



# STUDY ON AGRICULTURAL INVESTMENTS

## *FINAL REPORT*

### Funding Organisations:



## Livelihoods and Food Security Trust Fund



## Contents

I.	EXECUTIVE SUMMARY .....	6
II.	INTRODUCTION .....	10
2.1.	<i>The FSWG</i> .....	10
2.2.	<i>Study components</i> .....	10
2.2.1.	Study on Agricultural Investments .....	10
2.2.2.	Policy Analysis .....	10
III.	BACKGROUND .....	11
3.1.	<i>Overall case context</i> .....	12
3.2.	<i>Investment climate</i> .....	13
3.3.	<i>Case studies</i> .....	15
IV.	METHODOLOGY .....	18
4.1.	<i>Approach</i> .....	18
4.2.	<i>Methodology phases</i> .....	19
4.2.1.	Study on agricultural investments - Proposed case studies .....	19
4.2.2.	Policy research .....	20
4.3.	<i>Reporting</i> .....	21
4.4.	<i>Sample of actors in villages / States</i> .....	22
4.5.	<i>Challenges</i> .....	23
V.	FINDINGS RESEARCH – FIELD CASE STUDIES .....	24
5.1.	<i>Sugarcane case study - background</i> .....	24
5.2.	<i>Watermelon case study</i> .....	32
5.3.	<i>Tea leaves case study</i> .....	41
VI.	MYANMAR INVESTMENT LAW .....	50
6.1.	<i>Analysis</i> .....	50
6.1.1.	Analysis of situation that law or policy initiative aims to regulate .....	50
6.1.2.	Reviewed (draft) laws or policy initiatives, and related policies .....	51
6.1.2.1.	<i>Contract Farming-Sugarcane</i> .....	53
6.1.2.2.	<i>Lease Farming - Watermelon</i> .....	54
6.1.2.3.	<i>Interpretation of the Farmer Protection Law</i> .....	54
6.2.	<i>Institutional and stakeholder analysis</i> .....	55
6.2.1.	Key stakeholders, status of their influence .....	55
6.2.2.	Allies and targets .....	57
6.2.3.	Identification of key leverage points .....	58
VII.	OVERALL CONCLUSIONS AND RECOMMENDATIONS .....	60

<b>7.1. Conclusions</b> .....	60
<b>7.2. Recommendations</b> .....	63
<b>7.2.1. Case studies</b> .....	63
<b>7.2.2. Inclusive agri-business investments</b> .....	65
<b>7.2.3. Land matters</b> .....	68
<b>7.2.4. Environmental impact</b> .....	70
Annex I – Workplan .....	71
Annex II – Orientation questionnaire for partners .....	72
Annex III - Overall research Questionnaire per type of stakeholder .....	74
Annex IV – Manual for IDIs and FGDs .....	82
Annex V - Bibliography .....	84

## LIST OF ACRONYMS

ABCs	Agribusiness companies
AGPPS	AnGiang Plant Protection Joint Stock Company
ASEAN	Association of Southeast Asian Nations
CANSEA	Network of Conservation Agriculture in Southeast Asia
CCVFLV	Central Committee for the Management of Vacant, Fallow, and Virgin Land
CP	Charoen Pokphand Group
CIAT	International Center for Tropical Agriculture
CSO	Central Statistical Organization
DICA	Directorate of Investment and Company Administration
DOA	Department of Agriculture
DoICD	Department of Industrial Crops Development
ELCs	Economic Land Concessions
ESIA	environment and social impact assessment
FABs	Farmland Administration Bodies
FAOSTAT	Food and Agricultural Organization Online Statistical Database
FDI	Foreign Direct Investment
FELDA	Federal Land Development Authority
GAEZ	FAO Global Agro-Ecological Zones
GIS	geographic information system
GIZ	German Society for International Cooperation
GoM	Government of Myanmar
ha	hectare
HCV	high conservation value
IFC	International Finance Corporation (IFC)
IIASA	International Institute for Applied Systems Analysis (IIASA)
INGOs	International NGOs
kg/capita/yr	kilogram/per capita/per year
MDRI-CESD	Myanmar Development Resources Institute- Centre for Economic and Social Development
MIC	Myanmar Investment Commission
MOAI	Ministry of Agriculture and Irrigation
MoECAF	Ministry of Environmental Conservation and Forestry
MSU	Michigan State University
NGOs	Non-governmental Organizations
RSS	Ribbed Smoked Sheets
SWIA	Sector Wide Impact Assessment

SLRD	Settlement and Land Records Department
SMEs	Small- and medium-sized nonfarm enterprises
SMFs	Market-oriented small- and medium-sized farmers
SLCs	Social Land Concessions
TCD	tons cane per day
t/hr	tons per hour t/hr
TSR	Technically Specified Rubbers
VFV/VFVL	Vacant, Fallow and Virgin (land)

## I. EXECUTIVE SUMMARY

Agricultural investments are crucial to improve productivity and to raise the incomes and food security of farmers and others alike. Investments by small-holder farmers themselves are the main source of agricultural investments, but another major source are domestic and international companies who are interested to invest in Myanmar's agricultural sector. These investments create major opportunities for Myanmar's majority small-holder farmers, but they can also pose threats to their livelihoods and natural environments. The objective of this research therefore is A) to increase understanding of the impact of corporate and small holder agriculture investments on food security and rural livelihoods in Myanmar.

Private investment by agribusiness, both small and medium enterprises (SMEs) and larger agribusiness companies (ABCs) is critical to the realization of these goals. Myanmar is at a crossroad in terms of developing an inclusive agribusiness strategy. The agricultural sector is characterized by already high land inequality and landlessness, and low productivity of most SMFs. Meanwhile a growing share of land estimated at over nearly 2 M hectares (ha) has been allocated to large land concessions with little evidence of growth impacts and significant evidence of social and environmental risks.

B. FSWG's Policy Study Group (PSG) aims to review food security related policies and to engage with key stakeholders and advocate for policy changes in order to promote pro-poor public policies that reduce food insecurity in Myanmar. PSG also intends to promote good governance in the area of food security.

The objective of component B is to analyse the policy and stakeholder environment related to the Agricultural investment law (most relevant to the study) and policy initiatives, and provide recommendations to PSG for future policy advocacy including identified gaps and leverage points for advocacy strategies.

A variety of methods was employed to achieve these two objectives. The diagnosis was centered around extensive desk review of all relevant project and policy documentation, complemented with findings from the field based case studies, based on selection criteria in order to research positive examples of impact of local vs International investment and diagnose constraints and opportunities for future development, based on those with strong market opportunities and those available in the field. This led to a review of three case studies: i) contract farming in the Dry zone (watermelon), ii) Sugarcane in Sangaing and iii) Tea leaves in Northern Shan State. The team builds on existing research and refers to relevant aspects verified (See Annex V - Bibliography).

Some of the analyses, based on interviews with key stakeholders and recent research studies, is preliminary and needs to be confirmed by more in-depth studies, where indicated. The report is divided into five parts: (1) Background on agribusiness in Myanmar, (2) Methodology, (3) Findings per case study, (4) Policy component and (5) Overall conclusions and recommendations, aiming for inclusive agri-business investment.

### Findings

For all crops, there appeared a **need for both financial and technical support** to farmers to improve the processing of molasses (sugarcane), including the introduction of affordable small scale new equipment and processing technologies; in view of improved production (all crops). This includes introduction of new seed varieties (e.g. for water melon).

In addition, there appeared to be a **lack of proper plant treatment** (appropriate fertilizer and pesticide usage) for soil conservation and minimization of health risks for laborers and consumers, was observed for all crops.

Also, there appeared to be a **lack of trust relation between farmers and processors** (tea, etc). Indeed, contract farming arrangements have been less successful either because of the structure of the agreement (relatively informal) or because of weak relationships between the mill and growers.

Furthermore, a **lack of fair contracts and prices between farmers and factory or brokers**, in order to compensate in case of economic loss for farmers due to factory fault, was observed for all crops.

Finally, in relation to the latter, there appeared to be a **lack of proper quality standards** needed for good price / quality ratios, burdening on the small farmers (mostly tea (mixing young and old rough leaves), as well as of access to finance and to markets (for all crops).

Additionally, some **common cross-cutting constraints** emerge for all or nearly all studied crops value chains—especially **access to finance, electricity supply (for processing) and high transport costs**. These affect large agribusiness companies as well as SMEs and SMFs. For small and medium farmers, lack of strong producer organizations, weak extension, and poor access to technology were common to most.

The challenge for Myanmar is how to tap the assets of agribusiness in terms of access to technology, capital, and markets to complement the assets of SMFs in terms of their labor, land, entrepreneurship, and local knowledge. *Contract farming is in its infancy although good examples are emerging especially in sugarcane.*

In line with research conducted<sup>1</sup>, most sugar mills enter into contract farming agreements with cane growers facilitated by a natural monopsony on purchasing sugarcane from a small area around the mill. However, farmers are generally poorly organized to reap potential benefits from these arrangements. In some cases however, mills and contract farmers have developed strong agreements and relationships.

Sugarcane production has strong market prospects<sup>2</sup>. Myanmar could also become a significant exporter of sugar and possibly ethanol as well<sup>3</sup>. However, certification of social and environmental standards would likely be needed to gain duty free access to the EU under the Everything but Arms agreement, to be remedied through good policies, institutional reforms and key public investments.

It must be noted that contract farming “only makes economic sense for certain products in certain markets” (Minot 2007). There are indeed good examples of contract farming in Myanmar such as in sugarcane and good prospects in other sectors, especially horticulture. There are also good examples of contract farming for branded high quality rice in the region (e.g., Vietnam) that could guide the troubled contract rice farming sector in Myanmar. Contract farming in perennials is more difficult to design, but good examples of outgrower schemes are provided by sugarcane (Thailand)<sup>45</sup>.

## Policy

The findings are in line with the study (MSU-MDRI-CESD report, 2013) advocating a strategy focused on the so-called ‘Long Game’, i.e. a set of early actions necessary for enabling key institutional reforms, but complemented by ‘Short Game interventions’ that help to increase incomes, assets, farmer skills and water management systems in ways that expand productive potential in the Long Game. Indeed Myanmar’s neighbors and competitors in Thailand, Vietnam, Bangladesh, Malaysia, India and China have all committed to a Long Game involving strong public investments in agricultural research, extension and other public goods required to support agricultural productivity growth, needed for Myanmar to compete in increasingly competitive regional and global markets.

As research showed<sup>6</sup>, policy reforms begun at the end of the 1980s have moved in this direction, though slowly and at sometimes variable speeds. Continued reforms, coupled with increased resource allocations for agriculture and improved policy implementation capacity will be required to translate these still unfolding policy changes into sustained, improved conditions on the farm. Myanmar however has reached the stage in its agricultural reform process where substantial resource increases and significant institutional restructuring are required to advance an effective reform agenda.

This multi-pronged approach<sup>7</sup> addresses the needs of rural communities for early visible change while at the same time remaining committed to necessary structural re-engineering of institutions and policies. As a society, Myanmar’s government, parliament, private sector and civil society will need to decide whether they are willing to commit the financial resources and organizational recapitalization required. If not, in a worst-case Myanmar risks reversion to a Business as Usual future with its record of stagnation, poverty and food insecurity. The recommendations include early actions that will lay the foundation for a successful Long Game under which

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<sup>1</sup> MSU International development working paper 133, 2014

<sup>2</sup> Through value adding, especially the conversion of molasses to ethanol and the co-generation of electricity

<sup>3</sup> Thailand is the world’s second sugar exporter

<sup>4</sup> and oil palm (Indonesia)

<sup>5</sup> There may also be opportunity for short-term contracts for upgrading existing plantations of SMFs with a focus on quality. (MSU International development working paper 133, 2014)

<sup>6</sup> MSU-MDRI-CESD report, 2013

<sup>7</sup> Complementing long game with short game interventions

accelerated, broad-based agricultural growth, inclusive business models and financing and, improved food security, will be facilitated.

## Recommendations

There is a strong need for civil society to address the development of industrial, government-supported crops in the country, such as sugarcane, and their socio-economic impact on farmers and the country as a whole.

**To serve these potential markets, e.g. the Myanmar sugarcane industry needs to enhance its competitiveness.** Production costs are about 30% above Thai costs and the opening of a free trade zone in 2015 adds urgency to further restructuring of the sugar industry that is still in transition from state to private hands. Considerable consolidation is needed to reap economies of scale by transiting to larger scale more efficient mills characteristic of Thailand with 15,000 TCD. This will require foreign investors with the needed capital and technology<sup>8</sup>.

Much could be done **to promote more transparent and equitable contracts with fair prices (concerning all crops)**. Priorities to improve outcomes with contract farming include strengthening farmer organizations and building their capacity to get the most out of contracts, negotiating tripartite agreements with banks, providing model contracts. There may also be a case for separate legislation on contract farming as in Thailand and Vietnam.

**Provided a more equitable price sharing formula can be negotiated (all crops), a zoning policy for existing mills (sugarcane) would enable them to expand and better utilize capacity**, by guaranteeing that a mill would have sole rights to supply from a given area. Another priority is to relax land policies that currently restrict land conversion from paddy to other uses such as irrigated sugarcane.

**Contract farming agreements with the newly emerging agribusiness class in Myanmar could potentially offer unforeseen benefits to poor farmers if they negotiate beneficial arrangements.** More research needs to be done on contract farming in Myanmar-both in the uplands and the lowlands-to better understand the socio-economic dynamics of this emerging farming model and how NGOs could advocate for improved conditions for farmers to maximize benefits.

**NGOs need to work with Burmese multi-stakeholder partners especially agribusiness people and agricultural associations that influence decision makers in Myanmar** (i. e. generals and top-level government/military officials, on land reform policy. Specifically this should address the socioeconomic and environmental impacts of an export-oriented industrial agricultural approach and of unregulated company behavior<sup>9</sup>.

## Toward More Efficient and Inclusive Business Models

The GoM has launched a series of reforms of investment laws, including a new Foreign Investment Law. **Effective implementation will require capacity building** at various levels of government to define a strategic vision, and identify investments priorities and responsible investors to match that vision, and to monitor progress on the ground.

**Improving the investment climate is the highest priority in terms of increasing agribusiness investment from SMEs to larger domestic firms to foreign investment.** Agro-processing offers excellent prospects to meet rising urban food demands, and because of its high employment multiplier is especially good for inclusive growth<sup>10</sup>. **To ensure proper FDI (e.g. for watermelon production - current investment wasn't count as FDI) and support direct market access for local producers.**

**NGOs should continue to closely monitor FDI in Myanmar's agricultural sector, especially from potential investors** (i.e. Thailand, Vietnam, China, Korea, Japan). NGOs could entice investors from these countries

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<sup>8</sup> One investor is currently exploring the opening of a large state-of-the-art operation in the hinterland where land is available for a nucleus estate that could be combined with outgrowers.

<sup>9</sup> As also confirmed by study 'Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

<sup>10</sup> Increasing agricultural productivity in Myanmar and a repositioning of the banking system toward agro-industry are the two highest priorities.

to employ best practices such as propoor contract farming models, rather than concessionary approach.

Few international NGOs are working on micro-credit financing as a way to increase financial opportunities and security for farmers<sup>11</sup>. The concern is that with **contract farming** arrangements without government regulation or oversight farmers will become beholden to the business elite of Myanmar<sup>12</sup>. **Alternative methods of obtaining credit should be provided to farmers, besides the currently available loans**. UN agencies and INGOs should continue to push for **micro-credit schemes** to be adopted in Myanmar.

In addition, agricultural producers and processors to implement for selected value chains a small industry levy on production or export value to provide new and more stable sources of funding for providing these services<sup>13</sup>.

### **Managing Large-scale Land Concessions**

Global experience indicates that the use of large-scale land concessions as an incentive to investors is especially risky—including economic, social, and environmental risks (as seen in many cases). **It is recommended to put a hold on awarding further concessions** until a more transparent, equitable process is put in place, and the backlog of conflicts and ambiguities of existing contracts has been cleared.

- A first priority should be to encourage investors to focus on enhancing the productivity of existing land users, e.g. through contracting and out grower schemes to supply working capital through value chain financing.
- Where projects involve acquisition of land, investment proposals should be screened for responsible practices to maximize opportunities and minimize risks in terms of economic, social, and environmental outcomes<sup>14</sup>.

It is recommended that NGOs collaborate with FSWG's LCG on this initiative (Land Tenure Reform Policies) to maximize momentum and synergy.

Finally, outcomes will be facilitated by the state if it adopts the "long-term game" proposed by Haggblade et al. (2013), calling for sharply increased public investment in public goods such as R&D, extension and irrigation, and in supporting marketing and regulatory institutions.

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<sup>11</sup> Without the cycle of debt and landlessness associated with high-interest money-lending practices.

<sup>12</sup> As also confirmed by study 'Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

<sup>13</sup> The approach is well established for industrial crops in the region such as sugarcane (as well as rubber and palm oil). (It has been particularly successful in upgrading rubber value chains for SMFs in Thailand) (MSU International development working paper 133, 2014).

<sup>14</sup> A range of guidelines exist for such screening including the Principles for Responsible Agricultural Investment, the FAO Voluntary Guidelines on Responsible Governance of Tenure of Land, Forests and Fisheries, private standards for commodities such as oil palm and sugarcane.

## II. INTRODUCTION

### 2.1. The FSWG

The Food Security Working Group (FSWG), operating since 2002, is a forum for the networking, capacity building, policy advocacy, research, food security monitoring, and knowledge sharing for national and international NGOs and individuals concerned with food security in Myanmar. The current strategy, 2012 – 2014, is building on FSWG’s existing profile and responding to the prevailing food security situation and operating environment in Myanmar. In order to contribute towards its vision and fulfil its mission, the overall goal is to improve the quality of, and enabling environment for, food security interventions implemented in Myanmar.

In order to contribute towards its vision and fulfill its mission, the FSWG in its 2012-2014 strategy, with an overall goal of improving the quality of, and enabling environment for food security interventions in Myanmar, set itself three strategic objectives:

Project objective	
I	To build the capacities of members to improve practices in food security programming;
II	To develop the knowledge, evidence base and approaches of strategically important and emerging issues affecting food security in Myanmar;
III	To promote dialogue, debate and policy advocacy between stakeholders concerned with food security in Myanmar.

### 2.2. Study components

#### 2.2.1. Study on Agricultural Investments

Agricultural investments are crucial to improve productivity and to raise the incomes and food security of farmers and others alike. Investments by small-holder farmers themselves are the main source of agricultural investments, but another major source are domestic and international companies who are interested to invest in Myanmar’s agricultural sector. These investments create major opportunities for Myanmar’s majority small-holder farmers, but they can also pose threats to their livelihoods and natural environments.

**The objectives of the study on Agricultural Investments are:**

Study objectives component A	
I	To increase understanding of the impact of corporate and small holder agriculture investments on food security and rural livelihoods in Myanmar
II	To identify good and bad practices of corporate and small holder agriculture investments;
III	To formulate policy recommendations to improve the legislative framework to stimulate good practices for corporate and small holder agricultural investments and its enforcement;
IV	To increase understanding of the role of women in corporate agricultural investments.

#### 2.2.2. Policy Analysis

FSWG’s Policy Study Group (PSG) aims to review food security related policies and to engage with key stakeholders and advocate for policy changes in order to promote pro-poor public policies that reduce food insecurity in Myanmar. PSG also intends to promote good governance in the area of food security.

To this end, PSG has conducted last year, a scoping study on food security related policies and institutional analysis with a view to improve understanding of how policies are impacting food security in Myanmar,

which institutions are involved in the decision making, and to identify gaps and leverage points where FSWG can add value with its policy advocacy activities. This year, PSG will focus its activities on four key laws and policies initiatives that were prioritized by FSWG members during a policy advocacy planning workshop in May this year, of which one will be focus - the priority law and policy initiative is **the agriculture Investment Law** and the objective is:

Study objectives component B	
I	The objective of the consultancy is to analyse the policy and stakeholder environment related to the four selected priority law (Agricultural investment law, most relevant to the study) and policy initiatives, and provide recommendations to PSG for future policy advocacy including identified gaps and leverage points advocacy strategies and action planning.

### III. BACKGROUND

Of the country's approximately 56 million people, nearly three-fourths (40.5 million) live in rural areas, almost the same percentage is primarily dependent on land for their livelihood. Agriculture (including livestock and fisheries) contributes 34 percent of GDP and 15 percent of total export earnings, and employs 61 percent of the labour force (based on 2008-09 figures).

Despite its enormous potential, Myanmar's agriculture has underperformed over the past fifty years. Today, per capita earnings in agriculture average roughly \$200 a year<sup>15</sup>. Given that two-thirds of the population works primarily in agriculture, low farm productivity translates into high rates of poverty and food insecurity. Currently, about one quarter of the population falls below the national poverty line.

As a result, in spite of national rice self-sufficiency, food security for many households and individuals remains elusive. Poor households spend over 70% of their income on food. In addition, fully one-third of rural households borrow at some point during the year in order to purchase food. Even after shouldering this heavy financial burden, up to one-half of rural households report having to navigate two months each year without adequate food supplies, leaving one-third of the country's children stunted.

As in other sectors of the economy, ongoing ethnic civil war and violence over the past 60 years, coupled with international isolation, have discouraged private investments and hindered the exchange of technology and know-how. Within the agricultural sector, a series of institutional, policy and structural constraints has hampered agricultural growth and contributed to Myanmar's current high rates of hunger and malnutrition. The most critical of these problems include<sup>16</sup>:

- a highly skewed land distribution, which leaves roughly half of rural households landless,
- poor water control systems in the presence of global climate change and increasingly unpredictable rainfall,
- a high-cost transportation system,
- weak rural financial institutions,
- unpredictable government policies,

<sup>15</sup> One-half to one third of the levels achieved by its regional peers

<sup>16</sup> MSU/MDRI – 'A Strategic Agricultural Sector and Food Security Diagnostic for Myanmar' (July, 2013)

- low public investments in agricultural research, and
- weak links between extension services and farmers.

### 3.1. Overall case context

Since 2008, the Myanmar military government has been cooperating with favoured large Burmese companies to reshape biophysical landscapes, populations and livelihoods through the establishment of large-scale industrial agricultural concessions in Myanmar<sup>17</sup>. Most government initiatives promote the country's industrial crops such as jatropha<sup>18</sup>, but they also include annual crops such as cassava, sugarcane and paddy rice, among many others. And encouraging the private sector to establish so-called crop specialization companies to promote contract farming, especially for rice and vegetables. These government led "crop campaigns", channelled through military-favoured companies are threatening people's land and food security as well as ecological integrity, providing little benefit to local communities or sustainable national economic development, while causing added ecological stress<sup>19</sup>. As with other resource extraction sectors in the region, foreign investment originates largely from the more economically stable countries in the region, such as China, Thailand, Malaysia, Korea, Japan and Vietnam, which invest in neighbouring resource-rich yet economically poor countries, namely Cambodia, Laos and Myanmar.

#### Land tenure

The process of allocating land to investors entails little or no transparency, accountability or community participation, and often provides little or no financial or other compensation to farmers for their lost lands and livelihoods.

Land tenure security is very weak in Myanmar. Laws do exist that protect farmers' interests, such as the Farmers' Rights Protection Law of 1963 which in theory protects farmers' land from confiscation, but is almost never cited in courts; widespread land tenure insecurity is impacting their lives<sup>20</sup>. People living in the uplands of northern Myanmar seem to have the least tenure security, with no statutory or official claim to their land<sup>21</sup>. Two new land bills further marginalize farmers by favouring industrial agriculture which will be increasingly financed by FDI at the expense of pro-poor farm policies and practices.

#### Landlessness

Landlessness is a serious problem throughout Myanmar. Landless households in Myanmar comprise an estimated 35 to 53 percent of the national rural population (lowlands). A study<sup>22</sup> found that 44

<sup>17</sup> Source: 'Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

<sup>18</sup> An oil-producing plant used for biofuel, palm oil and rubber

<sup>19</sup> This is part of a wider trend throughout the Mekong region over the last decade of foreign investment in large-scale industrial plantation development.

<sup>20</sup> In Myanmar the state owns all land, although in practice land is informally bought, sold and transferred.

<sup>21</sup> Most of the lowland areas comply with statutory laws and the state land administration. The uplands, which are predominately populated by ethnic minorities, generally follow customary rights and laws, although these areas are increasingly coming under government agency control, largely through the granting of private land concessions that then must follow statutory laws under state land categories. (Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012).

<sup>22</sup> 2007 study of remote MASRIS 2004 "Agriculture Sector Review Investment Strategy." Vol. 1. Sector Review. Food and Agriculture Organization (FAO). 2007. "Identification and Assessment of the Poor, Food Insecure and Vulnerable in the Union of Myanmar." GCP/INT/952/EC-MYA. EC/FAO Cooperative Program. townships, mostly in the uplands.

percent of households were landless; those with land had an average holding of 3.6 acres, less than the 5-acre minimum required to sustain a household.

