If there is continue timber trade, the area will get peace longer. However, do not know what other national and international politics relationship exists between the Chinese and Myanmar. Thus, it could argue that the area is shaped with how Chinese and central government are worked and relationship together leading to not conflict, beyond the KIA's military resistance. In other words, it is a fact that there is incentive to prevent conflict at the movement because of Chinese-Myanmar relationship implication in this Kachin-China border.

5.2.2 The Interests and Role of the Myanmar Central Government

The central government does not have direct authority over the Mansi Township border area. However, as mentioned the area is used to transport illegal logs into China, and this arrangement currently benefits to the central government (namely Tatmadaw). It should be noted, however, that prior to 2015, the Chinese government would allow the logs to pass across the border in the daytime, but since then the logs have only been allowed to pass at night and not openly, which is understood as a message to the KIO that this illegal border trade is not as 'approved of' as in the past.

Regarding to the Chinese and central government, both have been built close ties and a relationship. As a result, perhaps the Tatmadaw would not want to attack currently because on the one hand it would potentially affect the relationship with the Chinese. If the Tatmadaw forcedly attacked the area, then it will mean not recognizing the investment and a lack of respect for Chinese activities and this

manner could absolutely disturb the relationship of Chinese and central government. Moreover, there could be one reason is that compared to where the conflict is currently most intense, there are relatively few resources in the Mansi Township Kachin-China border, which may limit the business incentive of the government to occupy the area even if the Tatmadaw anticipates lots of war casualties in trying to take control of the area. On the other hands, the Tatmadaw may also consider to attacking because they want to control the Kachin-China border of territory. There is incentive for the Tatmadaw for the long term they may think that the border will be secure, if it is under the central government control.

According to the finding, one of local KIO thinks that the central government will not consider fighting seriously in this area. In part, this may be because the central government has maintained various business relationships with Chinese investors, including across Kachin State since the ceasefire, and so fighting in this area may have implications for their relationship with Chinese investors in other places.

That is to say, the Chinese and central government relationship and decisions over their interests might also important for Mansi Township Kachin-China border security. And also the central government at least needs to consider addressing the farmers' livelihood in order not to attack.

5.2.3 The Interests and Role of the Chinese Government and Companies

The role of the Chinese in this area involves here in relationship with KIO and also with central government. Since the 1994 ceasefire, the Chinese became widely involved in business such as agricultural investment in Kachin State, including in this Kachin-China border. However, since 2011, most Chinese investments in Myanmar has plummeted, (Loreen, 2014). Some of Kachin Kachin-China border could also involve under decrease Chinese investment, as the conflict escalated since 2011.

Even though most Chinese border investment stopped after 2011, the circumstances of the Mansi Township Kachin-China border have still created some

opportunity for Chinese investors until now. The first opportunity is illegal timber trade through which, as discussed above, logs come from the central government controlled area through this Kachin-China border through informal border trade. This Kachin-China border is useful as an illegal transportation route for both the Chinese and central government. Therefore the central government seems to keep continuing the route for illicit business with the Chinese, which encourages Yunnan provincial income.

The second reason the Kachin-China border presents an opportunity is the sugarcane farming investment and process. This investment belongs to the Chinese government policy of opium substitution in order to ensure border security and to improve socio-economic conditions along the shared border. In addition, the sugarcane in this area not only supports the people in Mansi Township border area, but it also the Ruili Sugarcane Production Factory (RSPF) alone creates jobs for around 45,000 people including labourers, farmers and staff in China. In other words, sugarcane is providing many different jobs and income both in and outside China (Interview Middleman-GD, 18 May, 2016). Thus the sugarcane production of this Kachin-China border continues to be important for China.

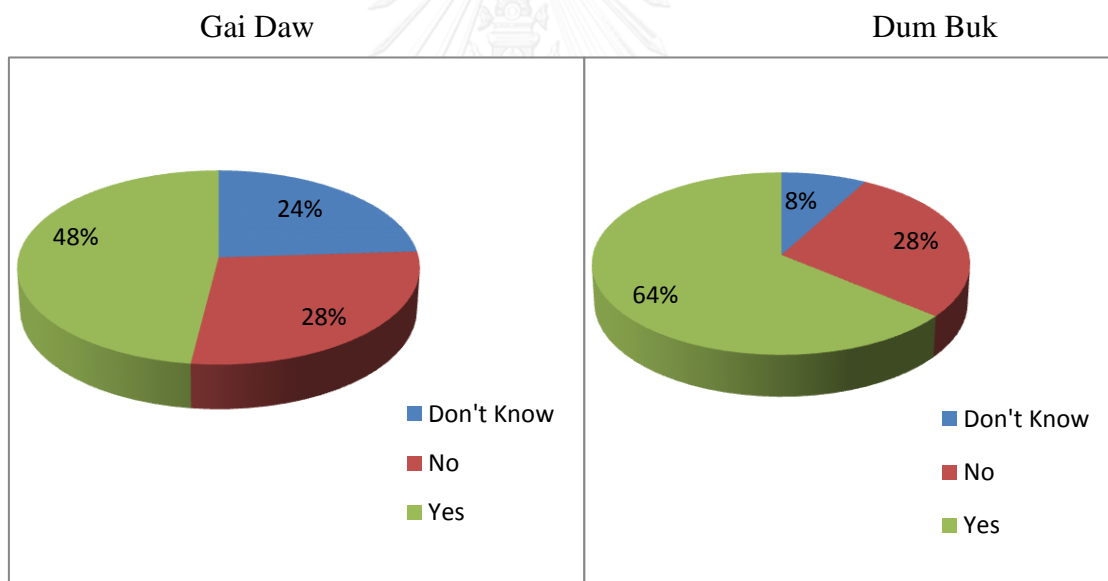
Regarding to this current conflict and sugarcane farming, the Chinese might think that if there can control by central government, then it will more easy because of direct relationship with central government toward cross-border relationship in this area.

5.3 The Perception of Farmers over Conflict and Contract Farming

Sugarcane contract farmers are keen to keep contract farming for their livelihood even though it has many challenges as mention above. It could be noted that farmers also participate for land sovereignty through engagement with contract farming under the implementation process of Ruili Sugarcane Production Factory (RSPF). This means farmers have a direct relationship with the Chinese. This section will analyse the perception of farmers about the current conflict and sugarcane farming based on their relationship with the Chinese.

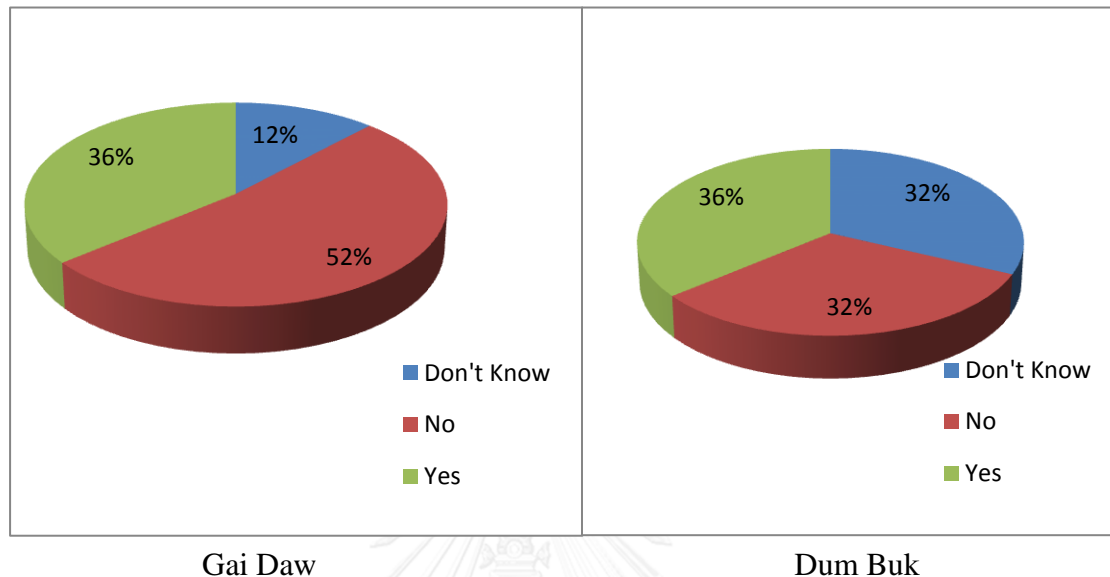
Related to sugarcane farming, villages are worried that conflict could spread any time and destroy the farms. But farmers have kept continuing their contract farming until now. Related to the fact the conflict situation is difficult to know, the Tatmadaw military offensive pushes fighting more and more, which affects farmers' livelihoods and causes instability. Nevertheless, according to the experiences of farmers, the *Nung Wu Yen* order farmers in a hurry to cut and transport the crops. In this case, locals understand that the order usually comes from the factory. However, there is also a suspicion that the RSPF may know the military movements of the Tatmadaw. Therefore, the (Chart 3 and 4) show farmers' perceptions about their farming and border security in response to two different questions.

