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ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

THE IMPACT OF ORGANIC RICE CONTRACT FARMING ON FARMERS'  
LIVELIHOOD AND LAND TENURE IN CAMBODIA:  
A CASE STUDY IN KAMPONG SPEU PROVINCE

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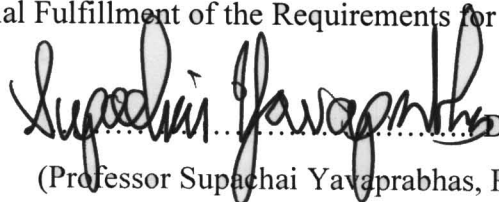
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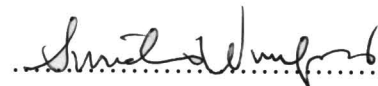
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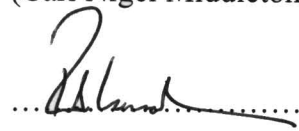
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ผลกระทบของการปลูกข้าวอินทรีย์แบบพันธะสัญญาต่อชีวิตเกษตรกรและการถือครอง ที่ดินในกัมพูชา : กรณีศึกษาในจังหวัดกำปงสปีอ (THE IMPACT OF ORGANIC RICE CONTRACT FARMING ON FARMERS' LIVELIHOOD AND LAND TENURE IN CAMBODIA: A CASE STUDY IN KAMPONG SPEU PROVINCE) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: ดร.คาร์ล มิคเคิลสัน, 141 หน้า.

วิทยานิพนธ์เล่มนี้มุ่งศึกษาเรื่องการปลูกข้าวอินทรีย์แบบพันธะสัญญาในประเทศกัมพูชาและศึกษาผลกระทบต่อวิถีชีวิตของชาวนาและการถือครองที่ดิน การศึกษานี้มุ่งหวังให้ได้ข้อมูลเชิงลึกเกี่ยวกับสภาพและเงื่อนไขของการปลูกข้าวอินทรีย์แบบพันธะสัญญาในประเทศกัมพูชา ทั้งยังมุ่งค้นหาลักษณะของการปลูกข้าวแบบพันธะสัญญาที่เหมาะสมอันจะนำไปสู่การปรับปรุงวิถีชีวิตของชาวนาและการพัฒนาระบบการถือครองที่ดินที่มั่นคงขึ้น การศึกษานี้จะนำไปสู่การศึกษาวิจัยใหม่ ๆ ด้านชีวิตความเป็นอยู่ของชาวนาและการเปลี่ยนแปลงการถือครองกรรมสิทธิ์ที่ดินอันเป็นผลมาจากการปลูกข้าวอินทรีย์แบบพันธะสัญญา โดยใช้กรณีศึกษาในจังหวัดกำปงสปีอในประเทศกัมพูชา

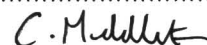
ในปัจจุบัน การปลูกข้าวอินทรีย์แบบพันธะสัญญาในประเทศกัมพูชาไม่ได้เป็นที่แพร่หลายนัก แต่มีแนวโน้มที่จะขยายตัวในอนาคตอันใกล้ การเพาะปลูกแบบในลักษณะนี้สามารถเพิ่มการลงทุนในภาคการเกษตรและในภาคสาธารณสุขในชนบทได้ และยังช่วยให้ชาวนาได้รับการสนับสนุนด้านการเงิน ด้านเทคนิค และด้านข้อมูลข่าวสารเกี่ยวกับแนวโน้มด้านราคาและการตลาด อย่างไรก็ตาม การเพาะปลูกแบบพันธะสัญญาไม่ได้ส่งผลดีเสมอไป ชาวนาจะสูญเสียอำนาจการต่อรอง การเจรจาผลกำไร การพัฒนาคุณภาพผลผลิต การสร้างความแข็งแกร่งให้กับระบบที่ดิน และวิถีชีวิตที่มีความมั่นคงน้อยลง

ในการศึกษานี้ ผู้เขียนได้ศึกษาการจัดการการเพาะปลูกแบบพันธะสัญญาของบริษัทอังกอ กเสกัม รงเรื่อง โดยได้สัมภาษณ์เกษตรกรที่ทำการเพาะปลูกแบบพันธะสัญญาจำนวน 16 คน และที่ไม่ได้ทำพันธะสัญญาจำนวน 20 คน ในจังหวัดกำปงสปีอ เพื่อศึกษารูปแบบการดำเนินการของบริษัทนี้และค้นหาแรงจูงใจของชาวนาในการเข้าร่วมการเพาะปลูกในรูปแบบนี้ อีกทั้งยังมุ่งศึกษาราคา ต้นทุน กำไร ผลประโยชน์อื่นๆ และความเปลี่ยนแปลงที่เกิดขึ้นในชุมชน