Many national and international forces and actions have converged in the past ten years to create the conditions for dramatic agrarian upheaval, along with pending land reform conducive to agribusiness investment. The Burmese regime has been slowly and partially liberalizing the national economy, which has included granting the right to private entities, to lease land.

In reality, gradual and ad hoc land reforms have resulted in increasing landlessness as larger tracts of land are transferred from smallholder farmers to private individuals and companies. Whereas the growth in the number of household-based land holdings from 1993 to 2003 increased by about 20 percent, commercial land holdings increased by 900 per cent<sup>23</sup>.

### *Fallow land*

A dramatic increase in large private land holdings can be credited to the expanded cultivation of marginal “wasteland” under the 1991 directive, Management of Cultivable Land, Fallow Land and Waste Land, which aimed to boost agricultural productivity and enable export earnings. This bill was then updated and passed in March 2012 as **The Vacant Fallow and Virgin Lands Management Bill**. Currently the national government only distributes cultivable wasteland and fallow land to private entrepreneurs, companies and state enterprises and not to farmers, even though they are technically eligible<sup>24</sup>.

### *Environment*

Myanmar is attempting to revamp its agrarian economy and jump-start a second green revolution<sup>25</sup>. There are however major environmental concerns with liberalizing the agricultural sector in general and industrial agricultural concessions specifically. Land management systems that maintain biodiversity, as do smallholder farms that employ agro-forestry management systems, are the most effective strategy for adapting to climate change and enhancing food security.

## **3.2. Investment climate**

Despite the ‘export first’ policy<sup>26</sup>, the private sector remains weak. Most of Myanmar’s agribusinesses lack access to capital, know-how, and human resources. A few big companies have developed often as a result of cronyism, monopoly licenses, and the backing of the military government, but many lack competitiveness. Furthermore, the opening of the ASEAN Free Trade Area in 2015 will challenge the domestic private sector to compete with their counterparts from ASEAN, requiring drastic upgrading of their technology, human resources, and management<sup>27 28</sup>.

There is little regulation of the type and quality of agricultural inputs, and of the quality and safety of exported agricultural products. In the long run, these problems are likely to penalize farmers who

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<sup>23</sup> Source: ‘Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction’. (Kevin Woods, 2012)

<sup>24</sup> The Ministry of Agriculture and Irrigation’s (MoAI) 30-year Master Plan for the Agriculture Sector (2000-01 to 2030-31) aims to convert 10 million acres of “wasteland” for agricultural production. This policy directive includes “permission to state-own[ed] factories for the area expansion of cotton, sugarcane and rubber to meet the needs of annual requirement.”

<sup>25</sup> through large-scale industrial agricultural concessions reliant upon modern technologies such as high-yield genetically modified (GMO) seeds, mechanization and high-grade chemical inputs.

<sup>26</sup> MSU International development working paper 133, 2014

<sup>27</sup> Myanmar ranked 182 out of 189 countries in both 2013 and 2014, the lowest in Southeast Asia. Rankings were especially low on starting a business, protecting investors and enforcing contracts but better for paying taxes and trading across borders. Source: <http://www.doingbusiness.org/data/exploreconomies/myanmar>

<sup>28</sup> These data are from Yangon only and are very preliminary since Myanmar was only included in the rankings from 2013.

ultimately pay higher prices for inputs and receive lower prices for outputs than they could in well-regulated markets. Access to bank finance, access to and high prices of electricity, and high transport costs are major constraints. These require long-term solutions.

On the positive side, there has been recent progress in the formal approval process for investments. The government has removed the dual foreign exchange system, reduced the corporate income tax from 30% to 25%, and removed the commercial tax for most exports. The GoM has started to streamline the investment approval process and reduced the documentary requirements for company incorporation to two weeks for foreign investors.

Foreign direct investment (FDI) so far has played a relatively minor role in agriculture even after liberalization. Based on the data of Directorate of Investment and Company Administration (DICA), foreign investment jumped from very low levels to reach nearly US\$2 billion in 2010-2011 before declining in subsequent years. In 2010-2011, the first three foreign companies were allowed to lease land for commercial farming of oil palm in Tanintharyi region (MOAI 2011), amounting to \$139 million (DICA 2011). A number of companies have also invested in the seed industry, especially for vegetables. In 2013, FDI in crop agriculture was however, less than 0.5 % of the total approved FDI, and livestock and fish accounted for another 0.8% (DICA 2013). To date then FDI has made a negligible contribution to agriculture with notable exceptions such as the Charoen Pokphand Group (CP Group) from Thailand that has invested heavily in the poultry supply chain and related maize seed industry. However, FDI further downstream in food processing is likely included under manufacturing and therefore overall FDI in food and agricultural and agribusiness may be larger.

### *Land Resources*

International data supports the finding that Myanmar is relatively well endowed with land. FAOSTAT data suggest a large area of 21 M ha of other land presumably the MOAI definition of VFV land. However, the International Institute for Applied Systems Analysis (IIASA) data set on crop suitability shows only 4 M ha as being of medium or higher suitability for expanded crop cultivation. Of this 2.5 M ha is classified as non-forested and only 0.53 M ha of this is in low population density areas with less than 25 persons per km<sup>2</sup> where conflicts with existing land users would be less. While this represents the largest area of uncultivated and non-forested land in the region suited to agriculture, it is only a small percentage of the estimated VFV land available for agriculture. Therefore, Myanmar's land abundance should not be overemphasized.

In addition, land in Myanmar is officially classified into various classes according to its crop suitability. Land types have been preserved in the new Farmland Law, severely constraining crop substitution possibilities such as the growing of sugarcane on paddy land.

Finally, models of agricultural development and investment vary in different areas of the country. Kachin and Shan States in northern Myanmar receive investment funds predominately from China, channelled through Chinese businessmen working with Burmese counterparts. Burmese companies are increasingly targeting other regions of the country for planting industrial crops<sup>29</sup>.

### *Large-scale Land Concessions*

By March 2013, a total of 377 national companies and 18,322 SMF growers had been allocated 1.53 million ha of VFV and deep-water land, and 0.36 million ha of forest lands for a total of 1.89 M ha. However, the deep-water lands have largely been abandoned and forestlands allocated in Mon State were nearly all for SMF rubber so excluding these, a more realistic figure is 0.94 M ha of VFV lands and

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<sup>29</sup> such as palm oil in Tanintharyi Region along the border with Thailand in the south, and rubber in Arakan State along the border with Bangladesh, where ethnic farmers are being dispossessed of their customary land. ('Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

0.32 M ha of forest lands for a total of 1.26 M ha. Thirty percent of allocated lands were in Kachin State, followed by 21 % in Taninthary Region, and 13 % in Sagaing Region . Management of these land concessions is shared across the MOAI, MoECAAF, and the Administration Department<sup>30</sup>.

The Central Committee for the Management of Vacant, Fallow, and Virgin Land (CCVFV) chaired by the Union Minister of Agriculture and Irrigation has responsibility for allocating VFV lands and for deep-water lands that were allocated in the 1990s. Land grants may be up to 5,000 acres (about 2,000 ha) initially, depending on the crop, with subsequent allocations up to a maximum of 50,000 acres (about 20,000 ha) if the initial allocations are fully developed. In practice, some companies have been allocated well above the maximum. Foreign investors can also apply for land concessions once they have been approved by the Myanmar Investment Commission. To date, only three foreign investors with a total of 0.11 million ha have been approved, although others are pending.

Few concessions<sup>31</sup> are achieving their intended purpose of developing modern agriculture. Despite the agreed development schedule<sup>32</sup>, most concessions have made little progress in implementing their development plans<sup>33</sup>. Finally, the GoM although monitoring progress has not followed its own rules that would require cancellation of nonperforming concessions, or concessions above the allowable maximum per company. With very low land rents and no penalties, investors have little to lose by hanging onto the land and speculating on its future value.

As said, many concessions are associated with high social and environmental costs. In particular, in areas of shifting cultivation in the north (taungya system), farmers do not have secure rights to their land, and many concessions have encroached on their fallow land and other forms of livelihoods<sup>34</sup>.

**In short**, Myanmar authorities have liberalized land development policies in an effort to increase agricultural commodity production and export, as advised by international finance bodies, regional investors and Burmese businessmen. Foreign investment in the agricultural sector is expected to increase with the newly elected, reform-minded Myanmar government and their recently enacted land bills that create land titles that can be bought, sold and transferred, including to foreign investors. Asian business leaders are currently reassessing the political and economic risks of investing in Myanmar.

### 3.3. Case studies

#### *Sugarcane*

The overall sugar industry was largely state owned and managed until 2009. Since privatization, sugarcane area has expanded to around 162,000 ha with sugar production of 348,130 tons in 2012-13. Most sugarcane is produced under rained conditions with average yields of 55-60 t/ha in line with global average yields for rainfed sugarcane.

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<sup>30</sup> A complex system of committees and working groups have been established to manage land issues: Five Working Groups are coordinated and chaired by the Union Minister, Ministry of Environmental Conservation and Forestry (MoECAAF) to formulate national land use and management policies: 1. National Land Use and Management Policy Drafting Working Group 2. Legal Affairs Working Group 3. Land Types, Classification, Mapping and Registration Working Group 4. Customary Land Use by National Ethnic Group and Dispute Solution Working Group; 5. Working Group for Collaboration with International Agencies.

<sup>31</sup> Except possibly those for rubber.

<sup>32</sup> *Investors agree to a development schedule of 15% completed in the first year, 30% in the second year, 30% in the third year, and the final 25% in the fourth year. Investors pay very low rents (about \$3/acre for perennial crops) and land rents and taxes are exempted for 2-8 years depending on the crop. Allocated VFV land can only be transferred with the approval of the Minister of Agriculture and Irrigation. It may also be converted to titled farmland if approved by the CCVFV.*

<sup>33</sup> Only 24% of the VFV concessions and 27% of the forestland concessions have been developed or planted, although most were granted over five years ago and should be fully developed according to the concession rules. (MSU International development working paper 133, 2014).

<sup>34</sup> E.g. grazing.

Due to increasing sugar prices and demand, sugar production has become an attractive business. After the mills were leased by the GoM to private entrepreneurs, farmers have been switching from other crops to sugarcane. The majority of these farmers are quite small with 69% under 2 ha.

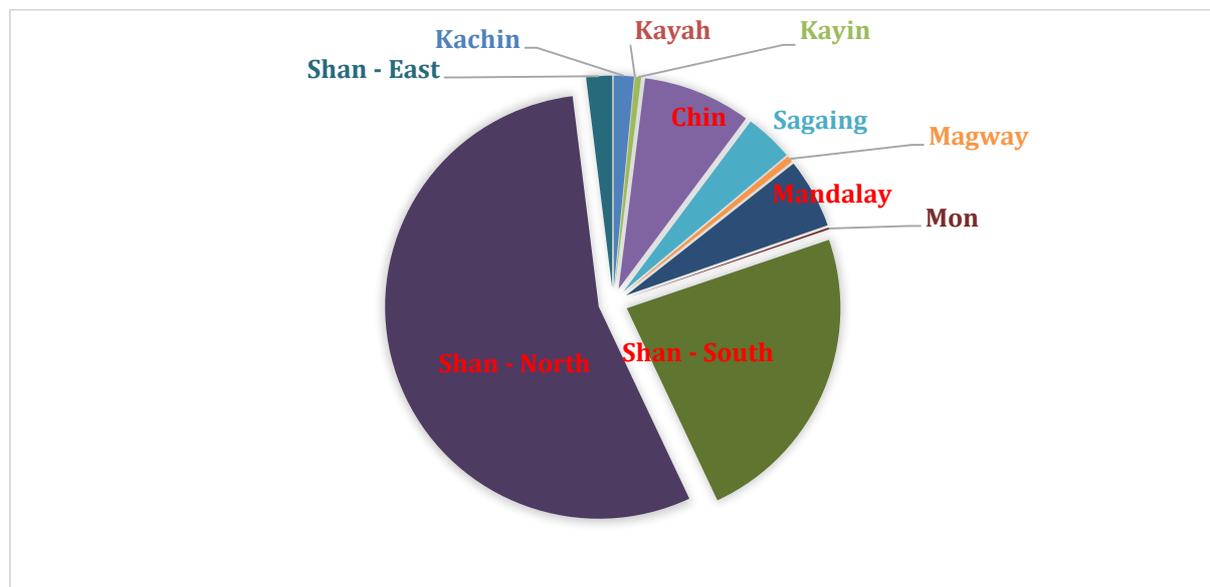
As sugarcane is a bulky product that has to be processed soon after harvest, there is a natural symbiosis between sugarcane growers and sugar millers that makes it ideally suited to adoption of contract farming. As in other countries, a formula pricing method is often used that distributes the product share between farmers and factories. For example, in Thailand, farmers received the equivalent of 70% of the ex-mill sugar price. However, the legacy of state-owned mills has left Myanmar with a low farmer share of value. After the factories were privatized, the cane growers' value share increased to 48% but is still well below international norms.

### Watermelon

Generally, most sugar mills enter into contract farming agreements with cane growers facilitated by a natural monopsony on purchasing sugarcane from a small area around the mill. In some cases, mills and contract farmers have developed well-structured agreements and strong relationships. For example, the Nawaday Sugar Factory (a Joint Venture with a Thai company) was established around 2000 and started working with contract farmers with better assets and relatively larger farm holdings. It supplies certified varieties and fertilizers, payable after cane delivery, and extension advice. (After the sugarcane procurement price increased from K 13,500 in 2007-08 to K 30,000 per ton in 2012-13, small farmers (under 2 ha) also entered contracts. To enhance mechanization, tractor dealers forged a commercial link with a private bank for financing tractor purchases based on a guarantee by the sugar factory of credit worthiness, with loan repayments deducted by the mill). In a similar way, larger farmers could afford to buy the five to seven ton truck for cane transport. These arrangements have allowed a sense of trust to develop over years between farmers and the mill.

### Tea

Following Palaung traditional history, tea in Myanmar was introduced more than 1000 years ago and the majority of the production areas are located in Shan State. Namhsan, Manton and Kyaukme from northern Shan State, and Pinlaung, Pindaya and Yatsauk from southern Shan State are major tea production areas in Myanmar. According to figure below, Shan State cover 80% of total tea cultivation area of Myanmar.



2013-2014 Tea cultivation area in Myanmar by State and Region (Source: DoA)

Assam *Camellia Assamica* dominated with more than 90% of total sown area and China *Camellia Sinensis* is found mostly in border area with China. Even if Myanmar was ranked fourth on the ASEAN tea production, the yield of fresh leaves per hectare was significantly lower compared to Vietnam. Causes were many, but low plant density and lack of systematic plant treatment can be considered as main reasons for low yield. This translates into higher production costs, and in turn results in decreased competitiveness for tea producers at all levels.

Different from other tea producing countries, Myanmar produces pickle tea in addition to green tea and black tea, the most common tea product in the world. Small scale traditional processing practices for green tea and pickle tea are dominant in local tea industries and more than 90% of local small scale black tea processors in northern Shan State stopped their business since 2010 due to illegal importing of black tea from China, high local production cost of fresh leaf and using out of date equipment in processing.

Quality control is one of the main factor for the development of the tea sector. Lack of technology and/or knowledge for production and processing, reliance on old and outdated equipment and traditional practices leads to low quality production. Currently, tea production in Myanmar, except for the border with China, is intended for local market and not export ready, due to quality issues.

## IV. METHODOLOGY

### 4.1. Approach

The approach adopted by the expert was underpinned by the following overall considerations:

- ❖ It considered the intricacy of policy and planning mechanisms, the complexity of relations between actors, and the need to promote participatory planning processes. This took into account the local capacity, where applicable.
- ❖ Planning and implementation must be underpinned by effective and inclusive communication; in view of the policy component of the project, the study gave consideration to contextual circumstances and relational structures between stakeholders, in view of effective advocacy and impact.
- ❖ The experts adopted a holistic approach and the study assessed the engagement with key institutional structures for the purpose of promoting agri investment for small holders, in the target regions, while assessing cross-cutting themes like gender and Human Rights.

**The approach used for the evaluation** followed a classic planning process, in line with the ToR for this study.

The project aimed to achieve the objectives through research, sharing of existing knowledge and new ideas, capacity building on women's food security issues, to influence policy on women's livelihoods and food security and integrate women's food security and livelihoods issues.

It builds on FSWG's expertise in the areas of agriculture, fishery, animal husbandry, community forestry and land tenure security, to improve the capacity of its member organizations and to harness the skills and knowledge from other international organizations and research institutions to improve food security programming and promote pro-poor public policy.

In order to do so, the research collected a number of case studies from different agro-ecological zones, where FSWG's members are active. The research aimed to also include cases that were already documented as part of other studies, many of them focusing on a certain sector (e.g. rubber, maize, and sugar). The selection of cases studies has been done in a participatory way, together with the FSWG members, asking them for their opinion in a short questionnaire (see Annex X), on which sectors they believe should be included and why, and their interest and availability in supporting data collection in the field. From the entire collection of cases, (*presented below under A. 'Proposed cases studies'*) of corporate agricultural investments common characteristics and patterns have been identified. Based on these common characteristics and patterns policy recommendation were formulated (*See chapter findings, section C*). Throughout the study special emphasis was aimed to be placed on the role of women. The research study started with a thorough literature analysis to make sure the research builds on existing research.

The study has been carried out with the following Key Experts as part of the team: Mr Evert de Witte, International agri-business Expert, and Mr Moe Aung, national agricultural development expert. Mrs. Yin Yin as the Project Coordinator, was responsible for the management of the project. FSWG and the local partners have facilitated the scheduling and the logistics of the interview appointments, acting as interlocutor with partners, especially those in the field.

**Interviews were targeted** at identifying the most interesting research components, together with the relevant stakeholders. The experts visited a sample of regions, based on the final selection of case studies and the availability of members to support data collection in that region (see section 4.4). In each region the experts (national expert) consulted with partners and *local Authorities* and specific and targeted interviews and Focus Group Discussion (FGDs) with *relevant stakeholders (incl. Small holder farmers)* were carried out, with the assistance of selected local partners. The interviews were conducted based on a checklist that has guided the expert to collect standardized and well-balanced information. Through the questions, the expert

aimed to verify and quantify stakeholder analysis and small holder investment threats and opportunities in view of effective advocacy roll-out. *Paragraph 4.4 presents a sample of projects and stakeholders per State.*

Briefing meetings between the research team and the FSWG management, have taken place regularly, for quality checks, including that of the inception report and the draft final report. Indeed, the researchers have reported regularly to the Project Officer of the FSWG Secretariat, as well as a special committee that was set up to monitor and steer the research implementation process. The researchers coordinated closely with the Project Officer for the planning of the training as well as data collection by selected FSWG members.

## 4.2. Methodology phases

The methodology proposed by the research experts, involved four main phases:

- I. **Desk phase:** Documentary and content analysis (Design documents, Progress Reports, etc) and design of the questionnaire for the socio economic condition (current livelihood situation) and tools (quantitative and qualitative), as well as guideline questions for KII and FGDs, regarding general information of geographic situation, resources and market related issues, and mapping investment institutions and stakeholder (analysis) and relevant policies/laws;
- II. **Field phase:** Interviews (Key Informant interviews, focus group discussions with stakeholders, and case studies) building on the desk review and using the data collection methods and tools developed under phase I.
- III. **Stakeholder briefings and debriefings** on overall findings, analysis, recommendations, at relevant forums organised by FSWG;
- IV. **Report writing phase** Draft and Final Report, including common lessons drawn in the policy context, in English and Myanmar, with separate briefing paper and policy briefing paper. The reporting format for the policy component has been integrated into the overall reporting, following the reporting structure agreed in the inception report.

Methodologically, the report was built on a desk study (Incl. FSWG's and implementing partners' workplans, project documents, reports, etc), and then triangulated findings with interviews with various stakeholders by means of the supporting checklist (see annex II). The feedback received during the interviews has helped in the assessment of the situational analysis (stakeholder analysis and small holder investment opportunities), and allowed to identifying key areas that need further attention.

The experts aimed to assess a number of assumptions and cross-cutting issues. Attention was given in particular to gender.

### 4.2.1. Study on agricultural investments - Proposed case studies

In order to define the relevant case studies, the following guiding criteria have been used. Instead of focusing on secondary data, and on investments already analyzed by other partners (e.g. large investments looked at by Oxfam, and small ones analysed by MDRI), the FSWG aimed to complement and focus on new or complementary areas, related to big and small area investments, for all the following points below.

- Focus was on FDI vs. domestic investment as well as corporate investments vs. smallholder investments.
- Focus on high potential sectors (e.g. sugar)
- Focus on shifting cultivation vs. lowland farming.
- Focus will be on positive and negative examples (e.g. negative environmental impact of usage of pesticides vs. a good example of organic farming).
- Geographic coverage of the above (e.g. Shan, Kayin, Chin, etc)

In addition, the following aspects were considered during the study:

- *General condition of community*
- *General condition of agri-business Sector focus on study area*
- *Resource Map (if possible)*
- *Seasonal trends*
- *Cost and benefit analysis*
- *Bottlenecks, Constraints and Opportunity*

The selection of cases was done in a participatory manner. Following the objectives and the research focus guiding criteria, the local partners were asked which sectors/cases they believed to be important to be included. In addition, the data collection was done through some of the local partners, receiving training in data collection, based on predefined questionnaires and data collection tools and reporting formats that can be found in *Annex IV*.

Based on the above the pre-selection of the following cases has been made:

1. *Sugarcane (Sagaing, Mandalay) / Wilmar*
2. *Contract farming in dry zone (Chinese vs. local) (watermelon)*
3. *Other, e.g. Beans/pulses dry zone*
4. *Corn (but already covered by study being finalized in Shan)*
5. *Tea palaung in Northern Shan state*
6. *Coffee (ED&F Man, Yoma), Ayerwaddy division (expected to receive USD 20 M of investment and aim of planting 3,700 acres by end of year 4).*
7. *Palm oil (considered too sensitive – military and cronies heavily involved)*

In addition to the challenges related to data collection (see section 4.5) and representativity, it was important for the final selection to have some degree of diversity among the selected studies - for example one that is in dry zone or Sagaing, and the other in ethnic upland area - as these are two very different agro-ecologies, geographies and political economies, which help give more depth understanding to the differences in agricultural productions in the country (rather than, for example, do a study in paddy in delta and then draw national conclusions from that).

→ Based on the above, it was decided to focus on three crops: sugarcane, watermelon and tea.

The researchers relied on support from partner organization to facilitate appointments with the various relevant stakeholders, for each of which a separate questionnaire has been developed (*annex III*).

In addition, the desk review for the policy component, described below was *aimed to be linked to the various policy aspects of agricultural investment*.

#### **4.2.2. Policy research**

Focus was to be broadly on investment and land policy. FSWG members were particularly interested in an agricultural investment law. The research looked at a scala of existing '*agricultural investments*' laws, e.g. three landlaws (and assess the two investment laws against those), as well as the '*farmer protection law*' (another priority law, that completed public consultation), which was thought to be a better alternative than the '*agri-investment law*').

Based on the mapping and reviewing of all existing relevant policies, the researchers were then to provide strategic advise on which law(s) to pursue and strategize for advocacy efforts.

At the same time, the researchers complemented other research (e.g. the scoping study for rice, MDRI) (mainly around large ones, on rubber and moreover on rice (much more on rice), as well as the policy research on rice that has been conducted by the FWSG.

In order to coordinate with research initiatives done by other partners and INGOs, the research aimed to complement a research carried out by a consultant contracted by Oxfam Myanmar, with the objective to provide information on trends and practice of regional agricultural investments by China, Thailand and other countries with smaller investments (like South Korea, Japan and Malaysia). That research was aimed to showcase some of the impacts of these investments on communities in Myanmar, while exploring the legal environment and looking at the burgeoning civil society in Myanmar that is demanding greater accountability of FDI. As such the expected OXFAM paper will suggest ways that regional Governments might regulate investments to be more transparent and responsible and ways that individual companies can invest responsibly. Despite the scope being more on big and FDI, it complements the research by the FSWG research, looking both at large but also small holder investments and the policy framework, inside Myanmar. The Oxfam study will become much more public and will receive much more media coverage.

In addition, the research was to consider the Food Security related directives and instructions, where relevant (e.g. on climate change and integrated coastal management (under MoLFRD), building on the analysis of the relevant state resource laws and policies already conducted by MDRI.

The research built on interesting successful examples of research and documentation, e.g. as from the East West Seed Company (Dutch FSWG member) on what a seed policy should look like, regionally and for Myanmar, the report of which is being drafted.