Chart 3. Do you worry about conflict in your villages?



Source: Semi-structured interview at Dum Buk and Gai Daw village in May 2016.

Chart 4. Do you think that the Chinese government can protect you from fighting in the area, because of sugarcane production?



Source: Semi-structured interview at Dum Buk and Gai Daw village in May 2016.

Regarding the question ‘do you worry about conflict in your village?’ (Chart 3), whilst some farmers said “No”, more farmers said that they worry a lot because the conflict is happening not very far from this area. However, there are several reasons why some farmers are not worried too much about conflict. The first reason is that the Kachin-China border itself is located next to the China border area. Second, locals hope that KIA will resist and maintain the area because it belongs to their territory, and third is the presence of two IDP camps in this Kachin-China border set up in 2011, meaning conflict cannot occur because it would be a direct concern to the UN and humanitarian involvement.

With respect to the question ‘Do you think that the Chinese government can protect you from fighting in the area, because of sugarcane production?’ (Chart 4), some farmers said “Yes” because farmers think the factory belongs to the Chinese government and thus conflict could be calmed through the Chinese government negotiating with central government, unless the conflict concerns investment.. In other words, central government will listen to the Chinese government since they

have ties through a national relationship. More farmers said “No”, they did not think the Chinese government could protect them, because they thought the Chinese government had money to compensate the factory, since the factory is backed up and worked through government policy under China’s Opium Substitution Programme. As a result, the sugarcane investment might not be a large amount for Chinese government to lose if the Myanmar central government inform them that they plan to fight the KIA, even though it would destroy farming. This broader analysis would suggest that China might help protect the area; one reason to think that at the moment is that a logging relationship would continue between China and Myanmar government. Moreover, the researcher observed that related to current conflict and sugarcane, instead saying of arguing the compensation among the factory and Chinese government, it could be said that the Chinese would want more border peace to increase investment and protect current sugarcane farming. In other words, the peace agreement of KIO and central government is essential here.

5.4 The Peace Process, Current Conflict and Conflict Contract Farming

The peace talks between the central government and the KIO started soon after conflict broke out in 2011. Regarding these peace talks, there are some differences in the purposes of these two parties. The new democratic government wants KIO to sign the Nationwide Ceasefire Agreement (NCA) to get a new ceasefire agreement. However, Sun (2014) argues that the NCA only serves to show off the momentum of national reconciliation for domestic political purposes and for the international arena. The main argument of KIO was that any ceasefire agreement without a long-term political solution will be an empty and temporary ceasefire leading to more armed conflict. The KIO always asked for a ‘genuine’ political dialogue to achieve peace. The KIO predicted that if ceasefire agreement was signed, the negotiation process would be stopped by the state and retuned back to its pre-2011 status (Sun, 2014).

The Chinese gradually realized that the Kachin conflict was also important to their relationship and to continue investment along their shared border area. Thus, for the first time, the Beijing government changed its non-interference policy when the Kachin conflict escalated during the end of 2012 to early 2013. Then in 2013, China

hosted and mediated peace talks between KIO and the central government at Ruili, Yunnan Province. The Chinese intervention into the peace process came about for many reasons, in part due to the most essential incentive of sustaining a peaceful relationship with the local and national authorities for their national security and strategic economic investment needs. For example, cross-border illegal trade, such as in jade and timber, has generated Chinese income, which is linked with Chinese investors who have been encouraged by the Yunnan provincial government into the Kachin border area after the 1994 ceasefire agreement (Loreen, 2014).

In the current situation, the peace talks process has not yet brought about any successful conflict resolution. Instead, regardless of the current peace process, the Tatmadaw continues its military offensives and action in Kachin State and northern Shan State. This is hampering trust building with civilians over the ceasefire process, as well as KIO and other ethnic groups. According to recent experiences, when U Thein Sein's civilian government came to power in 2011 it did not seem to have much influence over the Tatmadaw. Thein Sein ordered a halt to the Tatmadaw attacking the KIA in Kachin State several times, but the Tatmadaw continue nevertheless. The new National League for Democracy (NLD) took control of the national government level in 2016, but has not directly issued instructions to the Tatmadaw to stop the conflict in Kachin State and other ethnic areas.

5.5 The Differences between Normal Contract Farming (CF) and the Conflict Contract Farming (CCF)

There are many documents about the normal contract farming (CF) situation. In this thesis, the conflict contract farming (CCF) in Mansi Township in the area of KIO was found to have some significant differences from CF situations. The most important differences are:

- Under CF, there is only one government actor, whereas under CCF there are two government actors.
- CF farming is done in areas where there is secure political control, but CCF farming exists in conflict zones (previously a ceasefire zone).

- In the case of CCF, there is involved a relationship between the Chinese-Myanmar governments which tends to protect conflict contract farming from direct conflict at the moment.
- Farmers from CF focus on farming peacefully, while in contrast CCF farmers are hard to work peacefully due to conflict.
- In terms of labour involving IDPs, the CCF created job opportunities for IDPs, whereas under CF only free or normal people who come to work.
- CCF farming can be destroyed anytime by conflict, so the future is blurry regarding certain benefits, but on the other hand, if there were conflict, the Chinese-Myanmar relationship would be disturbed. In contrast, the future of CF is sure except for the impact of natural disasters.

Moreover a detailed comparison is made between normal contract farming (CF) and conflict contract farming (CCF) situations based on the benefits and costs from the perspective of farmers, the company/factory, and government, shown below in Table 11 (A), Table 12 (B), Table 13 (C), and Table 14 (D).

In below table 11 (A), the main points are talking about the benefits and costs to farmers. The table firstly compares the activities under CF and contrasts this with what conditions are similar in a CCF situation. In other words, some of situations under Mansi Township CCF are very similar to general CF situation. However, the section also points out that some things are happening *only under in CCF*.

The main points of this table are:

- ✓ Farmers step on to market oriented crop production and get regular income from contract farming. While the company can be dominated over farmers that are one cost to farmers. And affect to health due to chemical and some get into debts.
- ✓ The most significant benefit of CCF is that the land and the area become valuable and similar to urban farming landscape now. In contrast, farmers have highly worry about their farms and have to share their time for military services as the area is being a conflict zone.

Table 11 (A) Comparing the Benefits and Costs to Farmers

Outcome	General CF	Observed CCF in Mansi Township Kachin-China border
Benefits	<ul style="list-style-type: none"> To participate in new high value product markets 	<ul style="list-style-type: none"> Subsistence farmers begin to market base production Farmers owning wasteland became agribusiness farms
	<ul style="list-style-type: none"> May stabilise farmers' income 	<ul style="list-style-type: none"> People have regular jobs Recovered people's well-being Gained crops selling money Sugarcane farms used as a guarantee to borrow money in emergencies
	<ul style="list-style-type: none"> Credit may be accessed as collateral 	<ul style="list-style-type: none"> Give subsidy and paid advance during cultivation year (i.e. once every three to four years) Payment system uses credit cards⁵¹
	<ul style="list-style-type: none"> Farmers may gain access to seeds and technologies 	<ul style="list-style-type: none"> Initiation of new mono-crop production
<p>The benefits what only can see under CCF are:</p> <ul style="list-style-type: none"> Easy to get farm labour as IDPs, there since 2011 Land is documented and farmers have systematic access to their land Improved local labour exchange tradition Seeing more wide and smooth farmland 		

⁵¹ There is no local bank in local, but contract farmer households have their own credit cards given by factory, under Chinese Bank. So, they became familiar with the banking system and, how to use it.