Where possible, the research tried to feed into the forming of groups around farmer crop groups (and source locally), an initiative that started during a recent UN meeting. The research tried and identify where to strengthen this through the value chain approach, and then link them to NGOs for further assistance.

A concern related to the latter, as confirmed by the LCG, is that despite examples given of large investments, in practice they are not always happening, highlighting the need for public clarity and debate on what it is and how to implement it. So far, for everything else than yearly leases, one has to go through MIC), which is one of the things the revised land policy is trying to solve, which should override the property act.

Finally, the research gave importance to the role of women in this changing context of male departure and land grab, and aimed to build on relevant research done by international actors (e.g. Oxfam, on extrapolation of agri-investments impact), and a gender analysis study (from the FSWG project manager) on production and consumption). The research aimed to look at it from a policy perspective, in terms of access to land and credit. It considered migration and ethnicity in the above context.

Ultimately the above research on food security related policies and institutional analysis were aimed to be done with a view to improve understanding of how policies are impacting food security in Myanmar, which institutions are involved in the decision making, and to identify gaps and leverage points where FSWG can add value with its policy advocacy activities. The reporting has been structured accordingly.

The two components (A+B) are interrelated and overlap and were integrated in the overall reporting.

### **4.3. Reporting**

First of all, the team placed a high priority on measures to protect privacy and ensure confidentiality of information. Participants' co-operation was based on adequate information about the purpose the project and their agreement to participation.

The overall structure of the report is schematic and based on objective secondary data, complemented with qualitative data. The sections have been both developed based on collected data and information from stakeholders, while complemented and fed by specific interviews carried out with beneficiaries.

Recommendations have been designed in such a way that they aim to facilitate the setup/strengthening of a policy dialogue approach (as well as a ‘working paper’ for future programs to build on, for all partners (activities).

The findings, conclusions and recommendations are recommended to be discussed in the relevant fora, facilitating ownership of the process by the stakeholders, providing a forum for constructive engagement about the preliminary findings.

**In view of Knowledge Management**, uncovered gaps and/or new directions ought to be recorded and shared to support better project/advocacy performance, and guide future design. These are meant to be discussed and followed up, by the relevant stakeholders (FSWG, Authorities, Donors, Local Partners) responsible for strategic guidance, policy oversight, advocacy and future implementation respectively.

#### 4.4. Sample of actors in villages / States

For each of the two (three) field visits the target was to set up meetings, and conduct interviews and, where possible focus groups, with, apart from) the local implementer office, and ii) other donors/partners active in the field of agri-business, iii) the counterparts at the LG level, iv) identified potential beneficiaries. This has been done for the below selected States/villages accordingly:

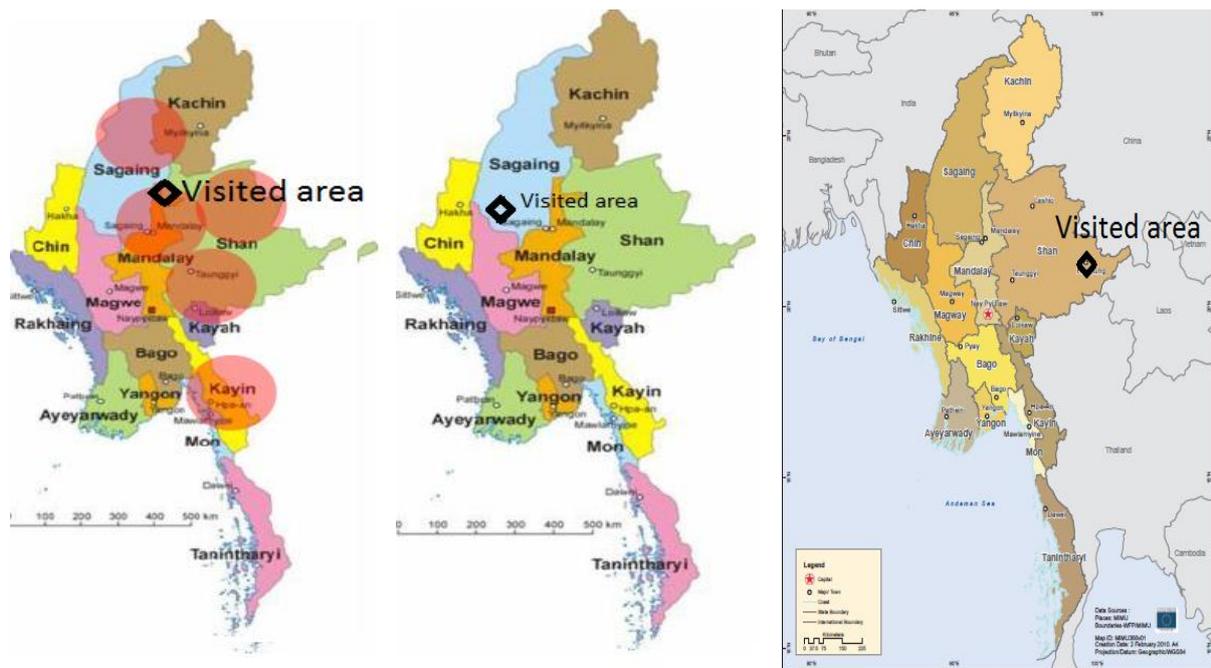
Villages / State	Stakeholders	Selection Criteria
<i>Sagaing, Dry-zone and Palaung</i>	<ul style="list-style-type: none"> <li>• Beneficiaries form agro-ecological zones, where FSWG members are active:</li> <li>• <i>Farmers</i></li> <li>• <i>Traders,</i></li> <li>• <i>Input suppliers</i></li> <li>• <i>FSWG members</i></li> <li>• <i>Key Informants in non-program areas that can offer perspective on alternate strategies</i></li> <li>• <i>VDC patrons,</i></li> <li>• <i>Members of VDCs</i></li> <li>• <i>Township administrators</i></li> <li>• <i>Microfinance and savings group participants</i></li> </ul>	<ul style="list-style-type: none"> <li>• Availability and accessibility</li> <li>• Nature of involvement in agri-business</li> <li>• Time and duration of involvement</li> <li>• Level of responsibility within institution/community</li> <li>• Nature and level of benefit from agri-business /investments</li> </ul>

The above table presents a wide sample of relevant target stakeholders per region, and their selection criteria.

The interviews drew on key stakeholders including members Beneficiaries form agro-ecological zones, where FSWG members are active, FSWG members, VDC patrons, Members of VDCs, Township administrators, Microfinance and savings group participants that offered perspective on strategies the research was informed by.

**10-15 KIIs and FGDs** have been conducted among stakeholders in each subset of the sample villages visited (3 locations). The focus group questions focused on challenges for the beneficiaries in the communities. Participatory research approaches, such as use of seasonal calendar were considered. All aspects were integrated into the questionnaires, which can be found in Annex III.

## Visited Areas



Visited area for Sugarcane

Visited area for Qatarmelon

Visited area for Tea

## 4.5. Challenges

Whilst the research received support from selected partners when undertaking the assignment, some challenges were encountered, mainly related to qualitative data collection in a tight timeframe. As initially indicated in the inception report, the distribution of the local implementers in the different regions together with the geographical coverage of the entire programme hampered the possibility to collect all needed relevant data for an in-depth analysis of some programme activities within the timeframe allocated to the research project. This risk has been minimised by careful pre-planning involving arrangement of meetings prior to the field team arriving on site.

Sugarcane from Kadu area and watermelon for Monywa were selected as case studies. During the survey period, watermelon was off season and only in a few places continued to be harvested due to previous factory milling problems. In general, both were researched offseason.

**Sugarcane:** The partner organization located in Indaw Township, bordering with Katha Township, is where the case study focused on. Villages from Katha were reached through network of partner organizations, but the data collectors had limited time for each village due to travel distances, longer than originally expected.

**Watermelon:** Almost all watermelon producers live outside of the production area. Land for watermelon production is rented for seasonal use. The research team met with the producers but was no chance to meet with farmers who rented out the land. The team therefore relied on KIIs for situation/status of land degradation after watermelon production. Since the majority of watermelon producers faced loss (small and large) for their investment due to a price fall at harvesting time, the research team could to go into much detail in some interviews.

**Tealeaves:** Even small production coverage, four to five fold of tea green tea price compare to other area within Myanmar was key for selection of study area. Right species (*China Cammelia Sinensis* id good for green tea) with modern consumer interest of green tea from old tea plants is main factor for

such price different. Two villages from Kengtung Township was visited through network of partner organization but the data collectors had limited due to language barrier.

## V. FINDINGS RESEARCH – FIELD CASE STUDIES

### 5.1. Sugarcane case study - background

In Myanmar, sugarcane cultivation dramatically increased in early 1990, since the Myanmar Government (GoMM) changed import substitution from export oriented policy for sugarcane industry. See in below figure.

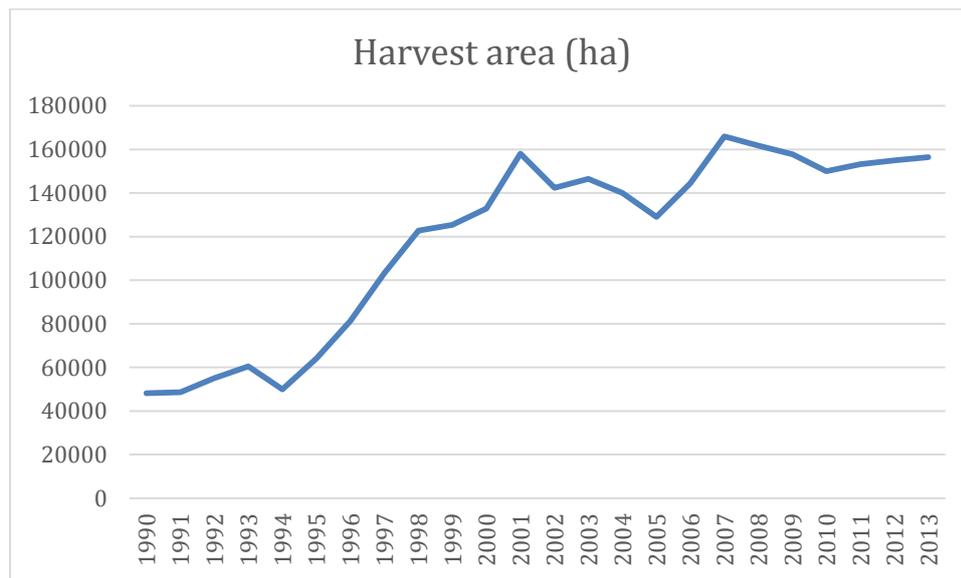


Figure 1: Sugarcane harvest area in Myanmar (Source: FAO)

It was understood that, most expanding sugar cane cultivating areas are reserve and/or degraded forest by small, medium and larger scale investment. Like other sugar cane cultivating area in Myanmar, farmers from both study area transformed reserve forest and/or degraded forest to sugarcane farm since late 1990. Both study area had experience of over 20 years in sugar cane cultivating and production of molasses. Since private invested sugar *mill* operated in area and labour shortage for processing, majority of farmer stop processing and practicing the contract farming which gradually expanded recently.

The study focused on two scenarios of dealing market with “contract farming” and “own processing of raw molasses with traditional method”. Study villages from Katha Township are located east and west of Ayeyarwaddy River and with location, their practice of market linkage was found different.

Sugar cane farmers from study villages located east of Ayeyarwaddy make contract agreement with sugar *mill* factory, while farmers from other side practice old traditional way of processing molasses. (see in Figure 2: Value Chain map)

The majority of farmers received official land ownership certification from government for their property right but only for a partial area. Comparing the east and west side of the Ayeyarwaddy River, the size of land owned by farmers from the east of the River is above 20 acre on average (some had more than 80 acre) while farmers on the west side of the river own between 10 acre to 20 acre.

Sugarcane farmers from study villages at the east bank of the Ayeyarwaddy River practice are shifting to sugarcane cultivation within their area, while farmers from the west bank of the River expand to forest area. Farmers from the east bank of the River cultivated beans and sesame in their land, while sugarcane cultivation was stopped for a few years due to low yield after continuous cultivation and harvesting. Different from them, farmers from west bank of river abandon the sugarcane cultivation area when the yield was low and not economically viable to continue production.

Following the lack of proper plant treatment (including less fertilizer usage in sugarcane cultivation) in the study area, the yield dramatically dropped after continuous cultivation - within a period of six to seven years, the yield of sugarcane resulted to be economically unviable. Almost all farmers stopped sugarcane cultivation after yield was not enough to cover production costs. Some farmers from east of Ayeyarwaddy river use part of their own land plot for cultivation of bean (without proper land preparation) for certain areas of abandoned land before they re-cultivate sugarcane, while farmers from the west of the river totally abandoned the old area and extended sugarcane cultivation into deeper forest area.

With the nature of less amount required in reinvestment in continue sugarcane cultivation and harvesting, almost all farmers enjoyed for six to seven year of profit from their farm in one cultivating (planting seedling) and harvesting circle. Without proper land preparation and plant treatment for using input, quality of soil fertility from their farm area degraded and circle of cultivation-harvesting are reduce to two – three years as well as reduced in yield per acre. In their normal practice, farmers abandon the old sugarcane farm area where not economically viable and start new area for plantation. Only few area of abandoned farm land area are being re-cultivated for other crops like sesame and beans, due to lack of access to investment.

#### **Brief socio-economic general information of study area**

With assistance of the partner organization, altogether 93 HHs from four villages located on both sides of the Ayeyarwaddy River were interviewed, to enable an understanding of their general socio-economic situation.

The average HH size is 5.58 and 16.3% (15 out of 93 HHs) of study HH are female headed. 62% of study HHs population is of working age of 18 to 60. The majority of HH heads are able to read and write in Myanmar language and only 4% (4 out of 93 HHs) was illiterate.

Paddy and seasonal crops including sugarcane is the main income source of HHs from study area, followed by farm labour and casual labour, of who landless HHs. All HHs who had income from agriculture work their own farmland. More than half of farmers had more than 10 acre of land especially for sugarcane production and remaining farmers own the farmland range of 2 to 10 acres.

### Sugarcane value chain at study area

Typical sugarcane value chain from study area is shown below:

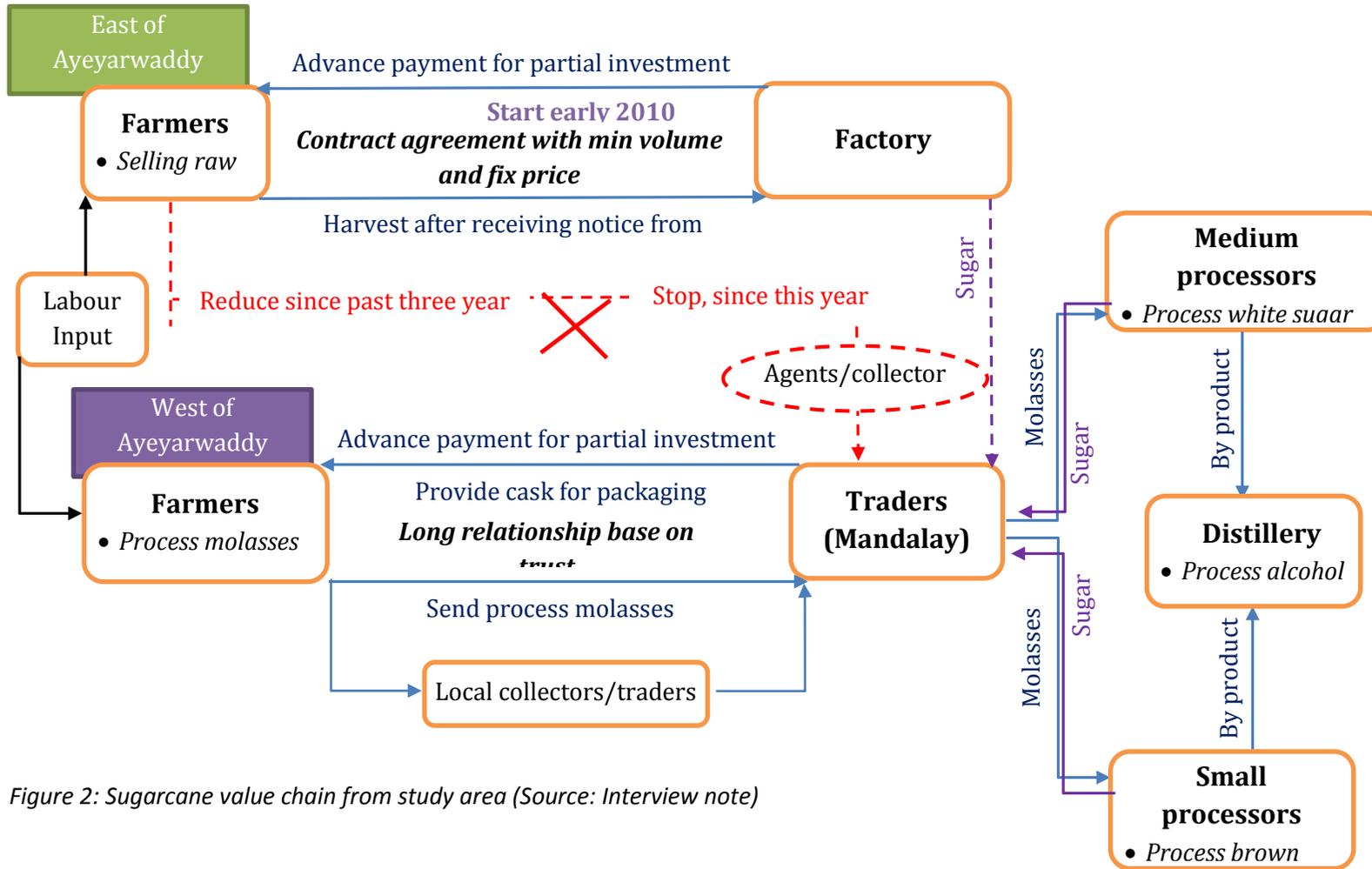


Figure 2: Sugarcane value chain from study area (Source: Interview note)

## Function and mechanism of main value chain actors

**Farmers:** Almost all farmers from the study area are forming the sugarcane cultivation land from reserve and/or degraded forestland since (approx.) 20 years ago. After harvesting, they sell fresh sugarcane to the sugar factory and/or sell the molasses to traders from Mandalay.

They receive advance money from traders and/or factory for cost of initial cultivating and harvesting.

Farmers from east of Ayeyarwaddy River make contract agreement with factory while farmers from west of Ayeyarwaddy River had traditional relationship with traders.

**Local collector/trader:** work as commission base agent the most and some of them are relatives of molasses traders from Mandalay.

They have two roles as 1) commission base agents who work with full financial support of traders from Mandalay and 2) trading with own finance with partial support from traders from Mandalay.

**Agents/collector:** play same role as local collector/trader for trading molasses but they are losing interest in production area on the east bank of the Ayeyarwaddy River this year, due to labour shortages for processing molasses, as well as the type of contract offered by sugarcane factory.

**Trader (Mandalay):** Play major role in local sugar production and work as commission based wholesaler. Collecting molasses from farmers direct and/or through local collector (and agent) before redistribution to medium and small processors for producing sugar. They buy the process sugar from processor/sugar mill and distributing to market through wholesale from Brintnaung Market, Yangon and retails.

Provide financial support to farmers through local collectors or direct. The relation between traders and farmers is a traditional one based on trust. Their relation is not limited to only financial support for cultivating and harvesting, it include other social support for need of farmers. One farmer met during the field visit mentioned that if someone from their family need health care in Mandalay, the trader who had developed a strong relationship over time, would provide the necessary arrangements, including lodging and financial support.

**Processor (small and medium):** purchase molasses from traders and sell process sugar to market through traders.

**Factory:** raw/fresh sugarcane is purchased from farmers and sugar is produced in the factory. The factory has also its own distillery for processing the by product of alcohol. Originally it started to operate with 2000 MT capacity and expanded to 7000 MT this year (2015). The processing capacity and productivity time have been increased by decreasing processing time with available raw sugarcane for factory and processing white sugar. The operation started two months later than usually but it faced processing problems with the newly installed machine, and the factory capacity slowed down during this harvesting season and led to reduction of the required volume of raw sugarcane for processing.

**Labour:** main player in production and direct link with farmers. Mainly relied on seasonal labour from other regions like central dry zone (CDZ) especially for harvesting and processing. Following migration to more income favorable area like mining and abroad, farmers from sugarcane sector faced labour shortage and as result increase labour cost in production.

## Cost Analysis

Table 1: Cost and profit (1 acre) – East of Ayeyarwaddy River (MMK)

Item	Year 1	Year 2	Remark
Land preparation	30,000	-	
Planting labour	30,000	-	
Seedling	120,000	-	
Weeding – 2 times	180,000	180,000	Reduce for weeding work in some place
Fertilizer			Some farmer used amount of 30,000 K
Plant treatment – 2 times	30,000	30,000	
Subtotal - 1	390,000	210,000	
Harvesting	100,000	100,000	
Labour for loading	37,500	37,500	
Transportation	159,600	159,600	
Subtotal - 2	297,100	297,100	
<b>TOTAL</b>	<b>687,100</b>	<b>507,100</b>	
<b>Average Yield 15 ton x 39,000 K</b>	<b>585,000</b>	<b>468,000</b>	20% approx. yield drop in year 2
<b>PROFIT &amp; LOST</b>	<b>L - 102,100</b>	<b>L - 39,100</b>	

Source: Interview note

Table 2: Cost and profit (1 acre) – West of Ayeyarwaddy River (MMK)

Item	Year 1	Year 2	Remark
Land developing	150,000	-	Cutting tree and removing
Land preparation	350,000	-	
Planting labour	30,000	-	
Seedling	70,000	-	
Subtotal - 1	600,000	-	
Harvesting	50,000	100,000	
Transportation to process place	40,000	40,000	2500 K for one drum (16 drum yield)
Milling	64,000	64,000	4000 K for one drum (16 drum yield)
Cooking molasses	80,000	80,000	5000 K for one drum (16 drum yield)
Subtotal - 2	234,000	234,000	
<b>TOTAL</b>	<b>834,000</b>	<b>234,000</b>	
<b>Average Yield 16 drum x 32,000 K</b>	<b>512,000</b>	<b>416,000</b>	20% approx. yield drop in year 2
<b>PROFIT &amp; LOST</b>	<b>L - 322,000</b>	<b>P - 182,000</b>	

Source: Interview note

Because of the nature of sugarcane cultivation, there is high investment in year one and some farmers have had experience of six to seven year continuation of harvesting without much additional yearly investment. With soil degrading and climate change effect, maximum economic viable status of harvesting period has been reduced two to three year.

In addition to yield drop, farmers suffer as a consequence of reduced prices of raw sugarcane and process molasses.

## Payment system

Farmers (from the east side of the river bank) who make contract agreements for supply raw to factory, received the advance money to cover the initial investment for cultivation, like land preparation and labour cost. Generally, factory assume the yield of 6 ton per acre approximate for contract amount and provide 8000 MMK per ton as advance payment. Just before the harvesting period, the factory provides labour cost for loading and transportation to factory from farm. All advance payments are then deducted from the final payment.

Farmers (from the west side of the river bank) who process molasses received advance payment from traders and the amount varied from one to another. After, molasses are transported to traders, farmers received remaining amount of payment weeks later. The trader received 6 MMK per viss for broker fee (commission) plus 4% interest rate for the advance money provided to farmers. Farmers also faced delays in payment and it sometime took up to one month or more, before being reimbursed by the traders.

## Major constraint for sugarcane farmers

**One sided contract from factory:** the contract clearly mentions that farmers are not allowed to cut the sugarcane without their notice. Due to some operational problems of the factory, farmers faced losses as 1) more waiting time for raw unloading at factory and prolonged time may cause weight loss of sugarcane and additional unnecessary daily expense of farmers; 2) sugarcane plants in the farm are drying due to bad weather conditions because farmer faced delayed harvesting period due to late order from factory for cutting raw sugarcane, and 3) labour who come to work for harvesting period move back due to lowered seasonal working time, which causes labour shortages when farmer actually receives notice from factory for cutting the sugarcane.

In addition to that, there is no clause for compensation, if farmers cannot cut raw sugarcane in timely manner.

**Labour shortage:** sugarcane industry required numbers of labour at harvesting time and study area relied on labour from other areas. Since there is more potential income from the mining sector and migration abroad to Thailand and Malaysia, as well as to mining area within Myanmar, as farmers from study area faced labour shortage especially for harvesting and processing molasses from sugarcane.

**Price instability:** domestic price of raw sugarcane beets and molasses are direct link with world sugar market price and as a result of a price drop in the world market shown in Figure 3, the domestic price of raw sugarcane beets and process molasses also fell down since 2012. The current market price is not economically viable for sugarcane farmers.

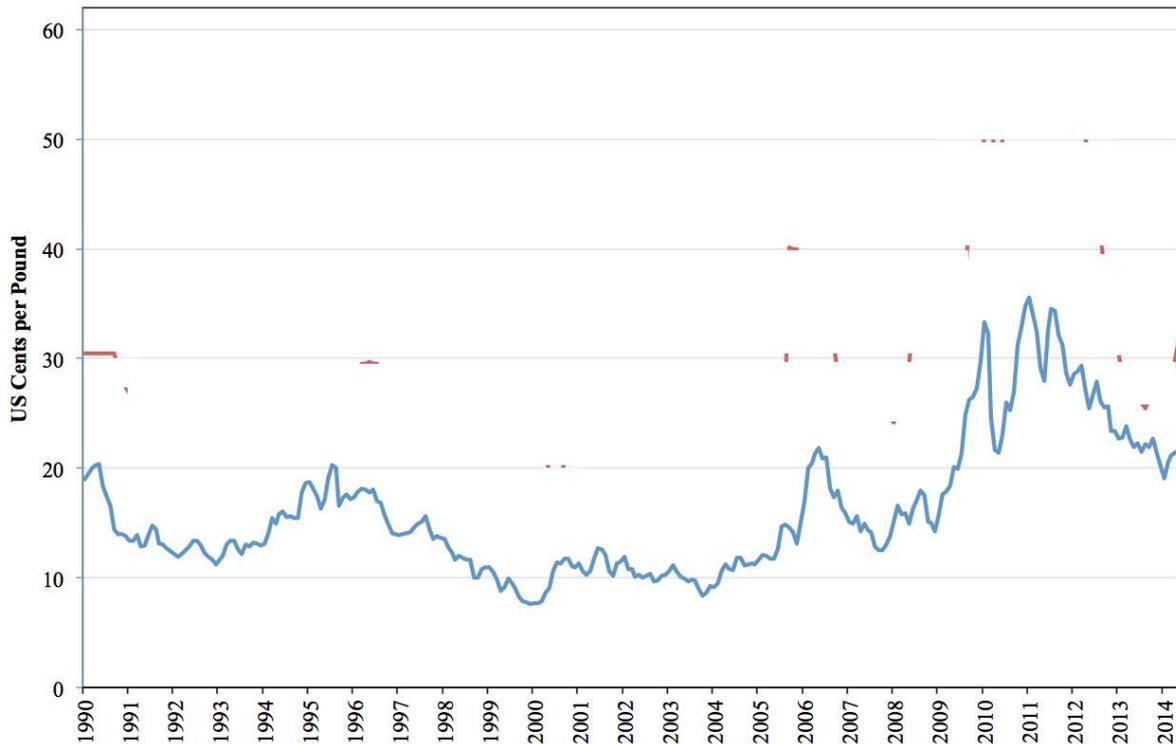


Figure 3: World sugar cane price (source: US Department of Agriculture, Economic Research Service, "Sugar and Sweeteners Yearbook Tables,")

Traders from Mandalay, met during the field study, mentioned that the price also depends on import volume and the exchange rate (changing).

**Traditional processing practice:** lacking of modern technology, farmers relied on old traditional processing method for process molasses. Lack of skill labour and using out-off-date equipment results in the production of low quality process molasses, with a subsequent reduced market price.

### Investment analysis

With large amounts of investment required for sugarcane production, especially for land preparation time and the harvesting period and time, almost all farmers from the study area received financial support from different sources for additional investment needs. The nature of different sources of financial support for additional investment needs, can be identified as follows:

- **Corporate investment**  
Contract agreement was made between farmers and sugar mill with minimum volume (currently define as 6 Ton / acre) with fixed price for specified cultivating area.
- **Traditional investment**  
Receiving money from traders from Mandalay and traditional relationships are key for receiving support. Specific amounts per acre were not defined but the size of the cultivation area is taking into account for consideration to give the advance money.

## Comparison between different investments

Corporate Investment	Traditional Investment
<p><b>Type of agreement</b></p> <ul style="list-style-type: none"> <li>• Legal base contract</li> <li>• One sided advantage from factory</li> <li>• Payment received immediate after inspection-grading/measuring-weighing the sugarcane at factory</li> <li>• No assurance for lost due to factory fault</li> <li>• No technical support for improved production</li> </ul>	<p><b>Type of agreement</b></p> <ul style="list-style-type: none"> <li>• Mutual understanding with traditional relationship</li> <li>• Include support for social affairs (such as arrangements for medical treatment in Mandalay)</li> <li>• Delay and partial payment after the molasses transported to trader from Mandalay.</li> <li>• No guarantee (insurance) for loss of production due to various reasons (e.g)</li> <li>• Less and less number of farmers and trader relation due to market failure</li> <li>• No technical support for improved production</li> </ul>
<p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• No alternative financial source for support</li> <li>• More abandon sugarcane farm due to economic loss</li> </ul>	<p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• No alternative financial source for support</li> <li>• More abandon sugarcane farm due to economic loss</li> </ul>
<p><b>Lessons learned for improvement</b></p> <ul style="list-style-type: none"> <li>• To support for improve production (increase yield) through proper plant treatment and introduction good species</li> <li>• To advocate for development of proper contract which will support mutual benefit for farmers and factory. Contract should include compensation of loss for farmer due to factory problem</li> <li>• Access to alternative financial source is necessary</li> </ul>	<p><b>Lessons learned for improvement</b></p> <ul style="list-style-type: none"> <li>• To support for improve production (increase yield) through proper plant treatment and introduction good species</li> <li>• To support for improve processing method and/or equipment (to improve the quality of molasses) to attract for market</li> <li>• Access to alternative financial source for re-use the abandon land is necessary for livelihood improvement</li> </ul>
<p><b>Overall</b></p> <ul style="list-style-type: none"> <li>• Risk of economic loss (from production and factory fault) was affected to farmers</li> </ul>	<p><b>Overall</b></p> <ul style="list-style-type: none"> <li>• Risk of economic loss (from production and price drop) was affected to farmers</li> </ul>

## Role of women

In most of the sugarcane value chain steps, including production and processing, more men are involved than women. No specific role of women was noticed, except for helping their husband who own the sugarcane farm, which is seen as common in almost all of rural Myanmar.

## Recommendations

- To support both financial and technical to farmers to improve production. This includes introduction new seed varieties and support the practice of proper plant treatment.
- To advocate for fair contracts between farmers and factory is necessary, in order to compensate in case of economic loss for farmers, due to factory fault.
- Financial and technical support for farmers to improve processing of molasses. This includes the introduction of affordable small scale new equipment and processing technologies.

## 5.2. Watermelon case study

### Background

Based on official statistic data released from the Ministry of Agriculture and Irrigation (MOAI), the total production of watermelon in Myanmar was 15,262 ha in 2012-2013, down from maximum area of 18,960 ha at 2010-2011 (see in Figure 4). But, in the area where the interviewees were conducted, a total area of Chinese investment alone was said to be more than 40,000 ha, in Sagine Region.

According to personal from **the** Myanmar Fruit & Vegetable Producer & Exporter Association, Chinese investors started to invest in watermelon production in Myanmar since 1995-96 at locations in upper Myanmar and northern Shan State, and nowadays they monopolized 80% of the Myanmar watermelon production.

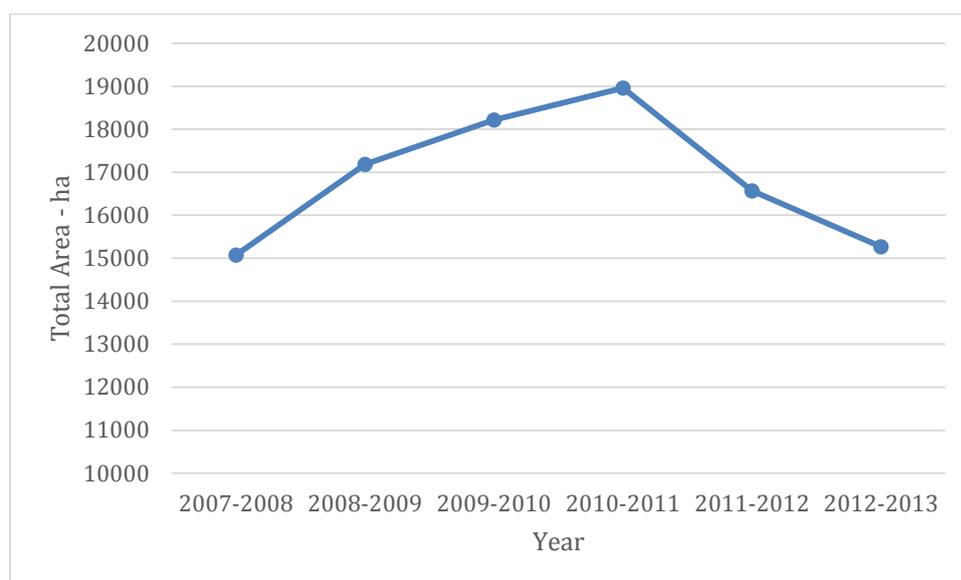


Figure 4: Total area of watermelon production in Myanmar (source: MOAI)

Almost all of watermelon producers from the study area are non-native farmers. It was noticed that Myanmar producer (referred as “local producer”) and Chinese producer (referred as “Chinese technician”) are involved accordingly, in watermelon production.

*People from Sagaine Region mentioned that watermelon was name as ‘gambling fruit’ - One year profit can cover two year of production.*

Both local and Chinese producers rent the land from native farmers who earn more money than out of production of other crops, like beans. The fee for renting land is MMK 200,000 to 400,000 per acre depending on the location. Following the low income from cultivating crop by own investment (both money and labour) due to the lack of inputs and proper plant treatment, native farmers are willing to rent the land to watermelon producers (local and Chinese) without consideration of damaging their soil due to over usage of fertilizer and pesticide/insecticide.

The cost comparison of production crops and profit (per acre) is shown in table 3 below:

*Table 3: Cost and profit (1 acre) for wheat production (MMK)*

Item	Wheat	Remark
Land preparation	50,000	
Seed – 3 bsk x 15,000 K	45,000	
Fertilizer – 3 bags x 20,000 K	60,000	
Irrigation	20,000	
Harvesting by machine	40,000	
<b>TOTAL COST</b>	<b>220,000</b>	
<b>Average Yield 25 bsk x 12,000 K</b>	<b>300,000</b>	
<b>PROFIT</b>	<b>80,000</b>	

*Source: Interview note*

Following the nature of watermelon production, depending on excessive fertilizer and pesticide usage, watermelon producers require certain amount of own investment. Watermelon producers indeed appeared better off, compared to native farmers in term of ability to secure own investment. In the study area, no native farmers were involved in watermelon production. According to interviewees, approximate production cost for one acre of watermelon is 2,100,000 MMK to 2,500,000 MMK. Even if supplier credit and advance money was practiced, native farmers cannot get involved in watermelon production due to the large required amount of initial investment.

Even if local producers used their own saving in production, they relied on additional supplier credit for necessary input and advance money from wholesaler for working capital because of the huge investment need in production. The profit from watermelon is high, however - if they receive a reasonable price from buyers and all interviewees mentioned that one year can cover two years of loss.

It was noticed that the majority of local watermelon producers live with a debt cycle by input supplier credit and advance money from wholesalers.

Differently from local producers, Chinese investors work on the production of watermelon with Chinese technicians on the profit sharing base. Chinese investors rent the land through their agents and send Chinese technicians who specialize in watermelon production, providing all necessary support including labour but also fertilizers, insecticide/pesticide, etc. Chinese technicians cultivate watermelon according to the harvesting time, based on a watermelon demand indicated as per Chinese calendar. Harvesting time of other watermelon in Myanmar is meant to meet the demand during the period of religious ceremonies indicated by the Chinese Luna calendar.

Since the watermelon demand from China market depends on their calendar of religious ceremony and climate, management and the timely harvesting in farm can result in a huge profit. With a specific time frame from planting to harvesting, Chinese technician manage their harvesting time to avoid overlap in the same period with major production area in China, and at the same time, adjust to the demand. Local producers lacking such knowledge and expertise, try to copy this Chinese technical practice as much as they can.

### **Brief socio-economic general information of study area**

With assistance of the partner organization, altogether 77 HHs from sixteen villages and wards located in four townships of Monywa, Butalin, Chaung Oo and Sarlingyi have been interviewed. Because of

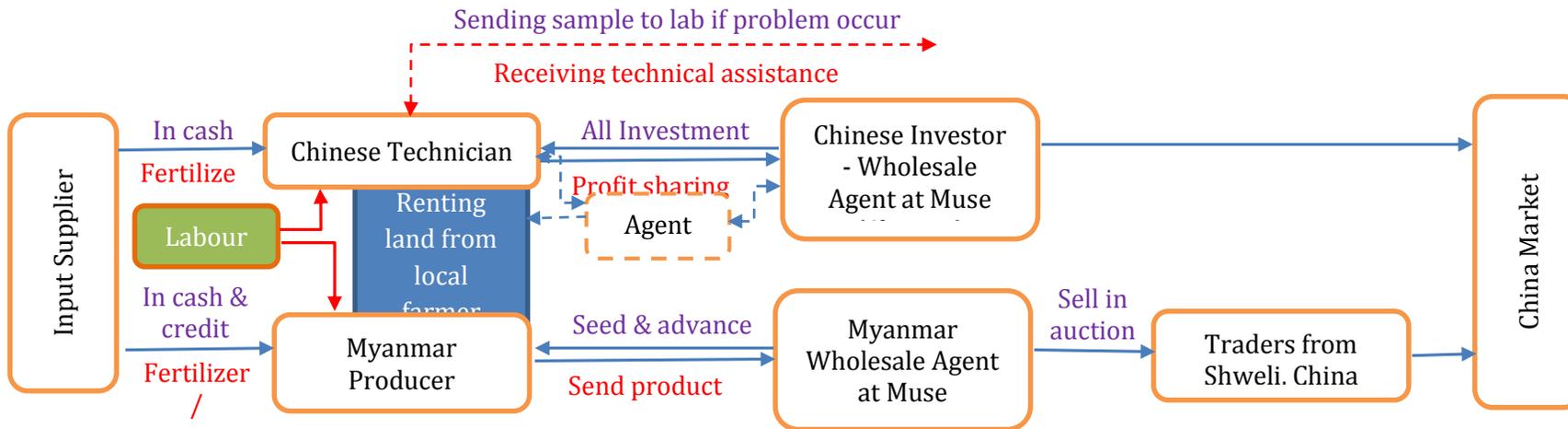
the nature of watermelon production, producers live in different locations (villages or town) from the actual production area. The research team focuses on watermelon producers rather than on the watermelon production areas.

The average HH size is 5.23 and 2.6% (2 out of 77 HHs) of study HH are female headed. 63.3% of the studied HHs population is of working age between 18 and 60. The majority of HH heads are able to read and write in Myanmar language and 23.4% (18 out of 77 HHs) of the studied HH' heads said to have a higher education level, such as high school and university level education.

Watermelon and squash are major seasonal crops as main income source of all HHs met in the study area and some of them produced additional paddy and sesame in their own farmland. Following the nature of production, almost all of producers, met during the study, rent the land from other native farmers for production of watermelon and squash. Only few watermelon producers from Minkhaung village, Chaung Oo Township, cultivated squash on their own land.

Almost all producers rent land for production of watermelon and rely on necessary working capital and access to finance (supplier credit and advance payment). In varying production areas, the area of individual watermelon production ranged from a minimum of 3 acre to a maximum of more than 20 acre.

## Value Chain Watermelon



### Function and mechanism of main value chain actors

**Agent:** not directly involved in production and marketing but plays a major linkage between the Chinese Investor and local people, including native farmers, authorities, and input suppliers. They find land for production and negotiate with native farmers for renting around the central dry zone of Mandalay and Sagaine Regions. Their role includes finding labour for production and providing necessary inputs like fertilizers through local input supply companies and/or distributors. They receive a commission for produced watermelons from the relevant Chinese investor. The main role of the agent is finding suitable land and getting permission from authorities for the stay of Chinese technicians to work at watermelon farms inside Myanmar during the production period.

**Producer:** major actors in watermelon value chain and responsible for production. Two types of producers, as Myanmar (local) producers and Chinese (technician) producers, were found in study area. Both are renting land from native farmers for seasonal watermelon production but only local producers faced risk of financial loss.

**Myanmar (Local) producers:** rent land with own resources and the remaining cost is covered by supplier credit and advance money. Seed and advance money is received from wholesalers from Muse who has long relationship with them. Input fertilizers, pesticide/insecticide are received from local input suppliers, partially with credit (but interest rate was not known (due to price setting system)). After harvesting the product, it is sent to Muse where China-Myanmar border trade zone is.

**Chinese Technicians:** working based on 'profit sharing', are responsible for managing production with necessary financial support from Chinese investors. Like local producers, they send the product to Muse wholesalers from Muse after harvesting.

**Chinese Investor (wholesaler at Muse):** work as wholesaler at Muse using connections with Myanmar Citizens (who work as agents) and start own production at Mandalay Region through contract farming, and later expanding production, bringing Chinese technicians who oversee the management of the whole production system. They have advantage because of the China market linkage. According to interviewees, one of the biggest wholesaler called Bo Myint Thu invested over 6,000 ha (>15,000 acre) of production in Mandalay and Sagaing Region.

**Myanmar Wholesaler at Muse:** work as fruit wholesalers at Muse and mainly operate as agents between Chinese traders and Myanmar producers through auction systems. They provided *advance money* and seeds to local producers. The longstanding relation between local producers and wholesalers is based on trust.

**Input Supplier:** with large amounts of fertilizer used, input supply companies from Yangon are competing on the market, through regional input distributors. Imported 15:15:15 NPK compound is the main fertilizer in watermelon production. A *partial* supplier credit system (paid in cash for certain amounts) was applied in input supply chain, from input supply company to farmer, through regional input distributor. Different from other crop production, no functioning (involvement of) small-scale local input supply retail, which exists in the study area, was noticed in the watermelon value chain.

**Labour:** major workforce in seasonal watermelon production. Originally, they recruit labour in the nearest area within dry zone, in the past years, but following external migration to other places like mining area and abroad (Thailand and Malaysia), currently (since last year) watermelon producers relied on seasonal labour from the delta area and lower parts of Myanmar. Originally, those recruited are farm workers in paddy production at their native place and work in seasonal labour for watermelon production in the study area, during the off season of paddy production.

According to interviewees, one local producer hired twenty to sixty workers for one season and it was understood that thousands of laborers are involved in watermelon production in the overall study area.

## Cost analysis

Average cost and profit calculation for watermelon production (per acre) is shown in Table 4 below:

Table 4: Cost analysis for watermelon production

Item	Cost	Profit & Lost	Remark
Renting land	300,000		Average of 200,000 to 400,000
Land preparation	100,000		
Seed	100,000		
Fertilizer	600,000		
Foliar and pesticide/insecticide	200,000		
Irrigation	200,000		Average estimation
Labour	800,000		
<b>Production Cost</b>	<b>2,200,000</b>		
Transportation	1,300,000		
Labour cost for cargo shifting	20,000		
Logistic cost	1,320,000		
<b>TOTAL COST</b>	<b>3,520,000</b>		
<b>Average Yield – 18,000 kg</b>			
<b>2014 price – 3 Yuan/kg</b>	<b>8,100,000</b>	<b>P – 4,580,000</b>	<b>Average price of 3 to 5 Yuan/kg</b>
<b>2015 price – 0.8 Yuan/kg</b>	<b>2,160,000</b>	<b>L – 1,36,000</b>	<b>Average price of 0.8 to 1.3 Yuan/kg</b>
<i>Note: commission not calculated</i>			
<b>Price for BEP – 1.5 Yuan/Kg</b>			

Source: Interview note

Based on the cost analysis table above, the margin of profit attracted local producer to continue investing in watermelon production. According to interviewees, some watermelon producers received 5 Yuan to 6 Yuan per kilogram and the profit reach 10 million MMK per acre approximately.

With a low price for this year, only few producers got a (small) profit at the price of 1.9 Yuan to 2.3 Yuan per kilogram. Some producers received a price a price that allowed them to cover the production costs, but the majority of producers faced huge loss.

## Payment system

Advance payment and supplier credit is being practiced. All payments are reimbursed when the producer sells their product. If producers loose the production, the advance payment and/or supplier credit is carried over to the next production season. Therefore, relation between regional input supplier or wholesalers and local producers, trust each other was main fact.

In addition, the wholesaler receives 5% commission for their service.

## Major constraint for watermelon producers

**Timing:** watermelon need exactly 90 days from planting to harvesting. Only very few days can be prolonged for harvesting. The demand from China depends on their religious festivals including Chinese New Year and other occasions as well as summer season. Adjusting target

market China and production within China is critical for receiving a good price. Chinese technicians are well prepared for this demand *based* calendar. Local producers sometime miss exact dates of events (eg. Chinese new year etc). Other times, harvesting period was simultaneous with inside China. Since price was heavily link with demand calendar and production in China, timing is crucial for watermelon production. Both Chinese and local producers cultivate watermelon for a six month period in one season, and they need to adjust to the harvesting time. In reality, local producers faced problems adjusting timely *and never got advantage from timing compared to Chinese technicians*.

**Land degradation:** the quality of the soil in the dry zone already got deteriorated through mismanagement and the lack of proper land treatment, since more than 10 years ago, when watermelon production was introduced in the study area). Some soil samples, from the study area, were send to *the Pesticide Analytical Laboratory, MOAI* and appeared to contain some heavy, at much higher levels than the maximum allowable limit. See table 5 below:

Table 5: Soil test result

	Maximum Permitted Level	Chinese Squash Butalin	Chinese Watermelon Kutokone	Myanmar Watermelon Kutokone	Myanmar Squash Butalin	No Watermelon No Squash last year	Chinese Watermelon Butalin
Cadmium (Cd)	0.8	ND	ND	ND	ND	ND	ND
Chromium (Cr)	100	15.8	34.8	77.25	11.7	17.8	45.97
<b>Nickel (Ni)</b>	<b>35</b>	9.4	27.05	85.5	8.5	8.9	46
Mercury (Hg)	3	ND	ND	ND	ND	ND	ND
<b>Iron (Fe)</b>	<b>250</b>	<b>922</b>	<b>962</b>	<b>1054</b>	<b>905.5</b>	<b>973</b>	<b>1048</b>
Lead (Pb)	85	ND	ND	7.55	ND	ND	6.82
Arsenic (As)	29	ND	ND	ND	ND	ND	ND

(Note: ND- No Detect, data value – ppm)

**Over usage of fertilizers:** according to the interviewees (local producers), approx.. 3 bags of potassium (total 150 Kg) and 18 to 20 bags of NPK (900 to 1000 Kg) were used in the production of one acre of watermelon. Some producers were said to use more than 20 bags of NPK compound and Chinese technicians were said to use nearly that same amount. In addition to that, according to some *activists (from an organic production group in Monywa)*, soil quality was fragile and deteriorated after two to three year of watermelon production. It requires proper study of the soil quality and the overuse of fertilizer.

**No control on pesticide/insecticide:** free flow of pesticide and insecticide was applied to avoid damaging watermelons before harvesting. It is being applied daily of every other day. In addition to that, no proper protection for the application of the fertilizer and pesticide was being used.

**Lack of technical support:** local producers faced pest and disease problems in their production and apply the pesticide and/or insecticide without specific technical guidance from agriculturists and/or technicians. According to interviewees, they applied on alternative day or every few days. Different from local producers, Chinese technicians send the information about their production problem to China and received necessary assistance including specific pesticide/insecticide but no one seemed to know about the information of such pesticide/insecticide.

**Buyer market:** even price was set through auctions, the market appears governed by buyer. When local producers send their product to the Muse border trade zone, respective wholesalers make negotiations with Chinese Traders, using auction systems. Chinese traders investigate the full loaded truck and offer their price to the wholesaler. Then, the wholesaler makes agreements with the producer for the best price. If producers do agree on the price, the wholesaler is allowed to keep the loaded truck at their compound for next day's auction. The majority of producers sell their product at the best price offered in the moment.

Once the producer agrees on the price, the loaded truck moves to China side and shift the cargo for transportation within China. Only after shifting the cargo (watermelon), the Chinese trader provides payment.

It was noted that, local producers faced some cheating from Chinese traders depending on the demand situation. This includes price reductions and rejecting the product by Chinese traders during the cargo (watermelon) shifting from original loaded truck (Myanmar Registered Number Plate car) to another truck (Chinese registered number plate car). According to person (producers) met during the interview, only few wholesalers from Muse forced Chinese trader to agree on term by auction, without reducing price and/or rejection of product, but the majority of wholesalers from Muse didn't take responsibility when this happened. It was understand that such things happen in case of sudden price drops on China and/or less demand from inside China.