<ul style="list-style-type: none"> • Costs 	<ul style="list-style-type: none"> • Process of deciding quality, quantity, characteristics and timing may be dominated by the company 	<ul style="list-style-type: none"> • There is no complaints mechanism due to transnational investment • Farmers never have the chance to meet with the factory • Land degradation and food security
	<ul style="list-style-type: none"> • The crop buying process may be exploited by middlemen, or suppliers themselves may be corrupt and dishonest 	<ul style="list-style-type: none"> • The factory deducts 10 RMB per ton from farmers production
	<ul style="list-style-type: none"> • The market could become unstable and collapse 	
	<ul style="list-style-type: none"> • Farmers can face challenges when a new crop is introduced 	
	<ul style="list-style-type: none"> • Risk of health violations due to the use of chemicals 	<ul style="list-style-type: none"> • Using varieties of herbicide with instructions written in Chinese languages
	<ul style="list-style-type: none"> • Risk of going into debt due to failed production 	<ul style="list-style-type: none"> • Risk of production debts undertaken by farmers themselves.
	<ul style="list-style-type: none"> • Some companies ignore the possibility of dealing with small-scale farmers 	
<p>The costs what only can see under CCF are:</p> <ul style="list-style-type: none"> • Farming can be destroyed anytime due to conflict • Farmers find it difficult to focus on farming due to requirements of KIA military service • Farmers are excluded from the contractual agreement process • Increased daily labour charges 		

- Increased distance to get firewood
- Farmers sacrifice for their labour and land

In below table 12 (B), the table is talking about the benefits and costs to the company/factory. The table structure is used as the same as above Table 11 (A). The main points of this table are:

- ✓ Less investment need because of small scale farmers, for instance farmer share lands and labours, while the crop quality is better and controllable. However, the negative things involved to the company/factory are market competition and the withdrawal of farmers from contract farming.
- ✓ In Mansi Township under CCF, the factory is quite comfortable and finds it easy to deal with farmers as the area is under KIO control. But investment is made under unsecure politics that can fail anytime if the Tatmadaw is going to attack the area.

Table 12(B) Comparing Benefits and Costs to the Company/Factory

Outcome	General CF	Observed CCF in Mansi Township Kachin-China border
Benefits	<ul style="list-style-type: none"> • Small-scale production may be more cost effective than large-scale production 	<ul style="list-style-type: none"> • Reduced labour costs • Less consideration of social and environmental impacts due to foreign lands and community
	<ul style="list-style-type: none"> • Small-scale farmers can produce high quality produce 	
	<ul style="list-style-type: none"> • The company can control the production process to meet standardized quality requirements 	
	<ul style="list-style-type: none"> • Farmers take responsibility 	

	/share risk with the company	
	<ul style="list-style-type: none"> • The benefits what only can see under CCF are: Easier to deal with contract farmers due to KIO controls • Get subsidies from Chinese government • Chinese government shares the risk of the factory as it works through government policy 	
Costs	Possibility of landlord disputes and evictions	
	Farmers may withdraw from the contract	
	Market competition can increase, especially when the outside market price is high	
	<ul style="list-style-type: none"> • The costs what only can see under CCF are: The investment areas are not politically secure • Farming capital can fail anytime due to armed conflict 	

In below table 13 (C), it is talking about the benefits and costs to the government (Myanmar central government). The table structure is used as the same as above Table 11 (A). The main points of this table are:

- In normal CF scheme, the central government gains some revenue from contract farming. In contrast, in Mansi Township conflict contract farming the central government doesn't have control over the area and loses territory at the moment.

Table 13(C) Comparing Benefits and Costs to the government (Myanmar central government)

Outcome	General CF	Observed CCF in Mansi Township Kachin-China border
Benefits	Increased income through tax revenue	
	Increased land taxes from production farming	
<ul style="list-style-type: none"> • The benefits what only can see under CCF are: Gain income through informal timber trade • Central government get continue for Chinese-Myanmar relationship 		
Costs	Land degradation in specific areas	•
	May affect sovereignty issues	•
<ul style="list-style-type: none"> • The costs what only can see under CCF are: KIO has revenue sources • Does not have control of the area 		

In below table 14 (D), it is talking about the benefits and costs to the government (KIO). The table structure used is the same as above Table 11 (A). The main points of this table are:

- ✓ Under CCF, the local KIO authority gain some revenue from the contract farming process, control over the investment and encouragement to farmers livelihood. However, Chinese migrant farmers' involvement mostly is affecting the sovereignty issue and there is a high level of pressure to maintain the farms, especially after 2011 conflict.

Table 14(D) Comparing Benefits and Costs to the *government (KIO)*

Outcome	General CF	Observed CCF in Mansi Township Kachin-China border
<ul style="list-style-type: none"> • Benefits 	<ul style="list-style-type: none"> • Gain income through taxes revenue 	<ul style="list-style-type: none"> • Generated a custom fee
	<ul style="list-style-type: none"> • Land taxes from production farming 	<ul style="list-style-type: none"> • Promoted taxes revenue from crops and farmed lands
<ul style="list-style-type: none"> • The benefits what only can see under CCF are Tends to protect the area from fighting due to set the relationship among the central Myanmar government and Chinese. • Factory helps to maintain small infrastructure (i.e. road and built small bridges) • Created livelihood opportunities for locals 		
Costs	<ul style="list-style-type: none"> • Land degradation in specific areas 	<ul style="list-style-type: none"> • Limited benefits from contract farming due to not having a factory • Difficult to avoid land degrading and chemical impacts
	<ul style="list-style-type: none"> • May affect sovereignty issue 	<ul style="list-style-type: none"> • Constraints to continue regular agribusiness without Chinese factory or company • Many Chinese migrant farmers participated in the area
<ul style="list-style-type: none"> • The costs what only can see under CCF are Pressure to manage conflict contract farming due to conflict 		

5.6 Summary

This chapter has argued that the concept of ceasefire capitalism is not really happening the same in Mansi Township, because the area is governed by KIO, which

has its own way of state building. It especially focused on farmers' livelihood improvements. However, regarding the current conflict and contract farming, it was observed that the relationship between the Chinese and Myanmar is bringing protection to the land and also the farming at the moment. If there is conflict, it would implicate and disturb the China-Myanmar relationship, therefore the Tatmadaw wants to maintain good relationship with the Chinese, which could be a reason for peace so far.

The perspective and processes of ceasefire capitalism and conflict contract farming show some differences. The typical features of ceasefire capitalism happen in central government controlled areas for state building through Chinese investment. In the process, the benefits are gained by Chinese and Burmese business elites, as well as by the central government's regional military commanders. In contrast, conflict contract farming happened in Mansi Township Kachin-China border, in areas under KIO control. While conflict contract farming also supports KIO state building through Chinese agricultural investment, conflict contract farming also encourages livelihoods for the people.

Under conflict contract farming in the Mansi Township border area, land sovereignty and border security circumstances have been based on the role of KIO, the Chinese, farmers, and central government as the conflict emerged since 2011. The area is likely to prevent fighting along the border beyond KIA military defence area. First, the incentive relationship of illegal trade exists under the informal arrangement of timber trade through business elites of the Myanmar central government and China. The logs cross this border into China. Through this process, these three key actors gain income. However, the larger share of income goes to the central government and the Chinese according to their involvement. As a consequence, sugarcane farming also prevents conflict in the area due to logging concessions.

Moreover, the Tatmadaw keep Chinese-Myanmar relationship at the moment otherwise those existing relationship would be hurt. Therefore, there are several

differences existed between contract farming and conflict contract farming., The features of CCF include that the farming exists under unstable politics that can damage the farming and cause losses anytime. Two governments (KIO and the central government) are involved under CCF, while Chinese also gets involves as investors as well as the cross-border implication. The Chinese would here is easy to deal because the lands and the people are under KIO controlled area.

Regarding to KIO and central government, the peace process is on going, although any resolution has not been reached. Instead, more Tatmadaw troops continue intense fighting in Kachin, and the central government does not have much influence over the Tatmadaw even though the NLD came to power in 2016.



CHAPTER VI

CONCLUSION AND RECOMMENDATION

This chapter answers the main research question ‘What are the opportunities and challenges for sugarcane contract farming in Mansi Township under China’s Opium Substitution Programme, in terms of improving farmer livelihoods and enabling peaceful development?’. Within this chapter, the first part sums up the different sub-questions, and therefore the conclusion (section 6.1), including: what have been the major development changes in Mansi Township (section 6.1.1); what is the contract structure for sugarcane production and how is it implemented (section 6.1.2); what are the costs and benefits of the recent sugarcane farming (section 6.1.3), and Mansi Township Kachin-China border conflict contract farming and peace in the Kachin-China border (section 6.1.4). The second part addresses the main research question, and therefore the main argument (section 6.2), which looks from the perspective of livelihoods and peace during the current conflict situation (section 6.2.1); livelihoods and peace under a future ceasefire (section 6.2.2); lessons learned on contract farming and China’s opium substitution programme and ways forward (6.2.3); and imagining a future beyond sugarcane (6.2.4). Finally, recommendations are offered based on the findings from data collection (section 6.3); while the last section offers directions for future research (section 6.4).

6.1 Conclusion

The conclusion is summarised based on four sub-questions about the major development changes in the area (6.1.1), the contract farming structure for sugarcane farming (6.1.2), the costs and benefits of recent farming (6.1.3), and Mansi Township Kachin-China border conflict contract farming and peace (6.1.4).

6.1.1 What Have Been the Major Development Changes in Mansi Township?

This thesis has shown that sugarcane contract farming has been an important factor in shaping the major development changes in Mansi Township Kachin-China

border. The thesis shows that the major development changes can be understood as being divided into three periods.

The first period was before opium had been banned in 1991. In this Kachin-China border, some farmers used to grow opium and have experienced earning a little income from this. However, it was hard to grow opium widely for the benefit of the local economy due to the area's involvement in conflict. Furthermore, people could access fewer livelihood opportunities in order to fulfil their material needs and support their general well-being. Even in terms of basic health care and education, opium production was unable to meet the needs of the people since the KIO also focused more on resistance on fighting. In addition, people found it difficult to survive, and didn't have enough food and clothes to wear. Therefore, at that time in Mansi Township Kachin-China border, the overall social, economic and political situation was very poor.

The second period of major development changes could be understood as the time after 1991 when the opium production had been banned by KIO until right before sugarcane was introduced in 2005. After 1991, people found life a lot more difficult compared to the period of opium production. As result, they practiced only subsistence farming. People had no other sources of income that could support children's education and encourage family well-being. However, a key significant change was locals' ability to overcome insufficient production of rice due to the introduction of the Chinese seeds and farming design in this area. At the same time, the ceasefire agreement happened in 1994, after which things improved for the better because the ceasefire led the KIO to focus on more peaceful development on providing public services, while locals started focusing on advancing livelihoods. Therefore, the circumstances created a more peaceful environment compared to the past.

After decade of ceasefire in 2005, important changes have occurred because of sugarcane contract farming. Firstly, sugarcane income created a local economy. It is now the single income source for farmers. In addition, people now have greater material well-being generally that before was hard to come by due to the lack of

family income. In terms of education, nowadays farmers have the ability to support their children to access higher education. Overall, farmers' living standards have also recovered since sugarcane contract farming has come. However, the situation now has become a little difficult again for farmers to continue sugarcane farming due to the new conflict since 2011 around Mansi Township.

6.1.2 What is the Contract Structure for Sugarcane Production and how is it Implemented?

The thesis found that a relatively unique formal contractual system existing compare to a typical situation (see section 1.5.1.1). In the case of conflict contract farming, this is basically to be understood as being shaped by the context of ceasefire and the violent conflict. Thus, contract structure circumstances have resulted in very unusual arrangements compared to normal contract farming.

The structure, the first policy come from the Yunnan government for alternative livelihood opium substitution, in co-operation with Ruili Sugarcane Production Factory (RSPF) to address the implementation. Later, a detailed contract was signed between RSPF and KIO. The KIO looks after overall policy over contract farming while the RSPF assigned the *Nung Wu Yeng* to lead the implementation process on the behalf of RSPF. The *Nung Wu Yen* worked with *Tsu Jang* to contract farmers' participation to produce sugarcane.

Under conflict contract farming, a number of differences are involved. First, it is cross border investment and the contract is signed between higher ranks (KIO and the factory) instead of farmers, who participate in the direct implementation processes. Moreover, farmers are being excluded from the contract farming negotiation process and have less space, which means that the farmer has little bargaining power with Ruili Sugarcane Production Factory (RSPF). At present, little attention is paid by the KIO and RSPF on evaluating the strengths and weaknesses of the current contractual system and how it could be further improved; instead they prioritised only sugarcane production improvement. However, it is important to farmers to get involved and share their opinions under contract, because they are the

direct implementers for the contract farming and need to be able to get more opportunity to talk to the factory about the improvement of sugarcane production.

Second, the role of KIO in conflict contract farming stands as a broker between the factory and farmers. In this case, KIO gave a guarantee to the factory over the contract, people and the land because the sugarcane was fostered under the ceasefire zone (now a conflict zone). To put it more simply, the KIO was keen to look at livelihood opportunities and gave a promise to the factory that their civilians would be able to produce sugarcane under a contract farming scheme.

Third, the significance of working under China's opium substitution programme is that there is a guarantee and certainty over production. Once farmers are participating, there is no need to worry about marketing and where to sell their production for instance, because RSPF is backed up by the Chinese government.

6.1.3 What are the Costs and Benefits of the recent Sugarcane Farming?

The costs and benefits of sugarcane contract farming are considered in terms of economic, environmental, and social aspects taking into account farmers, KIO, and Ruili Sugarcane Production Factory (RSPF).

Regarding economic aspects, income is the main positive impact. Participation in sugarcane contract farming was the first time farmers could be able to produce agro-marketing crops in their lives and improve their situation at the family level, village level and as a whole community even contract farming causes many undesirable cases and dilemma. The KIO enforces custom fees and land tax related to sugarcane production that generates a small amount of revenue for the administration, but more importantly this experience has become a learning process for how contract farming can benefit farmers and also generate revenue for government administration. The RSPF also benefits from the contract farming, although their total profit is not known to the KIO and the farmers in Mansi Township. Therefore, it is not possible for them to evaluate whether they are getting a fair deal from the contract farming arrangement. Furthermore, this is particularly significant when the risk allocation

associated with farmer debt is considered, given that the factory expects the farmer to go in to debt during the contract farming period, yet if the debt is not recovered then the factory expects the farmer to take responsibility by themselves.

With respect to the environment, local farmers, Chinese migrant farmers, KIO and Ruili Sugarcane Production Factory (RSPF) relate to the environment differently. The environment is destroyed in terms of people's well-being since sugarcane has brought the use of many chemicals. These actors gained benefits in different way along the contract farming process. For instance, farmers used land and KIO obtained land tax. Nowadays, most Kachin-China borders are polluted, not only in farming areas but this has also come to affect the village level. Once green lands have now become barren lands and started losing biology in the area. This became an unintended consequence of contract farming to Mansi Township Kachin-China border. At the same time, it could be argued that the factory is absent in considering environmental impacts since it is involved in cross border investment.

The benefits of the social impact of sugarcane farming can be seen mainly through improvements in social services. The income encourages access to social services that now can be managed by farmers, and reduces the burden on the KIO to find funds to cover the costs of these services. At the same time, it could be noted that this social development is meeting the mandate of China's Opium Substitution Programme as well. Contract farming has also enabled the KIO to better govern land in Mansi Township, as it has generated resources and provided incentive to issue land certificates. At a result, it is easier for farmers to manage what to do with their land. On the other hand, the factory is not worried about land disputes because of the secure land tenure situation. However, serious social impacts are involved such as health issues due to chemical that directly attack people's health and lead farmers to be unhappy. As a result, farmers face a difficult decision over commitment to participate in the long-term and they worry for their future livelihoods. In some cases, contract farming is disturbing to the social structure, for instance when works is needed even on Sundays since the factory is in China. In addition, the influences of the Chinese, such as living styles, are adapted by Kachin but are unsuitable with the community.