### Investment analysis

Following the nature of the high investment amount required, almost all watermelon producers came from outside of the production area and work with/on land rented from native farmers. It was clearly noticed that Chinese traders assigned Chinese technicians for production whereas local farmers produced themselves, without technical assistance. The nature of different sources of financial support for additional investment needs, can be identified as follows:

- **Corporate investment**  
Direct investment from Chinese traders through Chinese technicians and local agents (agent rent land on behalf of Chinese traders and provide the necessary support to Chinese technicians, including finding labour and locally available fertilizer).
- **Local investment**  
Using own investment, partially supported by Muse wholesaler (providing advance payment and seed) and by *credit purchase of fertilizer* from the local distributor.

### Comparison between different investments

Corporate Investment	Local Investment
<p><b>Source of investment</b></p> <ul style="list-style-type: none"> <li>• Fully own investment</li> </ul>	<p><b>Source of investment</b></p> <ul style="list-style-type: none"> <li>• Partially own investment support with advance money and credit purchase</li> </ul>
<p><b>Process of investment</b></p> <ul style="list-style-type: none"> <li>• Working with agent for               <ul style="list-style-type: none"> <li>○ Land rent</li> <li>○ Provide fertilizers from local importer and/or local distributor</li> <li>○ Hiring labour</li> </ul> </li> </ul>	<p><b>Process of investment</b></p> <ul style="list-style-type: none"> <li>• Land rent by own capital</li> <li>• Hiring labour by own capital (some may include loan from money lender)</li> <li>• Receiving partial assistance from</li> </ul>

<ul style="list-style-type: none"> <li>○ Transportation arrangement for carrying watermelon from production area to Muse</li> <li>○ Stay permit (mostly unofficial agreement from local authority) for Chinese technician (agriculturist)</li> <li>● Assign Chinese technician <ul style="list-style-type: none"> <li>○ To oversee the whole production with profit sharing basic</li> <li>○ Technical support from mainland China laboratory for pest and insect problem</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Seed and advance money from Muse wholesale</li> <li>○ Credit purchase for fertilizer need from local distributor from Monywa</li> <li>○ Credit transport charge (paid after sold out the watermelon at Muse)</li> <li>●</li> </ul>
<p><b>Impact</b></p> <ul style="list-style-type: none"> <li>● Advance in competition through <ul style="list-style-type: none"> <li>○ Market information (understand the mainland China production season and market need)</li> <li>○ Direct market access</li> </ul> </li> <li>● Land degradation</li> <li>● Worker safety (no protection during usage of pesticide and insecticide)</li> </ul>	<p><b>Impact</b></p> <ul style="list-style-type: none"> <li>● Less competitive power <ul style="list-style-type: none"> <li>○ Price set by buyer (Chinese traders)</li> <li>○ Lack of access to market information</li> </ul> </li> <li>● Land degradation</li> <li>● Worker safety (no protection during usage of pesticide and insecticide)</li> </ul>
<p><b>Lesson learn for improvement</b></p> <ul style="list-style-type: none"> <li>● To make proper guideline for foreign investment which make fair competition with local producer.</li> <li>● Advocate or set rule to follow for applying good agriculture practice (GAP) for preventing land degradation and worker safety</li> </ul>	<p><b>Lesson learn for improvement</b></p> <ul style="list-style-type: none"> <li>● To support for improve production applying good agriculture practice (GAP) for preventing land degradation and worker safety.</li> <li>● To support for more market competitive</li> <li>● To support access to alternative market rather than China</li> <li>● Access to alternative financial source is necessary</li> <li>● Provide necessary technical support including access to good seeds</li> </ul>
<p><b>Overall</b></p> <ul style="list-style-type: none"> <li>● Less risk of financial loss because of advantage to access market directly</li> </ul>	<p><b>Lesson learn for improvement</b></p> <ul style="list-style-type: none"> <li>● More risk of financial loss due to lack of access to market directly.</li> </ul>

### Role of women

Mainly in production level, more women are involved, than man. No specific role of women was noticed except for helping their husband who makes investment for production of watermelon farm, which seen as common in almost all of rural Myanmar. But in terms of labour, more women were involved because of the nature of production which requires a lot of weeding before harvesting and hand picking during the actual harvesting.

### Recommendations

**Sugarcane production has strong market prospects<sup>35</sup>** through value adding, especially the conversion of molasses to ethanol and the co-generation of electricity. Production of sugarcane-based ethanol also has potential, given that there is significant rainfed land that could be used to expand production. Myanmar could also become a significant exporter of

<sup>35</sup> As confirmed by the MSU International Development Working Paper 133, May 2014

sugar and possibly ethanol as well (Thailand is the world's second sugar exporter). However, certification of social and environmental standards would likely be needed to gain duty free access to the EU under the Everything but Arms agreement.

**To serve these potential markets, the Myanmar sugarcane industry needs to enhance its competitiveness.** Production costs are about 30% above Thai costs and the opening of a free trade zone in 2015 adds urgency to further restructuring of the sugar industry that is still in transition from state to private hands. Considerable consolidation is needed to reap economies of scale by transiting to larger scale more efficient mills characteristic of Thailand with 15,000 TCD. This will require foreign investors with the needed capital and technology. One investor is currently exploring the opening of a large state-of-the-art operation in the hinterland where land is available for a nucleus estate that could be combined with outgrowers.

**Provided a more equitable price sharing formula can be negotiated, a zoning policy for existing mills would enable them to expand and better utilize capacity,** by guaranteeing that a mill would have sole rights to supply from a given area. Another priority is to relax land policies that currently restrict land conversion from paddy to other uses such as irrigated sugarcane.

Contract farming arrangements have been less successful either because of the structure of the agreement (relatively informal) or because of weak relationships between the mill and growers.

In addition, there is a need to ensure the proper plant treatment (appropriate fertilizer and pesticide usage) for soil conservation and minimization of health risks for laborers and consumers.

Finally, there is a need to ensure proper direct foreign invest for watermelon production (current investment wasn't counted as official FDI). Support direct market access for local producers.

### **5.3. *Tea leaves case study***

#### **Background**

Following Palaung traditional history, tea in Myanmar was introduced more than 1000 years ago and the majority of the production areas are located in Shan State. Assam *Camellia Assamica* dominated with more than 90% of total sown area and China *Camellia Sinensis* is found mostly in border area with China. Even if Myanmar was ranked fourth on the ASEAN tea production, the yield of fresh leaves per hectare was significantly lower compared to Vietnam. Causes were many, but low plant density and lack of systematic plant treatment can be considered as main reasons for low yield. This translates into higher production costs, and in turn results in decreased competitiveness for tea producers at all levels.

Namhsan, Manton and Kyaukme from northern Shan State, and Pinlaung, Pindaya and Yatsauk from southern Shan State are major tea production areas and they rely on local (in country) market only. Apart from those townships, border area with China located within Shan State, also include areas for tea production and these producers sell their tea mostly to China.

Different from the Kokang and Wa areas bordering with China, tea produced from the Kengtung area were only meant for local markets (around the area of Kengtung), until last year. Local tea farmers sold and/or exchange with other commodities for their product at nearby townships until 2013.

Some villages from Kengtung, located above 4000-ft (in average) of sea level, cultivate tea and species similar to the China *Cammelia Sinensis* but also new species like Assam *Camellia Assamica* are being grown recently. Indeed, the age of tea plants vary from hundreds years old to less than five years old, only. According to old farmers from one study village (Wan Hseng), mentioning that even in the era of their grandparents tea plants already existed, it was understood that the age of tea plants in the village is over 200 years old. Tea farmers from another village (Pang Waun – lower) mentioned that tea plantation in their village started with their grandparents, about 80 years ago. In both areas young tea plantations of the age of under 15 years old, were found as well.

Until the late 1990s, production was solely meant for own consumption and no large commercial scale production was practiced in the survey area. Only few tea farmers sold green tea (including barter system) to nearby markets including in Kengtung and surrounding towns. It was noted that with increased market demand from China since early 2000, farmers started to increase production and selling green tea.<sup>36</sup>

Due to the substantial increase in market demand by China in 2007<sup>37</sup> and following the market stimulation<sup>38</sup> of tea, traders (including people who did not trade tea in the past) sold green tea from Myanmar to China through border trade<sup>39</sup> and the tea price in Myanmar rose up in 2007<sup>40</sup> (and normalised over the next year(s)). In consequence, and in response to the increased market demand from China, tea farmers in Kengtung increased tea cultivation *in recent years*.

According to 2014-2015 Statistic Data of Department of Agriculture (Kengtung District), the total tea cultivated area within Kengtung Township is 621 acre but the harvested area is only 275 acre. Based on data received through FGDs and KIIs at villages, on cultivation and harvested area of tea production, it was noted that both study villages share more than half of tea plantation area of the whole of Kengtung township. The data from Kengtung DOA also reflects the recently increased cultivation according to the answers received in the interviews.

Building on market experiences, some traders from the Kengtung area explored opportunities to sell quality green tea to China (special product from for old tea tree) which resulted in another price increase (and sales) in the region, in 2014.

### **Brief socio-economic general information of study area**

With assistance of partner organization, altogether 40 HHs from Wan Hseng village and Pang Waun village within Kengtung Township were mobilised and interviewed for the purpose of understanding the general situation of tea farmers.

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<sup>36</sup> Unclear message from interview about market demand (China or local), cannot verify from other sources.

<sup>37</sup> Remaining tea is sold to local market including area from Namhkhan Township where border with China

<sup>38</sup> China accepting all types of green tea in that period.

<sup>39</sup> With rising demand expectations of the 2008 Beijing Olympic, value added tea (mostly puer-cha and green tea) production increased among tea trader/companies within China and in this regard, also more green tea from Myanmar (not only from Kokang and Wa) was exported to China via border trade.

<sup>40</sup> the price of tea from Kengtung rose up to 20,000 MMK per viss from 3000 MMK to 5000 MMK per viss of normal price in 2007



Figure 1: Location map of visited villages (shown in green circle mark)

Almost all HHs from Wan Hseng village are Loi ethnic and the majority of HHs from Pang Waun village are Lahu ethnic apart from few Shan ethnic HHs. The Wan Seng village is located north of Kengtung across the mountain with dirt access road to town. The village consist of an old and a new village located 30 minutes walking distance from each other. Altogether 94 HHs existed in both villages and all HHs had tea plantation. Different from Wan Hseng, Pang Waun located South-East of Kengtung with a more easy access to town, throughout the year, with tar road. There, 38 out of 58 HHs had tea plantation. The other HHs earn income from paddy and seasonal crops.

The average HH size in the study area is 5.2 (5.33 in Wan Hseng and 5 in Pang Waun village) and 32.5% (13 out of 40 HHs) HH (study area) are female headed. 54.3% of study HHs population is between the working age of 18 to 60. The majority of HH head were unable to read and write in Myanmar language and 57.5% (23 out of 40 HHs) was illiterate. 24.5% of the total population from the surveyed HHs are between the age of 5 to 17 and 22.1% of the total population from surveyed HHs are students (mostly primary level, only).

Currently, tea is a major/the main source of income for the majority of the HHs (90% of respondents) but some HHs (45% of respondents) had received additional income from shifting cultivation, mainly for paddy.

Based on the FGDs and KIIs, the majority of the HHs (two-third of total HHs) was said to own 2 to 5 acre of land. Very few HHs own more than 5 acre and the remaining HHs own less than one acre of farm land (landless).

## Value chain

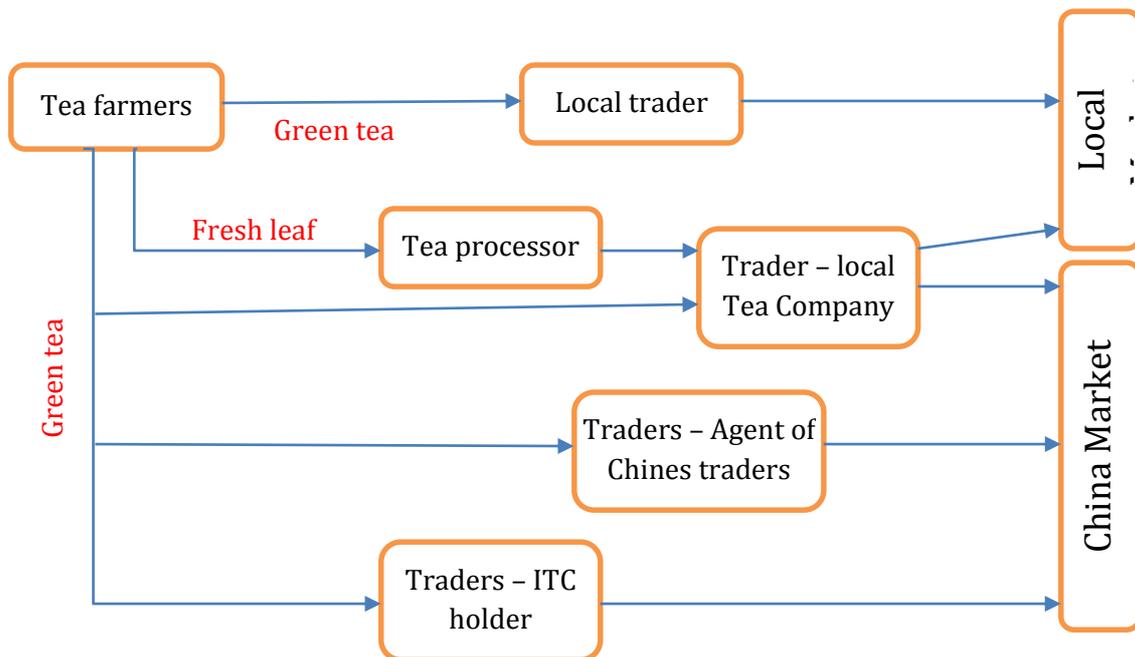


Figure 2: Value Chain Map

### Function and mechanism of main value chain actors

**Farmers:** Almost all farmers from the study area continued tea cultivation and processing from their grandparents. Traditional sundry green tea processing was practiced the most. Processed tea products are collected by traders and/or agents at the village. Few farmers sold fresh leaf directly to the processors, more so in Pang Waun than in Wan Hseng. During a FGD at Wan Hseng they mentioned that they process green tea by themselves but sometime sell fresh leaf directly if they don't have time to process, due to other activities, e.g. in shifting cultivation.

**Local processor:** through connection with traders, three tea farmers from Pang Waun village established a small scale processing unit (semi-factory) for mass production. They collect fresh leaves from farmers and process green tea. During the fresh leaf collection, up to 10% of will be deducted for rough leaf inclusion. In Wan Hseng, one trader from Kengtung who already had a connection with a Chinese tea company established a tea processing unit (semi-factory), but the majority of the tea farmers prefer to sell processed green tea rather than fresh leaves.

**Local trader:** collect tea from farmers and sell in local market. Sometimes tea farmers themselves work as local traders.

**Trader – local tea company:** tea company (Lahu and Ahkha Company Ltd, natural green tea production and distribution), established by the Lahu ethnic group with a good relationship with a Chinese (Manghai He He Chang) Tea Company from the neighboring Yunnan province, which produced puerh tea including Hou Run Shu Cha Sha Pu, one of the most balanced cooked/shu pu of the year 2013. The local tea company plays a major role in promoting export of green tea market in the region. The manager of the company learnt for modern tea

processing methods from China and passed these on to local tea processors. He also brought many samples of green tea including from southern and northern Shan to China, in order to try and access new markets and finally managed to market green tea produced from old tea plants. Two out of three tea processors from Pang Waun village had a good relationship with the local tea company. The company itself, establish a small scale tea processing unit (semi-factory) in Wan Hseng village. They sold green tea to both local and China markets.

**Trader – Agents of Chinese Traders:** Work on behalf of Chinese traders and play major role in green tea market. They received full financial support from Chinese traders.

Trader – ITC<sup>41</sup> holder: play major role in local green tea export market. They received advance payment as financial support from Chinese traders<sup>42</sup>.

**Labour:** tea leaf plucking is labour intensive work that needs to be done timely. Labour for tea plucking is being hired from within the village and sometimes from nearby villages. Ratios for profit sharing practice for tea plucking vary according to interviewees; 50% profit sharing for labour from Wan Hseng village and 33.3% profit sharing for labour from other villages, were mentioned. Different from Wan Hseng village, tea farmers from Pang Waun, receive a daily basic wage of 5000 MMK for tea plucking. According to tea farmers met, the practice of hiring labour for tea leaf plucking started around early 2000, when commercial tea trading started.

### Cost Analysis

It was difficult to make a cost analysis of green tea production due to the lack of records as well as irregular plant treatment. The majority of tea farmers used their own family labour, mostly for weeding. Labour was hired only for tea leaf plucking, being therefore the largest cost in green tea production in the study villages. Only very few tea farmers used natural fertilizer, like cow dung, for plant treatment.

### Price and Payment system

Based on the tables below, two different prices were noticed between study villages and the difference was more than double in 2014 and 2015.

*Table 1: Green tea price from 2005 to 2010*

Origin of Tea	Price of Green Tea (MMK per viss) – 2005 to 2010	
	Harvest before raining season	Harvest raining & winter season
Wan Hseng village	4,000 – 5,000	4,000 – 5,000
Pang Waun village	2,000 – 4,000	2,000 – 4,000

*Table 2: Green tea price for 2007 & 2010 onward*

Origin of Tea	Price of Green Tea (MMK per viss)	
	2007	2010 onward
Wan Hseng village	20,000 (average)	20,000 – 30,000
Pang Waun village	10,000 – 15,000	

*Table 3: Green tea price from 2014*

<sup>41</sup> Individual Trading Card

<sup>42</sup> Data on how much exactly was not obtained

Origin of Tea	Price of Green Tea (MMK per viss) – 2014	
	Harvest before raining season	Harvest raining & winter season
Wan Hseng village	140,000	60,000 – 55,000
Pang Waun village	50,000	30,000

Table 4: Green tea price from 2015

Origin of Tea	Price of Green Tea (MMK per viss) – 2015	
	Harvest before raining season	Harvest raining & winter season
Wan Hseng village	80,000	45,000 – 30,000
Pang Waun village	30,000	13,000

Above price tables clearly show that the type and the quality of green tea demanded by China market influenced the price. According to traders met, Chinese traders request for separation of green tea from old tea plants and other. Referring to the above tables, the price of green tea before 2010 was not much different between harvesting seasons, until the opportunity arose for increased tea production in the region, following the increased demand by the China market.

Cash in delivery was practiced the most as payments between tea farmers and local traders. Advance payment between local traders and Chinese traders were found as well. However, some traders met argued that the market was being distorted by traders who received advance payments, as there was not enough attention to quality (price/quality ratio).

A so-called floor price system practice was found in one processing unit (semi factory) in the Pang Waun village. The owner of the processing unit offers a basic price for fresh leaf, calculated by the ratio of fresh leaves and green tea from processing. But the factory does a quality control (of the amount of rough leaf inclusion after processing) and deducts the amount of rough leaf found in fresh tea leaves, which sometimes reaches up to 10%. (Farmers received payment for 90% weight in case a lot of rough leaves were mixed with the fresh leaves).

### Major Constraints

**Price instability:** the price of green tea is defined by China market. Since 2010 onward, the tea price increased four to five times before stabilizing; jumped again for another over four times in 2014; to finally drop almost 50% drop in 2015. Even if the higher prices attract tea farmers, the price fluctuation (dramatic ups and downs, and high risks) can lead to market failure.

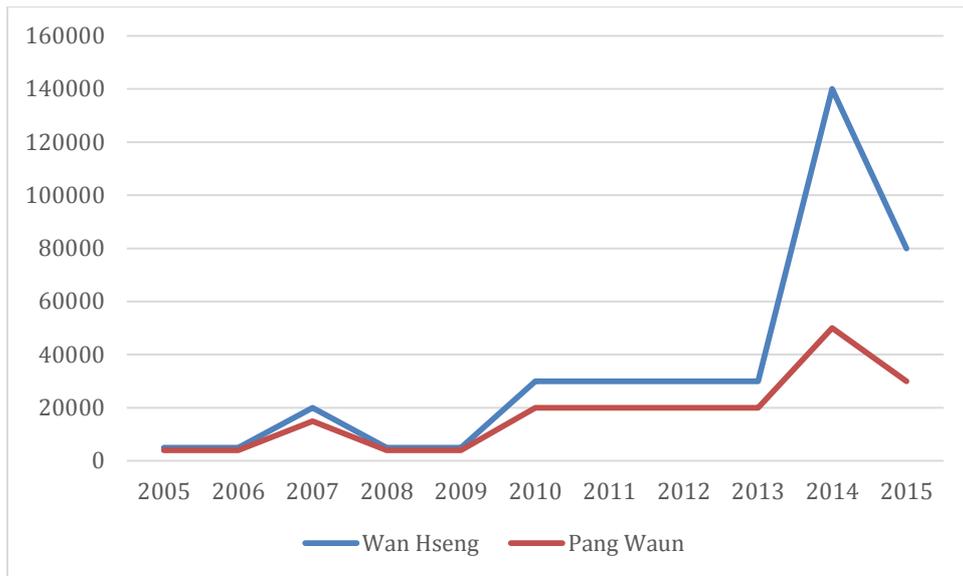


Figure 3: Price of tea in study village (source: interview result)

**Quality issue:** quality issues arise due to three factors: 1) traditional processing method with old equipment; 2) rough leaf inclusion during tea leaf plucking and 3) unethical practice of mixing various tea products.

**Rough leaf inclusion:** Out the above three issues for quality, traditional tea leaf plucking practiced in the study area is the main reason for rough leaf inclusion. (In general, one bud, two leaf for plucking is considered good quality of fresh tea leaf). In the study area, farmers keep bud and small leaf as it is, unless the tea leaves have enough volume for one day work of tea leaf plucking, and therefore allow for irregular inclusion of rough tea leaf, in tea leaf plucking. In addition to that, some labour pluck one bud and three-four leaf for weight gain, causing further inclusion of rough leaf (and decreasing quality).

**China market demand:** green tea processed from fresh tea leaves of hundreds year old tea plants is produced without polluting fertilizers and pesticides, depending solely on forest ecosystem nutrient recycling and pest regulation. The quality of this local “pu-erh tea” from tea forests is highly valued in the wider Chinese market and therefore, green tea harvested from old tea plants in the study area is on high demand by China market. However, there appeared to be a lack of awareness of farmers in the study area of such a demand for green tea processed from fresh leaf of old tea plants and therefore farmers simply increased tea plantation of mixed green tea both processed from both old and new tea plants. This in turn can lead to a price drop because Chinese traders only pay a good price for green tea produced from old tea plants. According to trader met, he was instructed by a Chinese trader to collect tea from old tea tree plants only/separately.

**Low yield:** It was observed that the traditional practice, used widely by farmers, lacks proper plant treatment. Only very few farmers use plant treatment (like input usage in their farm) and majority said not to pay much attention to plant treatment, which in turn results in lower yields<sup>43</sup>.

**Labour:** traditional tea production is labour intensive, especially for tea leaf plucking. Since villages are located in remote areas and there is a lack of labour shortage in the cultivation

<sup>43</sup> Data regarding the exact yield of fresh leaf could not be obtained during the study, due to the lack of data regarding teaplants per acre in the study area., among other.

period (of shifting cultivation), tea farmers simply abandon for timely tea leaf plucking and as result more rough leaf inclusion, which leads to lower quality green tea.

### Investment analysis

Following the nature of the local context, almost all tea farmers from the study area are small scale self-processing farmers, and only few who had good networking with traders are processing own fresh tea leaf and collect fresh tea leaf from others. Based on the nature of business size and type, financial requirements also differ and the following types of investment can be identified:

- Medium/large scale investment  
Receiving partial financial assistance from traders and work as processing service providers as well as local traders. Their main functions are:-
  - Process fresh tea leaf from own farm
  - Collect fresh tea leaf from other (regular or sometimes) and process together with own fresh leaf from own farm
  - Provide processing service to other farmers
  - Collect processed green tea from farmers and sell to traders from town.
- Traditional/small scale investment  
Using own investment especially for labour in tea production. Process fresh tea leaf by themselves mostly. Sometime, sold as fresh leaf to other farmer and/or processors.