However, overall, the status of conflict contract farming in Mansi Township Kachin-China border under China's Opium Substitution Programme clearly has had a great impact by supporting local farmers' livelihoods and increasing the local economy and living standards more than before sugarcane production. However, there are also very important issues with sugarcane contract farming they are not good at all. The biggest dilemmas for farmers here involve health and soil degradation. However, while this is difficult for farmers to take into account and respond so, the past situation was also difficult for farmers as they had little income, and there are currently no other better options for farmers than sugarcane production. Therefore, current sugarcane farming in Mansi Township Kachin-China border shows an impasse situation at present.

6.1.4 Mansi Township Kachin-China border Conflict Contract Farming and Peace

This thesis found in other areas of the Kachin State border, the process documented by Woods (2011) of ceasefire capitalism was happening. In this case, the ceasefire with the central government supported state building. Which was the first strategy involved logging concessions through border trade with the Chinese, while later the area was trying to cover itself with rubber plantations under the pioneer of China's Opium Substitution Programme through Chinese agricultural investors. However, in Mansi Township, this research found there is very different situation because of KIO control of area. This thesis argues that a process of conflict contract farming has emerged in Mansi Township, termed by the researcher as conflict contract farming. Under the conflict contract farming process, there was Chinese investment and it happened after the ceasefire similar to ceasefire capitalism. It could be noted that, the KIO formed their own ways of state building through contract farming, which has encouraged people's livelihoods in the conflict area, whereby ceasefire capitalism created benefits mostly for business elites and central government.

The conflict contract farming is still running even though conflict escalated nearby to Mansi Township due to KIO controlled territory. It could be argued that

because there the Tatmadaw has relationship with Chinese, at the moment and over the involvement of informal border trade under the arrangement of business elites of China and the central government until recently. It is recognized that the contract has emphasised the main role of the Chinese, and the central government tend to look forward and maintain the Chinese-Myanmar relationship. If there is coming attack the Tatmadaw, then those relationships would disturb at all. As a result of keeping relationship, the conflict contract farming appears to be protected from direct violent conflict in the area.

6.2 Main Argument

The main question of this thesis is: “What are the opportunities and challenges for sugarcane contract farming in Mansi Township under China’s Opium Substitution Programme, in terms of improving farmer livelihoods and enabling peaceful development?”

6.2.1 Livelihoods and Peace during the Current Conflict Situation

As mentioned above, the conflict is spreading but is not happening at the movement in this Kachin-China border and so it is partially in peace. However, this peace is not guaranteed for long. The kinds of challenges and opportunities to livelihoods and peace which this situation represents will be discussed here.

The biggest challenge in conflict contract farming is dealing with health issues. The factory and KIO need to do address these effectively by building more awareness, and encouraging and training farmers to use protective gear in the farms. Otherwise, less chemical heavy farming techniques must be introduced to protect the human body. The second challenge is the lack of capital investment, as the input from the factory is insufficient to run big farms like those of Chinese migrant farmers. Negotiation is needed to ask for loans from the Chinese government, which would be most appropriately led by the KIO. This could create a potential trend of progress for local farmers through efforts to expand to larger sugarcane farming, because the biggest benefits of the phenomenon of sugarcane production are gained when the

biggest farms are involved. Moreover, currently farmers are getting so tired since they mostly work themselves in the farms that can't afford to hire labour. If capital investment is raised, they will be able to achieve more success than now and probably be more relaxed. In contrast, the opportunity is that sugarcane production can help farmers increase their income. With the income from sugarcane, farmers are able to survive even though there is no other livelihood opportunity, especially since due to conflict the area became blocked and it became harder to access various opportunities since the 2011 conflict.

Under the current situation, the biggest challenge to getting a peaceful environment is that the factory seems not to guarantee against risk and is weak at taking responsibility over the farming process. It is important to stand up and give protection for farming. The Chinese could give messages to central government as well as to farmers and KIO that the farming is running under the opium substitution policy. However, the opportunity of peace in the current situation is that a peaceful situation so far due to maintain the relationship between Chinese and central government. In addition, setting IDPs camps down in this Kachin-China border also protects the area from serious attacks and gives an opportunity for a peaceful environment.

6.2.2 Livelihoods and Peace under a Future Ceasefire

The peace talks continue as has been introduced in section 5.4. One possible scenario that could happen would be a new ceasefire agreement again without a national level political solution being reached. In this situation, the role of livelihoods to farmers and peace will happen differently to current circumstances.

The challenge to livelihoods that will be faced is the competition with Chinese farmers, in other words more Chinese farmers will come and work contract farming when it is peaceful. Moreover, among Ruili Sugarcane Production Factory and other individual investors with different crops from China, they will compete to ensure the farmers engage with them under the contract farming scheme and this will have to be managed systematically by the KIO. On the other hand, farmers will have more

chance to make a voluntary decision to deal with who gives them more chances and opportunities. The other opportunity that will happen under a ceasefire is that more new villages will get involved in contract farming. Farmers will be able to focus their time and labour on managing their farms to help their well-being. Moreover, some farmers will switch to another long-term crop by trying to overcome the challenges of marketing and technical difficulties.

When a new type of peace happens again, this Kachin-China border will be controlled by KIO, the same now. Under a new ceasefire zone, the biggest challenges will be the political situation, which is not guaranteed and risks the area suffering from conflict again like the current situation. Without a suitable political solution, the area won't be able to remain a peaceful Kachin-China border, nor will the whole Kachin State. The opportunity of a ceasefire would be that the area and the people will obtain again a peaceful society. However, due to the temporary nature of ceasefire agreements, the peace can be ruined anytime that there will be challenges to sustainable peace and development of the area, the farms and the people.

6.2.3 Lesson Learned on Contract Farming and China's Opium Substitution Programme and Ways Forward

This section suggests how could be contract farming done better. The specific discussion here focuses just on Mansi Township Kachin-China border contract farming model under China's opium substitution programme.

With respect to overall contract farming, this is running fairly well, although not perfectly. There are several practicable models that should be continued. The one good thing is the position of KIO, who stays away from direct intervention in implementation. Thus, farmers have a voluntary decision to participate and a means to encourage deciding their own vision themselves. Next, financial transfers between the factory and farmers are quite clear as they are done using a credit card given to each family. This management provides farmers as evidence some farmers saving money with the credit, because there hasn't had any local banks previously. Moreover, there is no doubt about the middlemen of the factory in terms of corruption, because the

entire sugarcane production process linked to the factory that deals with farmers is clearly proven with documents.

However, the current Mansi Township border sugarcane farming has a few points need to be considered again. Firstly, with regards to the contractual agreement, the farmers have less power over it because they are excluded from decision making about agreement. It is important to think about farmers' voices from the ground since they best know the real situation that they anticipated dealing with cross border contract farming. Secondly, in terms of debt risk, at the moment this is not shared by the factory. The factory must share about debt, if the debt comes out due to reliable cases, for instance natural disaster.

To sum up it, the approach is too top-down instead of being a bottom-up approach or farmer-centred approach.

6.2.4 Imaging a Future beyond Sugarcane

Regarding contract farming, currently there is a dilemma on how to improve it and there are not alternative options at the moment. The researcher is trying to imagine some different future beyond sugarcane contract farming in this section. Here will discuss the possibilities and barrier to have a new option in the future.

According to observation of research, farmers in this area prefer to continue some crops that link to market like as sugarcane now. But, farmers are willing to switch in terms of the crops, using less chemicals and also can decide their future vision themselves. In other words, the imagination of future crop should be long term crop, environmental friendly, and access to market regularly. It is difficult to imagine but there are some possibilities about what future beyond sugarcane. The opportunities are, firstly, the weather is very similar to Yunnan province therefore it could be easy to analyse what kinds of crops could be planted by looking at the China side. Secondly, some cash crops are very suitable with locals, based on this experienced it could one option to find the way to grow them in the future. Finally,

the local manufacturing production should increase. In order to start it, the most difficulties in this area are;

- Need to create free and open marketing over a new crop production, and need to address on certain marketing without compromising or working under Chinese companies.
- Technical issues should be addressed to meet market standards and to increase yields.
- A new cash crop should give a guarantee to farmers because farmers depend on farming, unless could come a livelihood shortage.
- If the crop won't export to China, there should consider for transportation issue. It is mainly because the area is located between Chinese government and Myanmar government. Myanmar side will be not definitely better value for money because Myanmar is hard to catch up update business network. Instead it would be great to deal with other countries to meeting production and marketing concisely.

6.3 Recommendations

Recommendations to KIO

- ❖ There should be a stable political situation to reduce conflict with the main important focus on livelihoods through sugarcane production.
- ❖ KIO should review sugarcane contract structure and policy, in order to fix gaps and to increase cooperation between villagers and KIO as well as with the factory.
- ❖ KIO should look for more ways to benefit, instead of selling raw resources to China. It should establish a factory somewhere along the border, so then the sugarcane benefits could be worth more than now.
- ❖ KIO should emphasise more on how to prevent health impacts, for instance giving awareness in corporation with Ruili Sugarcane Production Factory.
- ❖ KIO should consider concisely substituting sugarcane which should involve the use of less chemicals and make available marketing for long-term livelihoods because sugarcane is not reliable for long-term.

- ❖ KIO's agricultural department should emphasise what could be done in the future beyond sugarcane, such as technical improvements, kinds of crops, marketing, and networks to initiate new ways of crop production for Mansi Township border area.
- ❖ The KIO's current land system that allows access to local people should be maintained in the future. And the KIO should continue to protect land for local people, and make sure that local people have land access.

Recommendation to Ruili Sugarcane Production Factory (RSPF)

- ✓ A management team should be formed during harvest time to manage on-time transportation to prevent sugarcane from drying out after it has been cut.
- ✓ The factory should have a channel to listen farmers' voices not just via *Nung Wu Yen* and *Tsu Jang*. Contract farmers felt they don't have negotiation power with the factory that reduces their power to propose opportunities, such as rewards or insurance money to recover from health impacts.
- ✓ The implementation process needs to evaluate among farmers and Ruili Sugarcane Production Factory. For instance, farmers want interpreters during important meetings, otherwise messages have been lost that lead them with insufficient information to follow structure.

Recommendation to the Chinese government

- The previous rubber concessions documented by Woods (2011), Kramer and Woods (2012) mention that Chinese opium alternative substitution where benefits are gained only by business elites and central government, whereby Mansi Township Kachin-China border sugarcane is a good example of alternative development, because it is greater support to local farmers even though they are not opium farmers.
- The Chinese government should analyse the process of China's Opium Substitution Program including in Mansi Township Kachin-China border. Overall, the current approach is promising but it would be better if the contract system took a more farmer-centric approach instead of focusing on government-to-government contracts and using middlemen.

- The government should guide the factory with some proper forms of concern about the protection of farmers. For instance, currently the factory doesn't share any debt risks with farmers.

Recommendations to Farmers

- Farmers should request free protective uniforms and gear (e.g. rubber gloves, shoes, hats, and glasses) from the factory and learn how to wear them systematically.
- In order to get more bargaining power with the factory, farmers should propose by letter or orally their challenges to KIO in order to fix the gaps among farmers, KIO and factory.
- Technically, the Chinese migrant farmers have properly nurtured their farms and get good yields, therefore in order to share knowledge and experiences farmers should ask the *Nung Wu Yen* and *Tsu Jang* to display exchange activities.
- Farmers should complain about the risk of debt, which is abused by the factory as it doesn't share with farmers. In addition, the payment system is being used in a selfish way.
- Farmers should seek other long-term crops to transform sugarcane production to another crop since some perennial crops are suitable with the local soil. They should not depend a lot on current sugarcane production and the factory.

6.4 Directions for Future Research

1. The role of KIO in this Kachin-China border is arranging development. The work they do promotes the livelihoods of the people, for instance, sugarcane farming implementation at present. According to the sugarcane production process, they have negotiated an arrangement that results in less benefits than what locals deserve. Therefore, research is needed to find out how to create unique local development ways of farming or other business activities that give regular income.

2. Current sugarcane farming is not guaranteed for long-term livelihoods because the soil has been degrading overtime. Even though they can extend farming a few more years, the farms need more fertiliser and eventually the sugarcane will need to be replanted every year. This might not succeed and so farmers will actually lose income. People from the area are now thinking about alternatives to sugarcane, however, things such as marketing, technical expertise, and capital need to be considered. Research is needed to discover what kinds of crops and marketing are suitable for the area for long-term sustainable livelihoods in this Mansi Township Kachin-China border.

3. Currently, there is a serious negative health impact on almost every contract farmer. However, it is not clear why they are facing health problems. Some family members require long term treatment. People realized this is because of sugarcane production chemicals, however there is not enough evidence to respond to it. Thus, there is a need for proper evidence and research on a health impact assessment which should research how contract farming impacts health and how to maximize it.

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APPENDIX I: QUESTIONNAIRES FOR INTERVIEWS

Focus Group Discussions (FGDs)

Contract Farming in a Conflict Zone: A case study of Mansi Township, Kachin State, Myanmar.

The FGDs' structure of questions will include two parts. Part One will include such things as personal information. Part two will have the questions and will include topics like their major developmental changes in thirty years , processing of sugarcane, contract farming production, the impact of sugarcane and their perspective of ceasefire.

In part one; the researcher will fill out their personal information. For part two the group will answer the questions by giving their own knowledge, opinions and experience.

Part 1: Personal information

FGD no: _____ Date: _____

Time: _____ Location: _____

Village name: _____ Male _____ Female _____

Facilitator: _____

Part 2: Major developmental changes in thirty years

1. How has changed the socio-economics changed over the past thirty years; especially, in the years between 1986 to 2016?
2. What are the different environmental impacts over the past thirty years?
3. What kinds of local economy improvements do you see?
4. How has local infrastructure development expanded over thirty years in the area?
5. How and when did the population of migration increases, and how it impacts the area and the people relating to the society, economy, and environment?
6. How have peoples' lives changed in terms of education and others aspect you think of?
7. What types of agriculture crop production existed before sugarcane production in the Mansi Township?

8. Why has farming production changed in the Mansi Township?
9. How many farmers are involving in sugarcane contract farming?

Process of sugarcane contract farming production

1. What type of contract farming models and systems are represented in the Mansi Township for sugarcane production?
2. How is the relationship between farming household and the middlemen, village sugarcane production contact person and the KIO?
3. What does the specific sugarcane farming implementation process require from the beginning to the end?

The impact of sugarcane farming

1. What are the significant positive /and negative changes after sugarcane farming began?
2. What costs, benefits and risks do you observe at the household level, village level and the whole society in regards to contract farming?
3. Are there any debts from sugarcane farming household in your village, if (no) why, if (yes) how did it happen and how do they solve this risk?
4. Are there any sugarcane farming households receiving remittance from their family members?
5. Are there big livelihood changes to farmers as a result of contract farming?
6. What kind of social and environmental impact occurs after the contract farming?
7. How does sugarcane farming support the family as a whole?
8. Is your village's sugarcane production successful or a failure?
9. What policies should be put in contract farming in order to benefit the farmer and improve local economic development ?

Perspective of ceasefire

1. Is there any difference before and after the ceasefire agreement with the KIO and Myanmar's military government especially on the borderland?
2. What is the relation between the ceasefire and sugarcane farming in this area?

3. What perception do you have on the current conflict relating to sugarcane farming in the area?
4. What are the interests and roles of the KIO on the ceasefire?
5. What are the interests and roles of the Chinese and the Myanmar governments on the ceasefire share based on your experiences and opinion?

Guideline Questions for In-depth Interview

Here an in-depth structure of questions will include two parts. In part one the researcher will fill out their personal information. For part two individuals will answer the questions by telling their own stories and experiences during their farm production years.