### Comparison between different investments

Medium/Large Scale Investment	Traditional/Small Scale Investment
<p><b>Source of investment</b></p> <ul style="list-style-type: none"> <li>• Advance payments as partial financial support by traders</li> </ul>	<p><b>Source of investment</b></p> <ul style="list-style-type: none"> <li>• Own investment especially (family) labour</li> </ul>
<p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• Possibility of loss due to price instability vis-à-vis, possibility of more profit</li> <li>• No alternative market access</li> <li>• Not enough fresh leaves needed for running processing unit (semi-factory)</li> <li>• Quality issue (rough leaf and mix with different type of process tea) due to lack of awareness among tea farmers and some traders</li> </ul>	<p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• No competitive power               <ul style="list-style-type: none"> <li>○ Price set by buyer (local traders and/or agent of Chinese traders)</li> <li>○ Lack of access to market information</li> </ul> </li> <li>• Low yield</li> <li>• Produced low quality product (rough leaf inclusion) due to traditional practice of tea leaf plucking and the lack of awareness for market requirements</li> </ul>
<p><b>Lesson learn for improvement</b></p> <ul style="list-style-type: none"> <li>• Support and need for establishment of trust relationship between farmers and processor.</li> <li>• Support for fair price setting with fresh leaf quality grading system among farmers needed</li> <li>• Support and need for access to alternative market rather than China.</li> <li>• Access to alternative financial source necessary</li> </ul>	<p><b>Lesson learn for improvement</b></p> <ul style="list-style-type: none"> <li>• Support and need for improved production applying good agriculture practice (GAP) with systematic plant treatment.</li> <li>• To support understanding of market demand for green tea from old tea plants.</li> <li>• Instead of own traditional processing with out-off-date equipment, encourage farmers to sell fresh leaf to processor and/or combine investment in quality processing.</li> </ul>

	<ul style="list-style-type: none"> <li>• Following the latter, need to support and establish trust relationship between farmers and processor.</li> <li>• Support and need for access to alternative market rather than China.</li> <li>• Access to alternative financial source necessary</li> </ul>
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### **Role of women**

Increased involvement of women in tea leaf plucking and processing was found throughout the study area. This increased involvement, however, concerns to a lesser extent the relevant decision making roles and opportunities for discussion with men on both economical and social issues, needed.

### **Recommendation**

- To support with both financial and technical assistance to farmers in view of improved production and processing
- To support quality (green tea) production through establishment of trust relation between tea farmers and processors, through:-
  - Setting fair price system with quality standard of fresh leaf
  - Disseminating market information
- Support for access to alternative markets, rather than depending solely on China market
- To advocate (with local traders) for setting proper quality standard of
  - Green tea from old and young tea plantations
  - Percentage of rough leaf inclusion
- To advocate farmer for understanding of market demand for green tea from old tea plants
- To advocate among traders for awareness of market failure for high price green tea from old tea plants due to mixture of green tea from old and new tea plants.

## VI. MYANMAR INVESTMENT LAW

### 6.1. Analysis

#### 6.1.1. Analysis of situation that law or policy initiative aims to regulate

The objective of the updated Myanmar Investment Law is explained in the following excerpt from the preamble (Government of the Republic of the Union of Myanmar, 2015):

This Law replaces and consolidates the Foreign Investment Law (Law No. Pyidaungsu Htluttaw Law No. 21, 2012, 2 November 2012) and the Myanmar Citizens Investment Law (Law No. Pyidaungsu Htluttaw Law No. 18 of 29 July 2013). The objective of the Law is to promote environmentally and socially sustainable economic growth and diversification of the productive sector of the Union. The Law also intends to provide investors, both domestic and foreign with a set of fundamental and enforceable legal rights and guarantees. The Law also upholds the principle of transparency, fairness and the rule of law, in accordance with accepted international standards and practice.

A Michigan State University (MSU) report defined improvements to the investment climate as key to increasing agribusiness (Byerlee, Kyaw, Thein, & Kham, 2014):

Improving the investment climate is the highest priority in terms of increasing agribusiness investment from SMEs to larger domestic firms to foreign investment. This is especially true for agro-industry where the food-processing sector is set to grow rapidly to meet urban food demands. The food-processing sector is especially good for inclusive growth. Higher value can be captured through relatively simple changes, such as canning, fruit drying, packaging, and even simple labeling. These additions can be an important step for a farmer or SME to expand commercial activity and access higher-value markets. The growth of supermarkets will further propel demand for such products.

The MSU report also defined the importance of changes in the Indian agro-industry to the wellbeing of Small to Medium Farmers (SMFs), which mirror the intent of the Farmer Protection Act in Myanmar, as shown in the excerpt below (Byerlee, Kyaw, Thein, & Kham, 2014):

Beyond the investment climate (including infrastructure) the other major determinants of growth in Indian agro-industry were agricultural productivity and access to credit. These findings underscore the central role of increasing productivity of SMFs in Myanmar and repositioning of Myanmar's banking sector toward agro-industry.

As shown in the following extract (Byerlee, Kyaw, Thein, & Kham, 2014), the current thrust towards large scale, industrialised farming has the potential to marginalise the smaller farming groups and families:

Private investment by agribusiness, both small and medium enterprises (SMEs) and larger agribusiness companies (ABCs) are critical to the realization of Myanmar's agricultural potential. However, how that investment translates into jobs and poverty reduction has great implications to future prosperity of the small holder. In particular, the Government of Myanmar appears to have prioritized large-scale commercial farming and plantations,

to the detriment of its millions of market-oriented small and medium-scale farmers (SMFs).

### 6.1.2. Reviewed (draft) laws or policy initiatives, and related policies

The initial draft (translated) of the Farmer Protection Act (Government of the Republic of the Union of Myanmar, 2013) was also reviewed, as it addresses several tangentially important areas, especially as they pertain to the small and medium sized farms and enterprises (SMFs and SMEs) in rural Myanmar. The following extract defines the purpose of the Act:

The purposes of this Act are as follow;

- (a) To support the farmers with reasonable amount of loan and grant
- (b) To supply research methodology, credit, machinery and input to transform into the modern industrial agricultural system
- (c) To help the farmers with market availability for trading farming product and obtaining fair price in marketplace for the farming product

The need for such an Act to be brought into legislation can be shown in the following excerpt from a report on CP maize production in Shan State (Woods, 2015):

The political-economic context of rural farming communities in Myanmar has slowly atrophied over the past few decades, from the socialist period, through forms of market reform experimentation in the 1990s, to the current reform period. A lack of state support, household capital, low-interest loans, market information, and institutional and infrastructural support has severely restricted the overall rural economy and especially economic opportunities for farmers. Households instead resort to local private moneylenders to obtain high-interest loans, resulting in a variety of socio-economic impacts at the household and village levels.

The report (Woods, 2015) goes on to discuss the Governments drive towards industrialised agriculture, and the potential for enhancing the wellbeing of farming families as long as adequate legislative safeguards are in place:

The current government's national development plan aims to intensify industrial agricultural production, especially in the rice sector, but also targets rubber, edible oil palm, and biofuel crops, such as sugarcane and cassava. Similarly, the Framework for Economic and Social Reforms Policy priorities for 2012-15 aims to boost agricultural productivity by increasing extension services and government loans, removing barriers throughout the supply chain, and promoting demand-oriented market support mechanisms. These reform policies could potentially have a positive impact on smallholder farmers, but only if supportive policies are in place to direct benefits in such a way as to be pro-poor - which currently is not the case as this report demonstrates. Smallholder farmers are being further marginalized by the development aspirations of the Myanmar government, and rising urban middle class and business elite who view

farmers as a hindrance rather than a national treasure to achieve sustainable national economic growth.

The use of the Vacant, Fallow and Virgin Lands Act (2012) to utilize lands deemed to fall into one of these categories in concessions for development is a practice that has large consequences for the rural population of Myanmar. The following excerpt shows the extent and types of development ongoing (Byerlee, Kyaw, Thein, & Kham, 2014):

For the VFV land, a total of 376 companies had been allocated 0.93 million ha by May 2013 with an average size per concession of about 2,500 ha. Forty percent of allocated VFV land was in Kachin State, followed by 17% in Sagaing Region, and 14% in Tanintharyi Region. The two most important commodities for VFV land allocation are rubber (87,389 ha), oil palm (71,809 ha), and rice (49,482 ha) with significant areas for jatropha, sugarcane, rice, cotton, and cassava. At least one company (or group of closely connected companies) controls over 200,000 ha of this land.

As the majority of the population in Myanmar relies upon farming in a rural smallholder setting for their livelihoods, situations which reduce or remove access to their traditionally farmed lands have large impacts on their ongoing wellbeing.

Landlessness among the rural class in Myanmar has a number of major causes. While issues such as large scale land acquisition for agri-business companies are a factor, as seen in the FAO report extract below, indebtedness among rural families is the leading cause (Srinivas & Hlaing, 2015).

Landlessness or near-landlessness seems to be on the rise, especially in the Ayeyardwady delta and dry zone (Bago-Bagan-Mandalay region), where one-fifth of the households in some villages were landless and engaged in wage labor; an equal number had marginal landholdings of less than one acre. Village tract leaders and residents reported that landlessness had been increasing over the past 4-5 years, with forced sales due to indebtedness being the leading cause of land alienation. Rates of landlessness in Upper Myanmar were generally lower but still ranged from 25 to 40 percent in every village.

As shown in the following excerpt from a report prepared for USAID/Burma (MSU/MDRI-CESD, 2013), estimates of landlessness rates among the rural community vary with time and the groups performing the studies, however a general upward trend is noted, and the amounts form a significant proportion of the population.

Although estimates of landlessness differ widely, the preponderance of available evidence suggests that between one quarter and one half of all rural households are landless in the sense that they have no land use rights to cultivable land. Okamoto (2008), for example, reports landlessness rates between 30% and 50% during the 1990s. The Integrated Household Livelihoods and Consumption Survey (ILHCA) of 2009/10 estimates rates of rural landlessness at 24%, while the FAO team conducting the UNDP agricultural sector review of 2005 estimated landlessness at 30% of rural households. A World Bank team visiting Myanmar in late 2012 has projected rural landlessness at 55%.

One of the rising causes of landlessness among smallholders is the increasing use of land as collateral in loans for farm production (Woods, 2015). Loans are increasingly necessary, especially for low and medium capital households, as costs of production exceed available

funds. Contract farming is common, and is mediated by brokers who supply farm inputs at a set price, provide loans, and purchase farm produce, often at below market price. This system makes it increasingly difficult for lower capital households to escape the debt cycle.

As seen in the extract below (Woods, 2015) from a Land Core Group report on contract maize farming, broker practices and goals seem to vary with region and ethnicity.

Using land as loan collateral is an increasingly common condition attached to loans from Sino brokers in North Shan State, a trend that is expected to increase with state-sponsored land titling and an emerging legal land market. Loss of land from debt seems much more common in North Shan State based on village-level data collection and key informant interviews for this study (although no specific quantitative figures are available), perhaps linked to the particular relationship between ethnic Chinese brokers and their village clients (see more below). In some of the villages studied for this project village headmen have enacted new village rules restricting land sales to people from outside the village to mitigate against “outsiders” obtaining and farming village land - although household interviews revealed that an ulterior motive by elite local villagers to squash outside competition to acquire land under duress is also influencing this decision.

In contrast, in South Shan State, brokers are usually of the same ethnicity as their clients, come from a nearby village, and in general have a longer trusting relationship with farmers to whom they lend. Land was never mentioned as being used as collateral in study villages in the south or according to key informant interviews. As a result, brokers in the south appear to be more lenient in loan agreements and debt forgiveness. Finally, three of the villages in the south are also either cultivating or labouring on poppy farms, and therefore have less of a debt crisis as they receive income from the poppy sector and loans are therefore not required. Consequently land loss from maize-induced debt in South Shan State appears to be less common than compared to the north.

#### **6.1.2.1. Contract Farming-Sugarcane**

Contract farming, if performed in the correct environment, can also lead to an increase in the wellbeing of the rural population, as the following extract from (Byerlee, Kyaw, Thein, & Kham, 2014) shows by contrasting the sugarcane contract farming industries in Myanmar and Thailand:

As sugarcane is a bulky product that has to be processed soon after harvest, there is a natural symbiosis between sugarcane growers and sugar millers that makes it ideally suited to adoption of contract farming. As in other countries, a formula pricing method is often used that distributes the product share between farmers and factories. For example, in Thailand, farmers received the equivalent of 70% of the ex-mill sugar price. However, the legacy of state-owned mills has left Myanmar with a low farmer share of value. After the factories were privatized, the cane growers’ value share increased to 48% but is still well below international norms.

### **Box 1: Positive Contract Farming Example**

The (Byerlee, Kyaw, Thein, & Kham, 2014) report goes into some detail regarding a monopolistic contract farming arrangement between a Thai sugar company (Nawaday Sugar Factory) and farms surrounding the mill in Myanmar. Initially larger farms with better assets were invited to be part of their program. The mill supplies certified varieties and fertilizers, payable after cane delivery, and extension advice. After the sugarcane procurement price increased from K 13,500 in 2007-08 to K 30,000 per ton in 2012-13, small farmers (under 2 ha) also entered contracts. To enhance mechanization, tractor dealers forged a commercial link with a private bank for financing tractor purchases based on a guarantee by the sugar factory of credit worthiness, with loan repayments deducted by the mill. In a similar way, larger farmers could afford to buy the five to seven ton truck for cane transport. These arrangements have allowed a sense of trust to develop over years between farmers and the mill.

#### **6.1.2.2. Lease Farming - Watermelon**

As seen in the following excerpt from (Srinivas & Hlaing, 2015), lease farming (in this example for watermelon) is an activity that has immediate short term benefits, but can have detrimental longer term effects:

While land acquisition by foreigners is barred under the Farmland Law of 2012, a number of Chinese nationals have leased land – through local intermediaries - to produce watermelon. A number of smallholder farmers have been lured into growing watermelon as a seasonal crop, a cycle of about three months each, particularly in the dry zone areas. The produce is mainly exported, through middlemen, to China for which quality standards such as size of the melon and numbers per lot are prescribed in advance.

Leases are generally for five to six months. The rate of compensation is 250,000 to 300,000 kyats per acre (1 USD = approximately 1,000 kyats); a lower rate may be offered in some areas. Often, local farmers never see the real investors, in spite of expressing an interest in establishing direct contact with investors instead of working through brokers.

The Chinese adopt intensive and secretive farming techniques with heavy and excessive application of fertilizers and agro-chemicals. When farmers regain the use of their plots in the next season, nutrient imbalance resulting from such fertilizer use could offset crop yields. Often, acquired resistance to chemical pesticides also leads to pest outbreaks. Environmental pollution is also likely.

Land rentals, however, are quite attractive for the farmers in the dry zone, making it difficult for them to resist an offer to lease their farms for watermelon production in spite of the problems that could arise thereafter.

#### **6.1.2.3. Interpretation of the Farmer Protection Law**

A rapid review (FSWG, n.d) of a later draft of the Farmer Protection Act was performed, and stated the following, with a note concerning the possible inaccuracies inherent in translated materials:

The draft “Farmer Protection Law” for Burma is a concise, yet extraordinarily broad act purportedly designed to address constraints affecting the performance of the agricultural sector through increased access to credit and grants, access to factors of production and technologies, and greater access to end markets.

To achieve these objectives, the draft law provides for an extraordinarily high degree of government intervention at critical segments of the agricultural sector and the financial services sector.

Through the establishment of a Farmer’s Protection Central Committee, the draft law appears to create an institution with broad powers to:

- 1) Maintain data on production costs and to establish market prices to ensure a specific rate of return for producers on a number of agricultural products and to establish a competent authority for procurement of agricultural products
- 2) Establish conditions and terms to provide grants, loans, and other related financial services to producers
- 3) Establish conditions to offer insurance products to producers.

It is unclear, based upon the language of the law, whether the law vests exclusive rights to establish market rates and offer financial services and insurance products through the Central Committee, or whether the purpose of the law is to simply offer market information and regulate terms for financial services and insurance products.

## **6.2. Institutional and stakeholder analysis**

### **6.2.1. Key stakeholders, status of their influence**

Part 2, Section 5 of the new Law requires the establishment of a Myanmar Investment Commission (Government of the Republic of the Union of Myanmar, 2015):

1. A commission with the name of the “Myanmar Investment Commission” is hereby established.
2. The Commission shall be an autonomous organ of the Union Government with perpetual succession.
3. The Union Government will provide an annual financial grant for Commission to meet its expenditure requirement.
4. Subject to and for the purposes of this Law, the Commission shall be capable in its name of:
  - a) entering into contracts;
  - b) suing and being sued;
  - c) acquiring, purchasing, or otherwise holding, enjoying and disposing of movable and immovable property; and
  - d) doing or performing all such other acts necessary for proper performance of its functions under this Law.

This Myanmar Investment Commission (MIC) could be seen as the dominant and most influential stakeholder in the investment process, from the time of its inception.

The other main stakeholder group in the new Investment Law would be the investors themselves, both foreign and domestic. The law aims to put both groups on an even footing, as can be seen from the following extract (Government of the Republic of the Union of Myanmar, 2015):

Subject to the other specific provisions of this Law the Union Government is committed to providing non-discriminatory treatment to all Investors and their Investments, in particular:

- a) shall accord to Foreign Investors and their Investments treatment no less favorable than that it accords, in like circumstances, to Domestic Investors and their Direct Investments with respect to the establishment, acquisition, expansion, management, conduct, operation, and sale or other disposition of Direct investments in its territory.
- b) shall accord same treatment, in like circumstances, to all Foreign Investors and their Direct Investments treatment no less favorable than that it accords, in like circumstances, to investors of any other third country and their Direct Investments.

A third group of stakeholders identified would be the employees, both domestic and international, of the two investor groups identified above. The new law seeks to remove barriers to an investor group using international employees, particularly in the case of a shortfall in domestic expertise in an area. This is shown in the following short extract (Government of the Republic of the Union of Myanmar, 2015):

Investors have the right to employ or engage qualified persons of any nationality to fill senior management, technical, professional and advisory positions in the investor's enterprise in the Union in accordance with the existing Laws of the Union.

A fourth group of stakeholders that will be affected by the new Investment Law are the landholders, both formal and informally recognised. The new Law seeks to reduce barriers to the lease of land for long term investment uses by both domestic and international groups, and this has the potential to severely affect those whose tenure on the land they are using is not recognised, as well as those whose financial situation is weakening. The relevant passage from the Law is shown below (Government of the Republic of the Union of Myanmar, 2015):

All Investors have the right to lease land either from private land-holders or from Government Entities in the case of State land, based on the category of usage including industrial, agricultural, livestock breeding and other forms of investment for a period to be agreed between the investor and the lessor. For Foreign Investors the right to lease land up to a maximum period of 50 years is guaranteed with an extension of 10 years and for a further 10 years thereafter.

When used in conjunction with other vague or outdated pieces of legislation such as the Virgin, Fallow and Vacant Act of 2012 or the 1894 Land Acquisition Act (Srinivas & Hlaing, 2015), the potential for this to strongly negatively affect landholders in favour of investors is very real.

Stakeholders in the ongoing legislative drafting process for the Farmer Protection Act, and also consequently for the Investment Law, have been identified in a Revision Submission (FSWG, 2013) as follows:

## FARMERS:

- a. Farmers with land tenure rights over areas of differing size may have different needs to protect their livelihoods which need to be considered in this law. The full range of farmers in Myanmar with both formal and customary land tenure rights, even if these rights are not yet recognized in law, need to be consulted, including:
  - i. Small scale farmers with land tenure rights on less than 5 acres of land
  - ii. Medium scale farmers with land tenure rights on 5 to 50 acres of land
  - iii. Larger scale farmers with land tenure rights on more than 50 acres of land.
- b. Farmers in all agro-ecological regions across the country, as they differ in terms of land-use systems, crops grown and thus protection mechanisms required. This must include farmers who use shifting cultivation systems, who should enjoy equal rights as compared to farmers who practice 'permanent agricultural'.
- c. Farmers who are representative of different ethnic and religious groups as these groups may have differing agricultural/land-use systems, land tenure regimes and livelihoods protection needs

## WOMEN & MEN:

- d. Women and men in all areas and across all groups mentioned above. Women's equal access/rights to land and natural resources must be explicitly enshrined in legislation. Women's requirements in terms of legislation to protect their agricultural livelihoods may be different from those of men and need to be specifically considered during consultation.

## CIVIL SOCIETY:

- e. Community based organizations (CBOs) working directly with local farmers in communities
- f. Farmers networks, farmers organizations and the lawyers that support them
- g. NGOs working at local level to support farmers and CBOs
- h. NGOs working at national level to promote farmers livelihoods and rights
- i. International NGOs working to support local civil society

Another group of stakeholders in the new Investment Law would be the contract farming industry, as exemplified by the CP Maize report (Woods, 2015). This first portion of this group would consist of the contract farming companies themselves, typically foreign based currently. A larger second sub-group would consist of the farm input brokerage cartels, the produce purchasing cartels, and credit agencies, which are all often the same entity.

### 6.2.2. Allies and targets

The new Law defines a number of offices within the Myanmar Investment Commission (Government of the Republic of the Union of Myanmar, 2015). As seen in the extract below, some of the terms yet to be defined are represented by [ ].

The Commission shall consist of the following Members:

- a) a Chairman who shall be appointed by the President;
- b) not more than [ ] other Members who shall be appointed by the President and of whom not more than [ ] shall represent the private sector; and

- c) the Secretary who shall be appointed by the President upon recommendation of the Chairman, for a mandate of [ ] years, renewable.

Any or all of these offices, once defined and allocated, could be viewed as an ally or target for influence.

### 6.2.3. Identification of key leverage points

The following selection of Committees and Commissions were identified in an FAO report (Srinivas & Hlaing, 2015) as useful in advocacy for Land Issues:

**Table 1: Effective Commissions/Committees for Land Management and Administration (part 1) (Srinivas & Hlaing, 2015)**

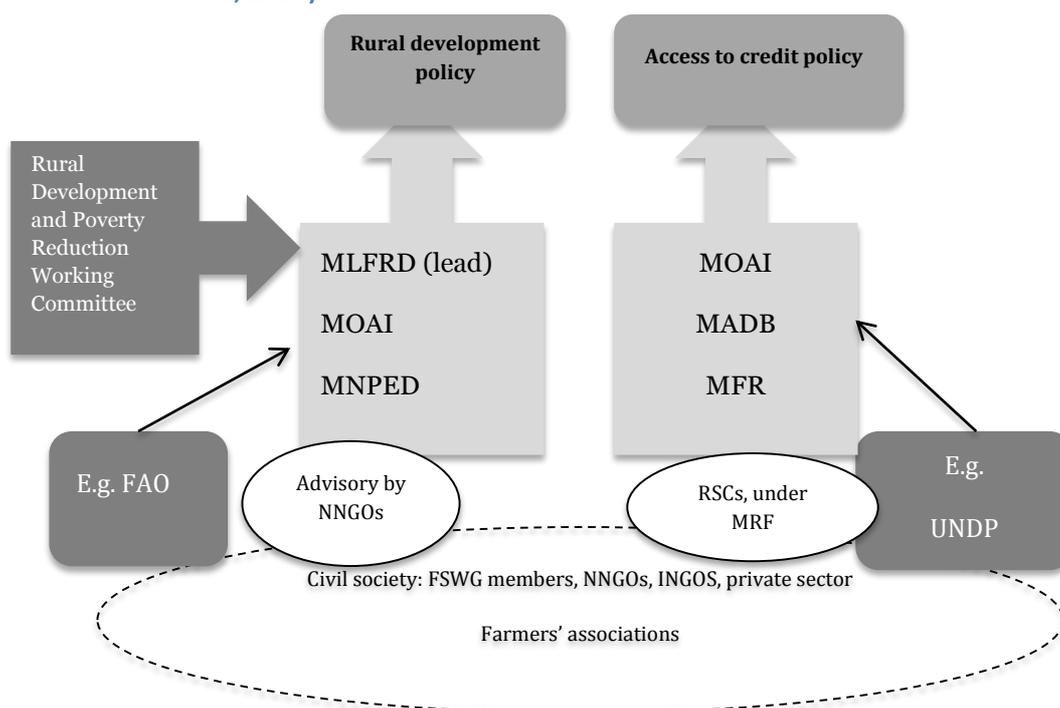
Sr. No.	Name of Committee and Date of Establishment	Purpose	Chair Person	Secretary
1	Central Committee for the VFV Land Management (March 2012)	To permit the right to cultivate or utilize vacant, fallow and virgin lands within the State for the following businesses: (a) agriculture (b) livestock breeding (c) mineral production (d) other lawful businesses permitted by the Government	Minister of MOAI	Director General (DG) of SLRD
2	Central Farm Land Administrative Body or FAB (March 2012)	To provide guidelines for the issuance of LUCs for farmland areas (as per Farmland Law of 2012) and oversee implementation. Guiding and supervising in respect of registration and conversion of farmland to other use	Minister of MOAI; Deputy Minister of MOAI: Vice-chair	DG-SLRD
3	Nay Pyi Taw Council FAB (October 2012)	Responsible for the issuance of LUCs for farmland areas (as per Farmland Law of 2012) and oversee implementation at the respective jurisdictional responsibility for the body	Chairman of Nay Pyi Taw Council	SLRD-Nay Pyi Taw
4	Region/State Farm Land Administrative Body (October 2012)		Chief Minister of Region/State	SLRD-Region/State
5	District-wise FAB (October 2012)		District Officer – GAD	District Officer-SLRD
6	Township-wise FAB (October 2012)		Township Officer – GAD	Township Officer- SLRD
7	Village Tract/Ward FAB (October 2012)		Staff of GAD	Surveyor-SLRD
8	Land Utilization Allotment Scrutinizing Committee, June 2012 (which was replaced by the National Land Resources Management Committee in late 2014)	The committee's work is to focus on issues related to NLUP, land use planning and allocation of land for investment including in agricultural projects in the country	Minister of MoECaF	DG-Forest Dept. DG-GAD Joint Secretary-1 DG of SLRD Joint Secretary-2
9	Land Confiscation Inquiry Commission (August 2012)	The commission has responsibility to investigate in accurate and concise manner of	U Tin Htut, MP	U Thein Tun, MP- Secretary U Tin Mya, MP- Asst. secretary

**Table 2: Effective Commissions/Committees for Land Management and Administration (part 2) (Srinivas & Hlaing, 2015)**

Sr. No.	Name of Committee and Date of Establishment	Purpose	Chair Person	Secretary
		complaints of farmers and to submit the findings with the comments and suggestions to Union Parliament.  Report submitted in disaggregated parts titled as Part 1 to 7 - and follow-up actions on recommendations awaited.		
10	Central Committee for National Land Resources Management (October 2014)	To draft the NLUP. To draft National Land Law. To provide guidelines to the works of Farm Land Administrative committees, and VFV land management committees. To supervise and provide guide lines for the land resource management of the country.	Vice-President-2 – Chair Minister of Home Affair: Vice Chair – 1 Minister of MoECaF: Vice Chair – 2	Deputy Minister of President Ministry = Secretary DG SLRD = Joint Secretary

A more process driven examination (shown below) of leverage points for advocacy was defined by a FSWG Briefing Paper on food security related policy analysis (Mirchandani & Win, 2013):

**Figure 1: Key actors and entry points for advocacy, rural development and access to credit (Mirchandani & Win, 2013)**



## VII. OVERALL CONCLUSIONS AND RECOMMENDATIONS

### 7.1. Conclusions

#### *Overall Prospects for Agribusiness in Myanmar*

Myanmar has strong prospects for growth of agriculture and agribusiness. On the demand side, economic growth is accelerating and rising incomes and urbanization provide major potential for growth of the food sector, including associated processing and marketing logistics. At the same time, regional markets are being opened by new trade agreements such as ASEAN, and a host of infrastructural corridors connecting Myanmar's hinterland to fast growing economies over its borders (Aung Min 2013). Finally, global agricultural commodity markets have experienced a decade of rising prices and although prices have declined in 2013, the general outlook for exports remains strong (OECD 2013).