Part 1: Personal information

Name: _____ Gender: _____
 Age: _____ Phone Number: _____
 Village Name: _____ Date: _____
 Place of interview: _____

Part 1: Specific questions

1. What are the significant developmental changes in your family over thirty years, around the years between 1986 to 2016? Please share your family stories based on a timeline of changes?
2. Please share your personal experiences of current sugarcane farming; what are the changes that have affected your family?
3. How did those changes specifically shape your family?
4. Are you satisfied with the new crop production? How well does it support your family; please compare to the past and explain it how it is now?
5. Does your family receive remittance, if, so how did you spend it?
6. How do you see the contract farming system; especially its structure and relationship dynamic? Are you happy with this system, and if not, what should be changed in the future?

7. What are the costs/benefits of sugarcane production for your family? Do you face any debts due to sugarcane not producing a good yield and or for any other reasons?
8. Could you explain how you manage your family's farming land?
9. Are there fair responsibilities within your family when taking care of the sugar farming process?
10. How do you think your livelihood has changed and how has sugarcane supported to your family?
11. What significant changes occurred in terms of costs and benefits for your society and environment after your family got involved in contract farming?
12. Do you know how your family has been impacted before ceasefire and after ceasefire and, how is this connected to your family condition in every aspect?
13. What do you think, if fighting comes into this area again like as before ceasefire, what will be the impact on you and your community?
14. Please share anything else you would like to.

Guideline Questions for Semi-structured Interviews

The semi-structure interviews include two parts such as personal information in part one. Part two will have the questions for topics like the major developmental changes in thirty years, the process of sugarcane contract farming production, the impact of sugarcane and their perspective of ceasefire.

In part one the researcher will fill out their personal information. For part two the individuals will answer the questions by giving family knowledge, opinions and experiences.

Part 1: Personal information

Name: _____ Gender: _____
 Age: _____ Marital Status: _____
 Education: _____ Occupation: _____
 Phone Number: _____ Number of family members _____
 Village Name: _____ Interview Date: _____

Part 2: Significant developmental changes in thirty years

1. Has your family improved its economy during the past thirty years?
2. How do your children access education over the past thirty years?
3. What type of agriculture have you experienced before sugarcane farming?
4. Why did your family move to sugarcane contract farming production?

Process of sugarcane contract farming production

5. What type of sugarcane contractual agreement and any others documents do you have for your farm?
6. Do you think that you have the opportunity to negotiate with any middlemen, KIO, village sugar farming contact person of company whenever you want?

If so, please explain how and when_____.

If no, why do you think it is that way_____.

7. What are the most important/least important do you think in the long sugarcane implementation process?

The impact of sugarcane farming

8. Is there any satisfaction among your family with the sugarcane contract farming system?

If so, please explain the reasons_____ and choose from one option in the below table.

Indicator	Satisfaction level (tick)	Remark
Not at all		
Just a little		
Well enough		
Very well		

9. Have you ever seen the sugarcane contract?

If no, explain why:_____.

10. How much farming land does your family own, and how much is for which crop? (eg. sugarcane farming, rice farming, seasonal crops, and others)

Purposes	Chinese (Mu)	Acre
Sugarcane		
Rice farm		
Seasonal crops		
others		
Total		

11. How long has your family been involved in contract farming?
 12. Who is registered as the head of contract farming household in your family?
 13. How do you clarify the responsibilities of sugarcane farming among your family?
 14. How does your family manage sources of income from sugarcane production?

Goals	Sources	Total harvest income in RMB (2016)	Scale of sugarcane farming	Amount spent in RMB
	Support for children education			
	Use in Building house			
	Donation			
	Tax for crop			
	Tax for land			
	Paid for land (if farming land is rented)			
	Paid for labour			
	Deduct for finance/fertilizer input			
	Deposit for invest			
	Others			

15. What are the costs involved for sugarcane farming? (Table 1 is focused more on narrative questions and Table 2 is based more on costings)

Questions	Yes	No	Other reasons
Does your family use labour from your family members?			
Does your family use your own land?			
Does your family receive regular inputs for capital/fertilizer?			
Does your family have good relationships with the company(middlemen and village sugar contact person)			
Other comments			

Item	Costs	Note
Costs to CF farmers		
Border fee in Mansi Township		
Fertilizer		
Herbicide		
Plowing		
Seeds		
Seed transport		
Road maintenance		
Other		

16. What is your family's economic condition after contract farming?

Indicator	Condition (tick one)	Remark
Much better		
Better		
Worse		

17. Why did your family participate in sugarcane farming?

Reason	The most relevant to you (tick one)	Remark
Good income		
Quick/frequent income		
A stable market		
Ease of transport/collection of crop		
Free inputs or incentives		
Others		

18. How much risk did your family share?

Share risk	The most relevant to you (tick one)	Remark
Not at all		
A little		
A lot		

19. Do you think that sugarcane farming supports your family? If (yes) please, explain me how and why?
20. Does your family face any debt problem due to participation into the sugarcane farming? If, why you do not and why you are in debt, please explain more?
21. Are your family members are working somewhere out of the village, and do you receive remittance, if yes how do you spend that money and where and how?
22. How many households in your village are engaged with sugarcane contract farming?
23. Are there any high successes and lower successes in your village with sugarcane production?
If so, please explain why_____.
24. Who are the labourers in sugarcane farming during working time?
25. Are there any social changes that came up in your family after participation in contract farming?
26. What challenges does your family anticipate right now, relating to sugarcane farming?
27. Are there any environmental impacts you can see on your farm and your village?

Perspective of ceasefire

28. Do you worry about conflict in your villages?
29. The conflict is nearby, how does it effects your farm?
30. Do you think that the Chinese government can protect you from fighting in the area, because of sugarcane?
31. What is worst case scenario of your sugarcane, if the conflict is going to happen again?

Guideline Questions for Key- Informants Interview

The structure of questions will include three parts such as personal information will be filled in part one. Part two mentions the questions for specific key informants and general questions for all experts are in part three.

In part one; the researcher will fill out their personal information. For part two and three, the experts will answer the questions by giving information, their own knowledge, opinions and experience.

Part 1: Personal information

Name: _____ Gender: _____
 Age: _____ Position: _____
 Organization: _____ Occupation: _____
 Phone Number: _____ Address: _____
 Date: _____ Place of interview: _____
 Length of work with sugarcane contract farming

Part 2: Specific questions for key informants

Questions for KIO

1. Could you please explain the Mansi Township's sugarcane contract farming structure/ implementation process?
2. What is KIO's purpose for doing sugarcane farming in this area?
3. How does sugarcane contract farming relate to the agriculture development of the KIO policy?
4. What is your perspective on 17 years ceasefire, how did it change the Mansi Township/and other parts of Kachin State?
5. What is the KIO's interest and role of ceasefire

Questions for Middlemen of China Company

1. Could you please explain what are your responsibilities with contract farming between the company and the KIO and farmers in the area?

2. Could you please explain the sugarcane contract farming structure and implementation farming process with the KIO?
3. What relationship do you have between the farmers and the company?
4. What costs, benefits and risks do you see for the farmers, company and KIO?
5. What is your perspective on 17 years of ceasefire in the area?

Questions for Village heads/village Sugar Company contact person, and elder people

1. What is the overall household farming situation and the impact of sugarcane?
2. What is the relationship between the company middlemen and the village sugar contact person?
3. Could you explain the sugarcane statistics of the village?
4. How do you define high successful and less successful one?
5. What are the significant changes after ceasefire in the borderland of Mansi Township?

Part 3: General questions for all expert interviews

Major development changes in thirty years

1. How and why has Mansi Township changed over the past thirty years; especially, in the years between 1986 to 2016?
2. What types of agriculture crop production existed before sugarcane production in the Mansi Township?
3. Why has farming changed their agricultural farming production pattern?
4. How many farmers are involving in sugarcane contract farming?
5. How is the volume of farming extension in Mansi Township?

Process of sugarcane contract farming production

1. What types of contractual agreement do they use in sugarcane farming?
2. What types of contract farming models and systems are represented in the Mansi Township's sugarcane production?
3. What do you think about the relationship between the KIO, farmers, middlemen, and village contact person of the company?

The impact of sugarcane farming

1. What are significant positive /and negative changes on farmers lives?
2. Why do you think farmers grew sugarcane?
3. What are the costs, benefits and risks to farmers and the whole society?
4. Are there any changes to the livelihood of farmers after growing sugarcane?
5. What kinds of social and environmental impacts happen after sugarcane farming is done?
6. How does sugarcane farming support the role of family?
7. What could be done in the future related to sugarcane contract farming in the Mansi township, by whom and how?
8. What elements are crucial to successful contract farming? What policies should be put in place within contract farming in order to benefit the farmer and improve economic development overall?

Perspective of ceasefire

1. Is there any difference before and after the ceasefire agreement with the KIO and Myanmar military government especially on the borderland of Mansi Township?
2. What is the relation between ceasefire and sugarcane farming in this area?
3. What are the interests and roles of the KIO on the ceasefire?
4. What are the interests and roles of China and Myanmar governments on the ceasefire explain your opinion on this?

APPENDIX 2: List of Interviewees and Respondents in the Research

List of Interviews: In Gai Gaw Village

Code	Interviewee	Date	Type of Method
Focus Group 1-GD	Younger Men	8.5.2016	Focus Group Discussion
Focus Group 2-GD	Younger Women	8.5.2016	Focus Group Discussion
Focus Group 3-GD	Older Women	16.5.2016	Focus Group Discussion
Focus Group 4-GD	Older Men	16.5.2016	Focus Group Discussion
CF1-GD	Villager	10.5.2016	In-depth Interview
CF2-GD	Villager	10.5.2016	In-depth Interview
CF3-GD	Villager	10.5.2016	In-depth Interview
CF4-GD	Villager	10.5.2016	In-depth Interview
CF5-GD	Villager	5.5.2016	Semi-Structured
CF6-GD	Villager	5.5.2016	Semi-Structured
CF7-GD	Villager	5.5.2016	Semi-Structured
CF8-GD	Villager	5.5.2016	Semi-Structured
CF9-GD	Villager	5.5.2016	Semi-Structured
CF10-GD	Villager	5.5.2016	Semi-Structured
CF11-GD	Villager	5.5.2016	Semi-Structured
CF12-GD	Villager	5.5.2016	Semi-Structured
CF13-GD	Villager	6.5.2016	Semi-Structured
CF14-GD	Villager	6.5.2016	Semi-Structured
CF15-GD	Villager	6.5.2016	Semi-Structured
CF16-GD	Villager	6.5.2016	Semi-Structured
CF17-GD	Villager	6.5.2016	Semi-Structured
CF18-GD	Villager	6.5.2016	Semi-Structured
CF19-GD	Villager	6.5.2016	Semi-Structured
CF20-GD	Villager	7.5.2016	Semi-Structured
CF21-GD	Villager	9.5.2016	Semi-Structured
CF22-GD	Villager	9.5.2016	Semi-Structured
CF23-GD	Villager	9.5.2016	Semi-Structured
CF24-GD	Villager	9.5.2016	Semi-Structured
CF25-GD	Villager	9.5.2016	Semi-Structured
CF26-GD	Villager	9.5.2016	Semi-Structured
CF27-GD	Villager	9.5.2016	Semi-Structured
CF28-GD	Villager	9.5.2016	Semi-Structured
CF29-GD	Villager	9.5.2016	Semi-Structured
Religious Leader 1-GD	KBC	7.5.2016	Key Informant
Elder 1- GD	Villager	9.5.2016	Key Informant
Elder 2- GD	Villager	9.5.2016	Key Informant
Elder 3- GD	Villager	9.5.2016	Key Informant
Contact Person-GD	Villager	10.5.2016	Key Informant
Religious Leader 2-GD	RC	10.5.2016	Key Informant
Village Head-GD	Villager	10.5.2016	Key Informant
Middlemen-GD	Nung Wu Yen	18.5.2016	Key Informant
Local NGO-GD	BRIDGE	19.5.2016	Key Informant

* CF= contract farmer, GD= Gai Daw , KBC= Kachin Baptist Convention, RC=Roman Catholic , BRIDGE= Bridging Rural Integrated Development and Grassroot Empowerment, Nung Wu Yen = the person in-charge of Farmers (Direct Translation from Chinese to English)

List of Interviews: In Dum Buk Village

Code	Interviewee	Date	Type of Method
Focus Group 1-DB	Older Women	13.5.2016	Focus Group Discussion
Focus Group 2- DB	Younger Women	13.5.2016	Focus Group Discussion
Focus Group 3- DB	Younger Men	14.5.2016	Focus Group Discussion
Focus Group 4- DB	Older Men	14.5.2016	Focus Group Discussion
CF1- DB	Villager	16.5.2016	In-depth Interview
CF2- DB	Villager	17.5.2016	In-depth Interview
CF3- DB	Villager	17.5.2016	In-depth Interview
CF4- DB	Villager	18.5.2016	In-depth Interview
CF5- DB	Villager	12.5.2016	Semi-Structured
CF6- DB	Villager	12.5.2016	Semi-Structured
CF7- DB	Villager	12.5.2016	Semi-Structured
CF8- DB	Villager	12.5.2016	Semi-Structured
CF9- DB	Villager	12.5.2016	Semi-Structured
CF10- DB	Villager	12.5.2016	Semi-Structured
CF11- DB	Villager	12.5.2016	Semi-Structured
CF12- DB	Villager	12.5.2016	Semi-Structured
CF13- DB	Villager	12.5.2016	Semi-Structured
CF14- DB	Villager	13.5.2016	Semi-Structured
CF15- DB	Villager	13.5.2016	Semi-Structured
CF16- DB	Villager	13.5.2016	Semi-Structured
CF17- DB	Villager	13.5.2016	Semi-Structured
CF18- DB	Villager	13.5.2016	Semi-Structured
CF19- DB	Villager	13.5.2016	Semi-Structured
CF20- DB	Villager	14.5.2016	Semi-Structured
CF21- DB	Villager	14.5.2016	Semi-Structured
CF22- DB	Villager	15.5.2016	Semi-Structured
CF23- DB	Villager	15.5.2016	Semi-Structured
CF24- DB	Villager	15.5.2016	Semi-Structured
CF25- DB	Villager	15.5.2016	Semi-Structured
CF26- DB	Villager	15.5.2016	Semi-Structured
CF27- DB	Villager	15.5.2016	Semi-Structured
CF28- DB	Villager	15.5.2016	Semi-Structured
CF29- DB	Villager	17.5.2016	Semi-Structured
Elder 1- DB	Villager	13.5.2016	Key Informant
Religious Leader 1- DB	KBC	14.5.2016	Key Informant
Elder 2- DB	Villager	15.5.2016	Key Informant
Contact Person-DB	Villager	16.5.2016	Key Informant
Middlemen- DB	Nung Wu Yen	17.5.2016	Key Informant
Village Head- DB	Villager	18.5.2016	Key Informant
Local NGO- DB	Alinn	18.5.2016	Key Informant
KIO 1	Chairmen of Central Agricultural Department	27.4.2016	Key Informant
KIO 2	Division Party Secretary	3.5.2016	Key Informant

* CF= Contract Farmer, DB= Dum Buk , Alinn= Light Foundation, KBC= Kachin Baptist Convention , Nung Wu Yen = the person in-charge of Farmers (Direct Translation from Chinese to English)

VITA

Htu Raw Lahpai was born in the Kachin State, bordering China in Myanmar. She is a Kachin by nationality. She holds a Bachelor Degree in Economics at the Mandalay Yadanapone University that she completed in 2009. She is actively engaged in promoting Kachin Womens' rights, including involvement in an anti-trafficking programme on the China border between the years 2006 to 2010. She joined the Kachin Relief and Development Committee (KRDC) under the wing of the Kachin Independence Organization (KIO) administration, as she is interested in holistic development within the broader community. She also worked in humanitarian assistance for Internally Displaced Persons (IDPs) along the Kachin-China border from 2011 until 2015 when she began studying in the Master of Arts in International Development Studies (MAIDS) Program at the Chulalongkorn University in Thailand.