On the supply side, Myanmar's agricultural sector is well placed to capture these market opportunities. Relative to its neighbors, it has abundant land and water resources, diverse agro-climatic conditions, and low wages. The government of Myanmar (GoM) has also embarked on an ambitious program of policy reform that has liberalized most markets and opened space for the private sector, both domestic and foreign.

Private investment by agribusiness, both small and medium enterprises (SMEs) and larger agribusiness companies (ABCs) are critical to the realization of Myanmar's agricultural potential<sup>44</sup>. Nonetheless, we recognize at the outset that only some SMFs will become viable commercial farmers, while many others will have to find alternative pathways out of poverty through participation in rural nonfarm enterprises linked to a dynamic agriculture and through migration to cities.<sup>45</sup>

Even as the share of agriculture in GDP declines, the share of agribusiness in GDP will increase for many years to come (World Bank 2007). The challenge for Myanmar is how to tap the assets of agribusiness in terms of access to technology, capital, and markets to complement the assets of SMFs in terms of their labor, land, entrepreneurship, and local knowledge. Responding to this challenge requires investment to improve the productivity of SMFs and link them to input industries, processors, and markets. In cases where agribusiness companies invest directly in farming, the challenge is to provide good jobs, while securing land rights of SMFs. Agribusiness is just beginning to take hold in Myanmar. Despite the government's partial liberalization of the agricultural sector since the mid-1990s, only very recently has export driven agribusiness really gained momentum in the country<sup>46</sup>. Regime leaders apparently are now considering providing loans to Burmese companies to engage in contract farming<sup>47</sup>, and 100% foreign ownership is possible now, among others.

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<sup>44</sup> There is strong evidence that there are few economies of scale in farming and that in low wage economies SMFs are more efficient than large-scale farmers in producing most agricultural products (Lipton 2009; World Bank 2007a). Also, improved productivity that raises the incomes of SMFs and reduces food prices to poor consumers translates into more equitable growth.

<sup>45</sup> Still it is estimated that some 2.3 million land holdings or about one third of all Myanmar farmers have between 2 and 20 ha of land, a much larger proportion than elsewhere in Asia (Haggblade et al. 2013)

<sup>46</sup> Currently depending however on a legal framework that allows the private sector to invest in land and resource extraction combined with a lingering socialist heritage that lacks protections for peasants to minimize the threats of an open economy.

<sup>47</sup> We can categorize companies engaged in agricultural development according to the following typology : (1) **Very large, regime-selected companies** based in Yangon, usually Burmese Chinese owners (including Asia World, Htoo Trading, Max Myanmar and Yuzana) , which receive large-scale land concessions, from 5, 000 acres to upwards of 100, 000, and monopolize processing and agricultural commodity exports. (2) **Medium-sized companies**, based in Yangon and Mandalay, which obtain 1000 acres co ncessions, sometimes engage in "2+3" contract farming, and usually sell their agricultural products to large companies for processing. (3) **Local companies** (often ethnic, such as Kachin, Kokang , Wa, etc.) , rebel groups under ceasefire agreements (e.g., KIO/A, UWSP/A) , and militias (e.g., Mang Ban in northern Shan State) in northern Myanmar that make land contracts with Chinese businessmen for crossborder export to China. These companies therefore seek financial compensation through access to the export market and to government loans, and by making contract arrangements with farmers.

## Investment

Asian countries are beginning to express interest in investing in largescale industrial agricultural concessions in Myanmar, representing a new stage in Myanmar's political economy of land development. China seems positioned to take the lead in both formal and informal agricultural investment in Myanmar, especially in the north along the two countries' shared border. However, other Asian countries also play a relevant role in FDI in Myanmar's agriculture sector, including Thailand, Vietnam and South Korea<sup>4849</sup>.

Following the above, two investment trajectories may be seen in Myanmar: emerging opportunities for Burmese businessmen to invest in agricultural land; and secondly, bilateral resource extraction agreements between the Burmese military state leaders and foreign governments, state-owned enterprises and private corporations. These are combining to bring higher flows of domestic and transnational financial capital into various resource sectors, including land itself as a valuable asset<sup>50</sup>.

As noted, there is very little FDI in Myanmar's national, formal agricultural sector<sup>51</sup>. Since the mid-1990s, when foreign investment began, it was generally earmarked for agricultural processing plants, almost always as a joint venture with a Myanmar government agricultural agency<sup>52</sup>.

## Contract farming

In order to reach domestic and export agricultural commodity quotas, since 2008 the government has been encouraging companies to engage in contract farming<sup>53</sup>. It is believed that this agricultural development model has only emerged at this time-and only in central and delta areas where Burmese companies are operating-because companies have failed to reach production and export quotas set by the leaders. The companies have lacked financial and human resources to develop their entire concessions, they have relied on inferior inputs (seed cultivars and chemicals), and the soil and/or topography of the land may not be conducive to the crops they are requested to grow.

There is little or no monitoring or regulation by the GoM of these concessions, especially those administered by military authorities<sup>54</sup>. Some of the land concessions do not appear in national government statistics and contract farming arrangements are not always made.

This is in contrast to predominantly Burman areas in the Central Dry Zone and Delta region, which are dominated by Burmese companies, which use local agricultural wage labour in their concessions. These companies are just beginning to get involved in forms of contract

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<sup>48</sup> 'Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

<sup>49</sup> Myanmar has been investing in agricultural inputs for decades, especially chemicals, as the country does not domestically supply these. It obtains chemical inputs and seeds from Thailand (higher quality, more expensive) and China (lower quality, cheaper), and to a lesser degree South Korea (highest quality)

<sup>50</sup> However, foreign investment is presumed to have been operating behind Burmese companies for many years, although informally and therefore not recorded or taxed as such. This is still the predominant form of foreign investment in agricultural land development in Myanmar.

<sup>51</sup> Nearly all of the companies formally involved in concessions in the north are local ethnic Burmese businessmen and to a lesser degree Burmese companies based in Yangon or Mandalay.

<sup>52</sup> For example, in 1997 eight sugar mills were constructed by the Myanmar Sugarcane Enterprise (MSE), with financial support from four Chinese companies on a buy-back basis, located in Yangon, Bago, Magway and Mandalay Regions. There is another Thai-owned sugar processing mill in Bago).

<sup>53</sup> This is mostly for rice, but also pulses, beans and palm oil.

<sup>54</sup> The government is not complying with the 1963 Farmer's Rights Protection Law, which is still in effect and was meant to legally block the confiscation of peasants' land. The FSWG has recommended that the GoM respect this law along with other recommendations to protect smallholder farmers, and elected members of Parliament have raised this issue in Parliament. There is a disconnect, therefore, between the aims of top regime leaders and the actions of businessmen, largely due to poor regulation, oversight and monitoring. (Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

farming<sup>55</sup>. The concessions are overseen by the MoAI, and the government appears to closely regulate their operations through taxation and monitoring of their progress<sup>56</sup>.

Most sugar mills enter into contract farming agreements with cane growers facilitated by a natural monopsony on purchasing sugarcane from a small area around the mill. In some cases, mills and farmers have developed structured agreements and strong relationships.

**Indeed, sugarcane production has strong market prospects** through value adding, especially the conversion of molasses to ethanol and the co-generation of electricity. Production of sugarcane-based ethanol also has potential, given that there is significant rainfed land that could be used to expand production. Myanmar could also become a significant exporter of sugar and possibly ethanol as well (Thailand is the world's second sugar exporter). However, certification of social and environmental standards would likely be needed to gain duty free access to the EU under the Everything but Arms agreement<sup>57</sup>.

### *Impact*

Northern Myanmar with 70 to 80 percent of the population directly relying on land for their livelihood and, to a lesser extent, the Central Dry Zone and Delta region are experiencing an enclosure movement never before witnessed in the country<sup>58</sup>. The loss of rotational agriculture sites, rights and customary practices have severe consequences for local communities socially, economically and ecologically. Furthermore, there is no policy regarding farmers whose land is confiscated for concessions allocated to companies<sup>59</sup>.

The immediate results from agribusiness investment by domestic and international sources have been abysmal, especially in ethnic minority regions. Due to low capital and technology inputs, limited infrastructure, inadequate training and poor land governance, including a lack of government assistance, agricultural production remains low.

As a result of concessions, farmers are displaced from their traditional lands, wage labour migration is on the rise, ecological health is threatened, food insecurity is increasing.

### *Risks*

As said one of the major adverse impacts of land enclosure from agribusiness is on community food security. According to the FSWG draft report, "Coping strategies for food insecurity, and for loss of access to land, though they may vary in intensity depending on the area and resources available, are generally similar across the uplands. As households are no longer able to access enough land to sustain livelihoods, an initial coping strategy will be to gather (and potentially deplete) common forest or other resources. Another common coping mechanism is to find work as a casual daily labourer when there is a market for it, usually in agriculture."

**Contract farming arrangements** pose new and different risks to farmers and businessmen. With the so-called '2+3 model'<sup>60</sup>, if the weather is bad (producing smaller than expected yields) or the market price drops, as it does at harvest time, farmers suffer economically,

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<sup>55</sup> They plant mostly the government's preferred national crops, such as jatropha, paddy rice, sesame and beans or pulses.

<sup>56</sup> The businesses involved tend to be middle-sized companies, not necessarily with good connections to the military, and they tend to be more transparent in their operations than in ethnic areas in the north and south.

<sup>57</sup> See the MSU International Development Working Paper 133, May 2014

<sup>58</sup> This is partially through the labelling of uplands as "wasteland" and "fallow land", which is then parcelled out to companies under the 1991/2012 Vacant, Fallow and Virgin Lands Management Bill. (Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

<sup>59</sup> With 'satellite villages' popping up a half-day walk from the original village after a large land concession is established.

<sup>60</sup> 'Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

which impacts their food security. In other cases, farmers may find their harvested crops without a buyer due to a price glut and/or oversupply.

These risks are disproportionately shouldered by small farmers, while businessmen and concession owners are relatively well protected. But as farmers and businessmen become more familiar with these farming arrangements, contract farming arrangements could have a much bigger positive impact for farmers<sup>61</sup>.

That said, specific local livelihood impacts are unknown, whether positive or negative, on upland and lowland farmers engaging with companies in 2+3 (and 'feudal') model contracts.

What is obvious though is that these land development projects can have significant bearing on the future of the political economy of the country, and specifically for farmers, land rights and potential land-based social movements. In addition, labour migration appears to be on the rise for villagers from different parts of the country, both lowlands and uplands<sup>62</sup>.

There is certainly a strong need, therefore, for civil society to address the development of industrial, government-supported crops in the country, such as sugarcane, and their socio-economic impact on farmers and the country as a whole.

## 7.2. Recommendations

### Introduction

Specific recommendations are discussed in detail accordingly (starting with recommendations related to a) specific case study related recommendations, towards broader b) inclusive investments; c) Land matters and d) environmental concerns, integrating policy components/aspects, where relevant). In doing so, Geo- and ethno-politics and ethnic business networks in Myanmar necessitate consideration<sup>6364</sup>.

#### 7.2.1. Case studies

For all crops, provide both **financial and technical support** to farmers to improve production. This includes introduction new seed varieties a, including the introduction of affordable small scale new equipment and processing technologies.

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<sup>61</sup> Theoretically, the 'feudal' model is worse for farmers. Arrangements with concession owners vary, but overall the same livelihood threats as with the '2+3 model' exist. In addition to the tax burden, farmers lose any decision-making power over the crops they plant.

<sup>62</sup> Burman Burmese labourers from the Central Dry Zone and Cyclone Nargis-affected farmers in the Delta region have migrated to northern Shan and especially Kachin State to work on agribusiness concession projects, disrupting socio-economic systems in communities that do not want Burmese. This is presumably in part due to the increasing prevalence of landlessness caused by multiple factors, especially land confiscation. ('Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

<sup>63</sup> 1. Central Myanmar and Delta Region The Bamar (or Burman) Burmese, the ethnic majority, are Buddhist with a long history of being ruled by the Burmese monarchy, followed by British colonial powers, and now they are under strong central government control. 2. Ethnic border states (e.g. Kachin, Shan, Arakan, Karen, Mon, etc.)

<sup>64</sup> In Shan State, for example, there exist so-called i) 'black' areas (controlled by insurgent groups); ii) 'brown' areas (jointly administered by the government and groups under ceasefire agreements), and iii) 'white' zones (solely government controlled). In each of these territorial configurations, agribusiness operates differently, with different players directing financial capital flows into the areas under their authority. This highlights how ethnic states, especially in the north along the China border, have many more state and non-state political/business actors than the Central/Delta regions of the country, and thus offer multiple avenues through which agricultural development travels.

To ensure the **proper plant treatment** (appropriate fertilizer and pesticide usage) for soil conservation and minimization of health risks for laborers and consumers.

Also, support in **establishing trust relations** between farmers and processors (tea, etc). Indeed, contract farming arrangements have been less successful either because of the structure of the agreement (relatively informal) or because of weak relationships between the mill and growers.

To **support quality (green tea) production** through establishment of trust relation between tea farmers and processors.

Furthermore, to **advocate for fair contracts and prices between farmers and factory** is necessary, in order to compensate in case of economic loss for farmers, due to factory fault.

In relation to the latter, support in and advocating for **setting proper quality standards** (e.g. minimizing inclusion of rough tea leaf) needed for **good price / quality ratios**, burdening on the small farmers, as well as of access to finance and to markets (for all crops).

Disseminate market information and **advocate farmer for understanding of market demand** e.g. for green tea from old tea plants

To **advocate among traders for awareness of market failure** for high price green tea from old tea plants due to mixture of green tea from old and new tea plants.

To **ensure proper FDI** for watermelon production (current investment not counted as official FDI) **and support direct market access** for local producers.

**Support for access to alternative markets** for tea, rather than depending solely on China market

Additionally, **some common cross-cutting constraints** emerge for all or nearly all studied crops value chains—especially access to finance, electricity supply (for processing) and high transport costs. These affect large agribusiness companies as well as SMEs and SMFs. For small and medium farmers, lack of strong producer organizations, weak extension, and poor access to technology were common to most. Contract farming is in its infancy although good examples are emerging especially in sugarcane.

### *Market potential*

To serve these potential markets, the Myanmar sugarcane industry needs to enhance its **competitiveness**. Production costs are about 30% above Thai costs and the opening of a free trade zone in 2015 adds urgency to further restructuring of the sugar industry that is still in transition from state to private hands. Considerable consolidation is needed to reap economies of scale by transiting to larger scale more efficient mills characteristic of Thailand with 15,000 TCD. This will require foreign investors with the needed capital and technology<sup>65</sup> (*See section on Recommendation on Inclusive business models below*).

**Provided a more equitable price sharing formula can be negotiated, a zoning policy for existing mills would enable them to expand and better utilize capacity and increased productivity**, by guaranteeing that a mill would have sole rights to supply from a given area. Another priority is to **relax land policies that currently restrict land conversion** from paddy to other uses such as irrigated sugarcane (*See more under Section B, recommendations regarding policies on land below*).

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<sup>65</sup> One investor is currently exploring the opening of a large state-of-the-art operation in the hinterland where land is available for a nucleus estate that could be combined with outgrowers.

As shown in the extract below, increasing the share of the agribusiness sector that utilises small and medium sized farms (SMFs) can in fact **increase productivity and output** (Byerlee, Kyaw, Thein, & Kham, 2014):

*Successful development experiences in Asia and elsewhere have amply demonstrated the success of a growth strategy based on SMFs. There is strong evidence that there are few economies of scale in farming and that in low wage economies SMFs are more efficient than large-scale farmers in producing most agricultural products. At the same time, improved productivity that raises the incomes of SMFs and reduces food prices to poor consumers translates into more equitable growth.*

Based upon this understanding, **policy direction should be taken towards a model that supports and invests in the SMF community**, not just as a charitable gesture, but as a sound fiscal choice. Choices that have resulted in the large increase of the landless classes, as shown in previous sections should be curbed and/or reversed. Care should be taken that broad scale farming and investment is not at the expense of the rural working poor of Myanmar. (**See Recommendations below**)

### 7.2.2. Inclusive agri-business investments

#### Towards more inclusive business models

A multi-stakeholder approach should be adopted to address land reform **pro-poor contract farming policies, micro-credit lending policies, and company regulation in the agribusiness sector. Advocating and lobbying the government to instate land policies that explicitly favour smallholder farmers** rather than an industrial agribusiness development model that supports the newly emerging elite class in Myanmar and foreign investors backing them.

*Contract farming agreements with the newly emerging agribusiness class in Myanmar could potentially offer unforeseen benefits to poor farmers if they negotiate beneficial arrangements. More research needs to be done on contract farming in Myanmar-both in the uplands and the lowlands-to better understand the socio-economic dynamics of this emerging farming model and how NGOs could advocate for improved conditions for farmers to maximize benefits.*

Farmers in Myanmar have **little experience with contract farming and much could be done to promote more transparent and equitable contracts**. Priorities to improve outcomes with contract farming include **strengthening farmer organizations and building their capacity** to get the most out of contracts, **negotiating tripartite agreements with banks**, providing **model contracts**<sup>66</sup>, and designing dispute resolution mechanisms. There may also be a case for separate legislation on contract farming as in Thailand and Vietnam.

**The first step should be an in depth research project on the socio-economic conditions and possibilities for contract farming in Myanmar, exploring what conditions would benefit farmers most**<sup>67</sup>. There is concern that if not addressed properly by the non-profit sector, contract farming will increasingly mimic a feudal arrangement, rather than a possibly more promising “2+3” model where farmers could potentially improve their livelihoods.

Civil society has important roles in facilitating contract farming in ways that maximize benefits

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<sup>66</sup> A number of detailed manuals on setting up contract farming schemes are available that lay out good practice for contractual processes such as quality specifications, transport arrangements, pricing, loan repayment, and dispute resolution (e.g., USAID 2013; Will 2013). Pro-poor contract farming policies.

<sup>67</sup> Case studies should highlight opportunities and challenges in different geopolitical areas of the country, such as the Central Dry Zone, the Delta region, ethnic southern states/regions, and the uplands of northern Myanmar ('Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

to farmers. **NGOs can be important in helping to build the capacity of farmer organizations to be effective agents of change and facilitate negotiation of contracts** with ABCs by providing basic information on expected value addition by processors or traders and key clauses in contracts to protect farmer benefits. They may also help broker tripartite agreements with banks for financing as well as provide access to information on new market opportunities and even co-financing investment costs with banks<sup>68</sup>.

Finally, although contracts may be legally covered by standard contract legislation, many countries including India, Thailand and Vietnam, have **specific legislation to govern the special needs of contract farming**. These countries also have government units to implement the legislation, facilitate contracting, and monitor progress. The relevance of these examples for Myanmar should be further studied in relation to the extremely poor ranking of Myanmar on contract enforcement in the World Bank's Doing Business Indicators.

### Increase Investment in Agricultural Research and other Public Goods for Rural Growth

The (MSU/MDRI-CESD, 2013) report titled Strategic Agriculture Sector Food Security Diagnostic for Myanmar defines as a key **policy initiative** an increase in government expenditure to support agriculture.

Overall, agriculture and fisheries have contributed only 4 percent of foreign currency and 6 percent of local currency investments made under the Foreign Investment Law. Despite the lack of FDI, the agricultural sector still accounts for upwards of 35 percent of the country's GDP. FDI is not yet an essential ingredient to this sector, although this is set to change<sup>69</sup>.

It is **recommended that Myanmar increases the amounts of expenditure on Agricultural research** to at least match the other nations in the region. Underinvestment for a number of decades has meant that Myanmar has invested only 20% as much as its regional counterparts in agricultural research, in the process systematically depriving the agricultural sector of its major engine of productivity growth.

Other areas that it is recommended are addressed for investment (MSU/MDRI-CESD, 2013) include **extension, education, rural transport, telecommunications and early warning, climate monitoring and irrigation and drainage control systems**.

The GoM has launched a series of reforms of investment laws, including a new Foreign Investment Law. **Effective implementation will require capacity building at various levels of government to define a strategic vision, and identify investments priorities and responsible investors to match that vision**. Implementation will also require transparent processes and matching capacity to evaluate proposals for likely economic, social, and environmental impacts, and to monitor progress on the ground.

**Improving the investment climate is the highest priority in terms of increasing agribusiness investment from SMEs to larger domestic firms to foreign investment**. Agro-processing offers excellent prospects to meet rising urban food demands, and because of its high employment multiplier is especially good for inclusive growth. **Increasing agricultural productivity in Myanmar and a repositioning of the banking system toward agro-industry are the two highest priorities for this sector**.

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<sup>68</sup> Alternatively, approval of land concessions could be made contingent on including a specified percent of area under SMFs under contractual arrangements (MSU International Development Working Paper 133 May 2014).

<sup>69</sup> In 2010 the country's leaders decided to allow for 100 percent foreign owned land concessions.

**More careful investigation is needed** to determine how much of the current inflow of investment from the Burmese private sector to various resource sectors, especially agribusiness, is actually from new foreign investment<sup>70</sup>.

**NGOs should therefore continue to closely monitor FDI in Myanmar's agricultural sector, especially from those countries mentioned in interviews as interested in investing in the future.** NGOs could entice investors from these countries<sup>71</sup> to employ best practices, such as propoor contract farming models, rather than a concessionary approach.

**Finally, promoting best international practices, such as CSR,** for transnational companies operating in resource extraction activities in Myanmar could be another avenue for NGOs to pursue<sup>72</sup>.

### Provide Access to Affordable Finance Systems

Also defined in the (MSU/MDRI-CESD, 2013) report is a recommendation that the rural credit system needs to be updated, as the punitive rates of interest currently demanded can easily contribute to an increase in indebtedness and consequently landlessness in Myanmar.

As was pointed out earlier in this report, use of land as collateral for farming inputs has become the leading cause of landlessness among the Myanmar rural classes.

**It is therefore recommended that the effort to build up local savings instruments, credit systems and institutions that intermediate between borrowers and lenders are made.** This will require investments in long-term institutional development from the Government of Myanmar.

A few international NGOs are working on micro-credit financing as a way to increase financial opportunities and security for farmers without the cycle of debt and landlessness associated with high-interest money-lending practices. The concern is that with contract farming arrangements dictated by Burmese businessmen without government regulation or oversight, farmers will become beholden to the business elite of Myanmar<sup>73</sup>. **Alternative methods of obtaining credit should be provided to farmers**, besides the currently available moneylenders, bank loans and company loans. **Various UN agencies and a few INGOs have been pushing for micro-credit schemes to be adopted in Myanmar**, with limited success due to GoM resistance. In addition, agribusiness investment in the seed industry can be a major driver of increased productivity of SMFs<sup>74</sup>.

In line with conducted research<sup>75</sup>, and given the serious weakness of public sector services in Myanmar, a logical response is for agricultural producers and processors to implement for selected value chains a small industry levy on production or export value to provide new and

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<sup>70</sup> This is not to discount the role of Burmese businessmen both inside the country and those living outside, especially in Singapore in financing agribusiness ventures.

<sup>71</sup> Thailand, Vietnam, China, Korea, and Japan

<sup>72</sup> There are various international protocols for best practice, due diligence, environmental and social impacts, etc. which NGOs could advocate for foreign companies to adopt in their Myanmar operations. This includes guidelines by the former UN representative on business and human rights, John Ruggie, which has been released as part of the UN's Special Commission on Human Rights. Other CSR initiatives exist for specific agricultural commodities, such as guidelines for sustainable development of palm oil. These and various other CSR initiatives, should be carefully considered as an advocacy strategy as CSR principles may not be implementable even with a cooperative business client.

<sup>73</sup> 'Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction'. (Kevin Woods, 2012)

<sup>74</sup> The hybrid seed industry is quickly developing in Myanmar led by maize, with activity also in cotton and vegetables, and future prospects for hybrid rice. There is much room for growth of a competitive private seed industry, based around SMEs and FDI in the seed industry. The needs to strengthen the basic regulatory framework by implementing the new seed law and facilitating better access to a steady flow of new varieties and inbreds from strong public breeding programs or from abroad.

<sup>75</sup> MSU International Development Working Paper 133 May 2014

more stable sources of funding for providing these services. The approach is well established for industrial crops in the region such as rubber, sugarcane, and oil palm and could logically be extended to export crops such as rice and pulses. It has been particularly successful in upgrading rubber value chains for SMFs in Thailand<sup>76</sup>.

### 7.2.3. Land matters

#### Addressing the Issue of Tract Land Concessions

As discussed earlier in this report, the issue of land concessions being used to grant investors access to lands that may be in use by non-registered permanent or migratory rural families is a recurring one in Myanmar. As seen in the following extract from a Land Briefing Paper (Myanmar Centre for Responsible Business, 2015), the common nature of these instances has had large effects:

*The Vacant Fallow and Virgin (VFV) Lands Management Law and Rules, are clearly aimed at providing a legal framework for implementing Government land policies to maximise the use of land as a resource for generating agricultural income and tax revenues. Tenure security is deliberately circumscribed to allow the Government the flexibility to do what they believe is needed for development. Civil society groups and farmers organisations have pointed out that land regarded as VFV may in fact be occupied by people or subject to shifting cultivation according to traditional farming practices, but which the Government classifies as VFV. The complicated registration procedures under the new agricultural laws mean that smallholder farmers, which is most of Myanmar's population, will struggle to register their land tenure claims and are at risk of having their land registered by more powerful interests. Potentially developers could register their tenure claims as land users of farmland and so-called VFV land, which has in fact long been occupied by others. By not recognising informal land rights, and formalising land rights through titling, despite pre-existing informal claims, the new laws may reinforce existing inequality and/or create new injustices, potentially creating or exacerbating tensions or even conflict.*

The process by which an investor applies to utilise lands designated as VFV is described below, as given by (Myanmar Centre for Responsible Business, 2015). Note that the description of foreign investor restrictions appears to predate the current and recent Investor Law, which explicitly states that domestic and foreign investors shall be treated equally under the Law:

*With respect to land designated as VFV, investors may acquire land by applying to the Government for land rights over VFV lands. Foreign investors with Myanmar Investment Commission (MIC) permits, those in joint ventures with Government bodies, or citizens and Myanmar citizen investors are permitted by the 2012 VFV Law to apply to the Central Committee for the Management of VFV Lands for the rights to cultivate and use VFV land (Article 5(a), (d), and (e)). Foreign investors without MIC permits do not appear to be permitted to do the same. These VFV land rights are temporary and not transferable.*

The **following recommendations for the control of large scale land concessions**, as per the Virgin, Fallow, Vacant Lands Law (2012), and the Land Acquisition Act (1894) were proposed by (Byerlee, Kyaw, Thein, & Kham, 2014) in their report on Inclusive Growth in Myanmar.

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<sup>76</sup> Various institutional options are available to manage such funds but the initiative should be led and governed by the private sector, but with complementary actions by the public sector, especially to enact collection of the levy.

## Halting the Progress of Tract Land Concessions until Transparent and Equitable Systems are put in Place

As shown previously in this report, the ongoing practice of land concessions for industry is a large factor contributing to landlessness among the working poor of rural Myanmar. As shown in the following excerpt, this has also led to a large volume of ongoing disputes and legal challenges (Byerlee, Kyaw, Thein, & Kham, 2014): Global experience indicates that the use of large-scale land concessions as an incentive to investors is especially risky—including economic, social, and environmental risks—and Myanmar is no exception.

A recommendation would be appropriate to **halt further concessions until a more transparent, equitable process is put in place**, and the backlog of conflicts and ambiguities of existing contracts has been resolved and addressed.

The need to apply the principle of informed consent in relation to land transfer is highlighted in the following recommendation from a rubber industry analysis (Global Witness, 2014): **Adopt the standard of Free, Prior and Informed Consent as defined in the UN Declaration on the Rights of Indigenous Peoples** – to which Myanmar is a signatory – for all communities potentially affected by rubber and other agricultural investments.

It is **recommended that NGOs collaborate with FSWG’s LCG on this initiative (Land Tenure Reform Policies)** to maximize momentum and synergy.

## Correctly Mapping and Tracking the Progress and Extents of Concessions:

As mentioned earlier in this report, a large proportion of the existing land concessions are underutilised, and in fact are technically violating the terms of the concession contract (Byerlee, Kyaw, Thein, & Kham, 2014).

It is recommended, based upon (Byerlee, Kyaw, Thein, & Kham, 2014) that a **geo-referenced open database is established that provides details on geographic information system (GIS) coordinates, the investor, targets for total investment and jobs, and the current status in terms of the area sown and infrastructure developed**. Laos provides a good example of database constructed through collaboration of the Ministry of Agriculture and development partners.

A second priority recommendation (Byerlee, Kyaw, Thein, & Kham, 2014) is to **monitor and track the existing concessions and cancel non-performing concessions or concessions that have violated contracts in other ways**, using transparent rules and processes. This recommendation ties into the following recommendation, as seen below.

It is **recommended that NGOs collaborate with FSWG’s LCG on this initiative (mapping and tracking)** to maximize momentum and coordination.

## Alleviation of the Landless Issue with VFV Lands:

In principle, a straightforward solution to the issue of landless rural population can be at least partially solved with **allocation of existing VFV land tracts**. As much of the allocated VFV lands are underutilised, a recommendation was put forward by (Byerlee, Kyaw, Thein, & Kham, 2014), that suggests a large potential for programs to allocate available VFV land to poor rural families as an alternative to large land concessions to investors.

As noted in the example from Thailand (Byerlee, Kyaw, Thein, & Kham, 2014), **a systematic program of formal conversion of forest land to titled farmland could be combined with public investment in basic physical and social infrastructure.**

#### 7.2.4. Environmental impact

##### Environmental and Social Impact Assessments

**The need for thorough prior analysis of the effects of an investment on the community and environment is shown in the following excerpt from a rubber industry analysis (Global Witness, 2014):**

***Environmental and Social Impact Assessments should be undertaken for all land investments prior to contracts being secured in order to prevent deforestation and other environmental impacts, and prevent forced evictions. Ensure such assessments are sufficiently rigorous to prevent projects from going forward if the negative impacts are too great. Harmonise such assessments with existing environmental laws and related regulation and ensure the results of such assessments are made public.***

As mentioned in an MSU paper on Inclusive Growth in Myanmar (Byerlee, Kyaw, Thein, & Kham, 2014), a range of guidelines exist for responsible practices to maximize opportunities and minimize risks in terms of economic, social, and environmental outcomes. Such instruments include the Principles for Responsible Agricultural Investment, the FAO Voluntary Guidelines on Responsible Governance of Tenure of Land, Forests and Fisheries, private standards for commodities such as oil palm and sugarcane, and good practice guides for conducting Environmental and Social Impact Assessment.

**NGOs need to work with Burmese multi-stakeholder partners, especially agribusiness people and agricultural associations that influence decision makers in Myanmar<sup>77</sup>, on land reform policy. Specifically, this should address the socioeconomic and environmental impacts of an export-oriented industrial agricultural approach and of unregulated company behaviour.**

It is therefore **recommended that all investments are subjected to preliminary Environmental and Social Impact Assessments**, at a bare minimum. A code of practice surrounding these requirements should be adopted from those mentioned above (Principles for Responsible Agricultural Investment).

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<sup>77</sup> i. e. , generals and top-level government/military officials



## Annex II – Orientation questionnaire for partners

The objectives of the study on Agricultural Investments are:

Study objectives	
I	To increase understanding of the impact of corporate and small holder agriculture investments on food security and rural livelihoods in Myanmar
II	To identify good and bad practices of corporate and small holder agriculture investments;
III	To formulate policy recommendations to improve the legislative framework to stimulate good practices for corporate and small holder agricultural investments and its enforcement;
IV	To increase understanding of the role of women in corporate agricultural investments.

In view of the methodology for the research, we are in the process of identifying what should be included in the research (e.g. commodity focal sector), and more specifically, the sampling and the tools to be developed for the data collection, for which we rely on you as local partner.

### Guiding selection criteria research focus and data collection

Instead of focusing on secondary data, and on investments already analyzed by other partners (e.g. large investments looked at by Oxfam, and small ones analysed by MDRI), this FSWG aims to complement and focus on new or complementary areas, related to big and small area investments, for all the following points below.

- Focus will be on FDI vs. domestic investment as well as corporate investments vs. smallholder investments.
- Focus on high potential sectors (e.g. corn, sugar)
- Focus on shifting cultivation vs. lowland farming.
- Focus will be on positive and negative examples (e.g. negative environmental impact of usage of pesticides vs. a good example of organic farming).
- Geographic coverage of the above (e.g. Shan, Kayin, Chin, etc)

Following the objectives and the research focus guiding criteria, we would like to kindly ask you as a FSWG partner to fill in the short questionnaire below:

Orientation questions	
Name and location of partner:	Name: Location:
Which sectors do you think should be focus?	Name two sectors: Why these sectors? Please explain.
Do you know of any good example or bad example of small-holder vs. corporate investments in your area that you think should be included?	Name one each:

Do you have previous experience in data collection for agri-business investment related research?	Yes/No. If so, when and where?
Would you be interested, upon the provision of a one-day training in data collection, to support this research in terms of collecting data (based on predefined questionnaire and tools provided to you, and with financial compensation)?	Yes/ No?
If so, what is your availability and when would it be best for you? The field work will take be around one week)	Availability in March:
The idea is for the outcomes / recommendations of this study to support policy dialogue. Would you be interested and in the position to follow up on this and take some of the initiatives forward, at a post research phase?	Yes/ No? How?

Due to the urgency of this research we would appreciate an **answer by Monday morning 23 February 2015, 10 a.m.**

This will be incorporated into the inception report, which will be shared with you, before agreeing on a date and place for the training and the subsequent data collection to take place.

FWSG thanks you very much in advance for your kind cooperation.

## Annex III - Overall research Questionnaire per type of stakeholder

### I. HH Questions (For village)

1. Name of HH head - ?
2. Age of HH head - ?
3. Sex of HH head (selection by given)
  - a. Male
  - b. Female
4. Education of HH head (selection by given)
  - a. Primary
  - b. Middle
  - c. High
  - d. University
5. Ethnic - ?
6. Number of family member by sex
  - a. Male - ?
  - b. Female - ?
7. Number of family member by age
  - a. < 5 - ?
  - b. 5 to 17 - ?
  - c. 18 to 60 - ?
  - d. > 60 - ?
8. Number of disable family member (is it relevant?)How about ethnicity?
9. Number of student
  - a. Primary - ?
  - b. Middle - ?
  - c. High - ?
  - d. University - ?
10. Source of income (By number) - ?
11. Source of main income (selection from given)
  - a. Agriculture – paddy
  - b. Agriculture – seasonal crop
  - c. Perennial crop
  - d. Livestock
  - e. Trading
  - f. Casual labour – farm labour
  - g. Casual labour – off job
  - h. Artisan
  - i. Other
12. Source of secondary income (selection from given)
  - a. Agriculture – paddy
  - b. Agriculture – seasonal crop
  - c. Perennial crop
  - d. Livestock

- e. Trading
  - f. Casual labour – farm labour
  - g. Casual labour – off job
  - h. Artisan
  - i. Other
13. Bread winner in HH (by number) - ?
14. Main bread winner per HH (selection by given)
- a. HH head,
  - b. Family member
15. Land ownership by size (selection from given) **{if answer b to f, continue for Q 16 – 20}**
- a. No Land
  - b. < 1 acre
  - c. 1 to 2 acre
  - d. 2 to 5 acre
  - e. 5 to 10 acre
  - f. > 10 acre
16. Type of land (selection by given)
- a. Paddy Farmland
  - b. Kaing Myay (alluvial land beside river)
  - c. Yar Myay (Dry land)
  - d. Gardening (Chan Myay)
17. Type of major crop - ?
18. Cultivating & harvesting season for major crop - ?
19. Type of secondary crop - ?
20. Cultivating & harvesting season for secondary crop - ?
21. Average monthly HH income (selection by given)
- a. < 50,000 Kyat
  - b. 50001 to 100,000
  - c. 100,001 to 200,000
  - d. 200,001 to 300,000
  - e. 300,301 to 500,000
  - f. 500,001 to 1,000,000
  - g. > 1,000,001 Kyat
22. Average monthly HH expenditure (selection by given)
- a. < 50,000 Kyat
  - b. 50001 to 100,000
  - c. 100,001 to 200,000
  - d. 200,001 to 300,000
  - e. 300,301 to 500,000
  - f. 500,001 to 1,000,000
  - g. > 1,000,001 Kyat
23. Source of money for insufficient income (selection by given)
- a. Relative
  - b. Employer

- c. Micro finance
  - d. Money lender
24. Interest rate (if answer select b, c & d) - ?
25. Payback system (selection by given)
- a. Money
  - b. Product
  - c. Work
26. Source of capital for investment for improving / expanding business (selection by given)
- a. Relative
  - b. Trader
  - c. Micro finance
  - d. Money lender
  - e. Other
27. Interest rate (if answer select for b, c & d)
28. Payback system (selection by given)
- a. Money
  - b. Product
  - c. Other

#### Additional

1. Source of water for agriculture purpose (selection by given)
  - a. Shallow well inside agriculture land
  - b. Tube well
  - c. River, Creek – own arrangement
  - d. Manmade lake
  - e. Irrigation system
  - f. Other
2. Point of sale for product (selection by given) **{only answer a, b, c & d at Q 12}**
  - a. At farm gate
  - b. At village
  - c. Other area
3. If select “c”; Access to market by distance - ?
4. Access to market by mode (maybe means)
  - a. By foot
  - b. By motorbike
  - c. By car
  - d. Other
5. Access to market for cost

#### II. Farmer (small & big farmer)

1. Land size for cultivation (selection by given)
  - a. < 1 acre

- b. 1 to 2 acre
  - c. 2 to 5 acre
  - d. 5 to 10 acre
  - e. > 10 acre
2. Type of land (selection by given)
    - a. Paddy Farmland
    - b. Kaing Myay (alluvial land beside river)
    - c. Yar Myay (Dry land)
    - d. Gardening (Chan Myay)
  3. Accessibility – land ownership (selection by given)
    - a. Own land
    - b. Rent for agriculture
  4. If answer b; type of rent (selection by given and answer the question)
    - a. By cost; amount - ?
    - b. By profit sharing; ratio - ?
  5. Cropping system (selection by given)
    - a. single,
    - b. mix
    - c. double,
    - d. perennial
  6. Type of major crop - ?
  7. Cultivating & harvesting season for major crop - ?
  8. Type of secondary crop - ?
  9. Cultivating & harvesting season for secondary crop - ?
  10. Cost, and type of investment and payback system (**ask for detail step first**)
    - a. Land preparation - ?
    - b. Seed - ?
    - c. Fertilizer/insecticide – pesticide - ?
    - d. Plant treatment - ?
    - e. Other (modern machinery to increase productivity / land / plantation expending / know-how / training) - ?
  11. Source of seed (selection by given?)
    - a. Own
    - b. Buy from other farmer
    - c. By from trader
  12. Source of Fertilizer/insecticide – pesticide (selection by given)
    - a. From local supplier
    - b. From company direct distributor
  13. Current yield for major crop - ?
  14. Maximum – minimum yield (& time) for major crop - ?
  15. Yield trend & opinion for major crop - ?
  16. Current yield for secondary crop - ? (**If necessary**)
  17. Maximum – minimum yield (& time) for secondary crop - ?
  18. Yield trend & opinion for secondary crop - ?
  19. Number and type of potential sale point - ?

20. Most frequently used selling points and why - ?
21. Number of buyer in sale point - ?
22. Most frequent buyer and why - ?
23. Current selling price - ?
24. Maximum - minimum (& time of price) selling price - ?
25. Price trend at last three to five year and opinion - ?
26. Purchase condition (buyer standard)
27. Payment system (selection by given)
  - a. Advance,
  - b. Credit,
  - c. Cash in delivery
28. Standards / quality of product different from market demand
29. Source and cost of accessing market information (on quality, price, demand, etc.) - ?
30. Advantage and weakness from being able to access correct market information - ?
31. Access to credit for working capital (selection by given?)
  - a. Not accessible
  - b. Relative
  - c. Money lender
  - d. Trader
  - e. Bank
  - f. Other
32. The method of payment including interest rate?)

Explain whether the discussed type of investment (which one) has a positive or negative impact on the farmer / achieving food security and improved rural livelihoods: (please explain in the points 36 to 41) to be developed for the specific case

33. Opportunities and Constraints for business improvement through the ongoing investment (type) (increase income and productivity, efficiency) Investment opportunities? By whom?
34. Change of practice (do you mean increasing productivity through investing in new machinery, better seeds, technology? In case of big investments – how individual farmers benefit?
35. Strength & weakness of what?
36. Tax and revenue (if any?)
37. Effect of rule – regulation (facilitation of sales / production through the new regulations – if any)
38. Any support from government, organization (if any?)

### III. Trader

1. Buying
  - a. Sources
  - b. Price
  - c. Trade volume – one time from one source

- d. Condition & standard
  - e. Payment system
  - f. Access to potential alternative source
2. Selling
    - a. Sources
    - b. Price
    - c. Trade volume – one time for one source
    - d. Condition & standard
    - e. Payment system
    - f. Access to potential alternative source
  3. Practice
    - a. Bulk up to?
    - b. Storage (bulk up to & period)?
    - c. Grading (in practice or not / impact )
  4. Amount of trade
    - a. By order?
    - b. By own judgment?
    - c. Just flow of trade – no bulk & store
  5. Cost
    - a. Storage
    - b. Labour
  6. Transportation (both buying and selling) if any?
    - a. Mode (means)
    - b. Cost
    - c. Constraints
  7. Price trend
    - a. Maximum – minimum (by time)
    - b. Past three to five year
  8. Outstanding issue (by year) & reason (if any?)
    - a. By volume (production, order)
    - b. By price
    - c. Trends?
  9. Advantage and weakness of product from region
  10. Tax and revenue (if any?)
  11. License, rule and regulation, policies (agriculture trading)?
  12. Access to and effect of association and their assistance
  13. Opportunity, Constraints - bottle neck for business improvement (quantity and quality)
  14. Access to loan – credit
  15. Suggestion for improvement (focus on impact of farmer investment) (if any?)

#### **IV. Input Company**

1. Amount and type of input - ?

2. Selling
  - a. Distribution channel (direct distribution or through distributor) and why - ?
  - b. Price for each product - ?
  - c. Trade volume per season (in quantity OR total buying amount in money) - ?
  - d. Payment system - ?
3. Marketing strategy (advertising, technical support, other) - ?
4. Contract farming (if any) (selection by given)
  - a. Yes
  - b. No
5. If yes at Q-4; Type of contract farming - ?
6. If yes at Q-4; Number of farmers for contract farming - ?
7. Effect of license, rule and regulation, policies (agriculture input trading) on investment impact?
8. Effect of license, rule and regulation, policies (agriculture contract farming) on the investment impact?
9. Competitiveness in market (with other suppliers) - ?
10. Business trend (increase or decrease in sale/trade)
11. Opportunity, Constraints - bottle neck for business improvement (quantity and quality)
12. Suggestion for improvement (focus on impact of farmer investment) (if any?)

#### **V. Local Input Supplier**

1. Amount and type of input - ?
2. Buying
  - a. Sources & why - ?
  - b. Price for each product - ?
  - c. Trade volume per season (in quantity OR total buying amount in money) - ?
  - d. Payment system - ?
  - e. Access to potential alternative source - ?
3. Selling
  - a. Sources & why - ?
  - b. Number of farmers coverage (dealing with him/her) - ?
  - c. Price for each category - ?
  - d. Trade volume for season (in quantity OR total buying amount in money) - ?
  - e. Payment system - ?
  - f. Access to potential alternative source - ?
4. Effect of license, rule and regulation, policies (agriculture input trading) on the investment impact
5. Competitiveness in market (with other suppliers) - ?
6. Business trend (increase or decrease in sale/trade)
7. Opportunity, Constraints - bottle neck for business improvement (quantity and quality)
8. Suggestion for improvement (focus on impact of (small) farmer investment) (if any?)

## **VI. Key Informant – village authority and elder**

1. Population & HH
2. Village Area
  - a. Agriculture
  - b. Other
3. About farmer
  - a. Total number
  - b. Group by size of land
4. Access to water
  - a. Agriculture
  - b. Drinking
  - c. Domestic
5. Village products (major)
  - a. Type and volume
6. Income generation sources for villagers
  - a. Number of HH by activities
7. Access to loan – credit
8. Access to nearest town for trade, education and health
  - a. Distance
  - b. Mode (means)
  - c. Cost
  - d. Time
9. Migration in – out (if any?)
10. Contract farming (if any?)
  - a. Number of farmer
  - b. Total area
  - c. Practice & condition
  - d. Dispute (if any?)
11. Organization, institution Name
  - a. Any support & coordination
    - i. Type
    - ii. Amount
    - iii. Frequency
12. Law, rule and regulation for agriculture sector
  - a. Effect (if any?)
  - b. Advantage, disadvantage and weakness
  - c. Suggestion (if any?)

## Annex IV – Manual for IDIs and FGDs

### Overall General Manual for Interview

#### Interview Guidelines

- All Interviews in this survey will take between 60 mins and 90 mins.
- Interviewer needs to carefully read out all of the content and information on each *Interview Sheet* in advance, before Interview is conducted. Interview question (and detailed explanations on *Sheet*) guide him/her in the flow of the interview.
- General Interview procedure steps:
  1. Introduction/Warm up
  2. Distribute *sheets* to participants and get their basic information and signatures
  3. Start to conduct interview.
  4. During interview, check if participants are clear on the meanings of special technical terms or words on the *sheet* (If necessary, explain. Some definitions are mentioned on *interview sheet*.)
  5. Note down interviewee's responses on *Interview Sheet*.
  6. Wrap up & Thanks

### Overall General Manual for FGD

#### FGD Guideline

- All FGDs in this survey will take between 60 mins and 120 mins.
- Moderator of FGD need to read carefully all of the content and information on *each FGD sheet* in advance before discussion. Detailed instruction and explanation on *sheet* will help and guide him/her to conduct necessary facilitation process for the participants during discussion.
- l. FGD procedure steps:
  7. Introduction/Warm up

8. Before discussion starts, discussion **group is formed** as instructed on FGD sheet
9. Distribute FGD sheet to participants and get their basic information and signatures
10. Firstly, point out special technical terms or words seen on *FGD Sheet* that may not be clear for participants and confirm of their understanding. If necessary, explain (Some definitions are mentioned on *FGD sheet*.)
11. Next, explain the purpose of FGD, discussion tasks & instruction to be followed during discussion
12. Start to conduct discussion parts with Moderator's facilitation
13. Note down Participants' Discussion outputs on *FGD sheet* by Participants themselves (Use **one set of FGD sheets** is for **One** group)
14. Collect *Sheets* back and assure that all *Sheets* are back to Moderator
15. Wrap up & Thanks

## Annex V - Bibliography

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