บริษัท อังกอ กเสกัม รงเรื่องได้ช่วยปรับปรุงสภาพความเป็นอยู่ของชาวนาให้ดีขึ้น เนื่องจากชาวนาที่เข้าร่วมจะมีที่ดินทำกินและมีรายได้สูงขึ้น ทั้งนี้ ราคาข้าวที่สูงขึ้น เมล็ดพันธุ์ข้าวที่มีคุณภาพ และการเข้าถึงตลาดล้วนเป็นเหตุผลหลักที่ชักจูงให้ชาวนามาเข้าร่วมทำการเพาะปลูกแบบพันธะสัญญากับบริษัทนี้

กล่าวโดยสรุป การเพาะปลูกแบบพันธะสัญญามีศักยภาพอย่างเห็นได้ชัดที่จะขยายตัวในอนาคต อย่างไรก็ตาม เพื่อให้การทำนาในรูปแบบนี้พัฒนาขึ้นและเพื่อให้เกิดการกระจายรายได้อย่างเท่าเทียมกันระหว่างบริษัทและชาวนา ประเด็นเรื่องบทบาทของรัฐบาล การวางกรอบกฎหมาย การบังคับให้เป็นไปตามพันธะสัญญา ระบบการถือครองที่ดิน และการจัดตั้งองค์กรชาวนาขนาดย่อม จะต้องถูกหยิบยกขึ้นมาเกี่ยวข้องด้วย

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# # 5281010124 MAJOR: INTERNATIONAL DEVELOPMENT STUDIES  
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BETTI ROSITA SARI: THE IMPACT OF ORGANIC RICE CONTRACT  
 FARMING ON FARMERS' LIVELIHOOD AND LAND TENURE IN  
 CAMBODIA: A CASE STUDY IN KAMPONG SPEU PROVINCE  
 CARL NIGEL MIDDLETON, Ph.D: [141] pp.

This study examines organic rice contract farming in Cambodia and its impact on farmers' livelihood and land tenure. The study's objective is to gain a better insight of the terms and conditions of rice contract farming scheme in Cambodia, and determine under what conditions contract farming could bring improvements to farmers' livelihoods and strengthen land tenure security. This study contributes new research findings on farmers' livelihood and land ownership changes due to organic-rice contract farming with a case study in Kampong Speu province, Cambodia.


Rice contract farming is not widespread in Cambodia at present, but is expected to expand significantly in the near future. Contract farming can increase investment into agricultural and infrastructure in rural areas. Contract farming can also enable farmers to access credit, inputs, technical advice and information about market condition and pricing trends. Yet, the disadvantages of contract farming include loss of farmer bargaining power and a potential reduction in profit margins, increased emphasis on improving production quality, land consolidation in favor of participating contract farmers, and less secure livelihoods.


In this study, the contract farming arrangements of *Angkor Kasekam Rongroeng* (AKR) Company is studied. A survey of 16 contract farmers and 20 non-contract farmers in Kampong Speu province has been undertaken to examine the AKR contract farming scheme arrangements and to identify farmer's motivations to participate in contract farming and the costs, benefits and changes in the community.

AKR rice contract farming improves farmers' livelihood because they get a higher income and rice yields. Higher price, good rice seed, and access to market are the main reasons for farmers to participate in AKR contract farming. However, strict requirements, heavy penalties, poor extension services, and lack of information about the contract terms and conditions reduce farmers' long-term participation in contract farming. In addition, contract farmers have less bargaining power to negotiate with the company due to the absence of a farmer association. The AKR contract farming does not strengthen farmers' land tenure, but deforestation has been widespread in the villages studied due to the expansion of land under (contract) cultivation.

Overall, the status of contract farming in Cambodia clearly points to the great potential for its expansion in the future. However, for this to be realized and for the benefits to be shared fairly between companies and the farmers themselves, the study concludes that issues about the role of the government, the regulatory framework, contract enforcement, the land tenure system and the formation of small-scale farmer organizations must all be addressed.

Field of study: International  
 Development Studies  
 Academic year 2010

Student's signature:  .....

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## LIST OF ABBREVIATIONS

AKR	<i>Angkor Kasekam Roungroeung</i>
ABK	<i>Apiwat Bandanh Kasekar</i>
CSES	Cambodia Socio-Economic Survey
CDRI	Cambodia Development Resource Institute
CEDAC	Center for Education and Development of Agriculture in Cambodia
CIRD	Cambodia Institute for Research and Rural Development
CEA	Cambodia Economic Association
CELAGRID	Center for Livestock and Agriculture Development
CARE	Christian Action Research and Education
CPR	Common Property Resources
EU	European Union
ECHO	European Commission for Humanitarian Aid Office
FDI	Foreign Direct Investment
FAO	Food and Agriculture Organization
FGD	Focus Group Discussions
FNN	Farmer Nature Network
GDP	Gross Domestic Product
HHLS	Household Livelihood Security Approach
HDI	Human Development Index
Ha	Hectares
KKR	<i>Khmer Kasekar Roungreung</i>
LMAP	Land Management and Administration Project
MAFF	Ministry of Agriculture, Forestry and Fishery
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MoE	Ministry of Environment
MFIs	Micro Finance Institutions
MRC	Mekong River Commission
NIS	National Institute of Statistics
NGOs	Non Government Organizations
RGC	Royal Government of Cambodia

SRI	System of Rice Intensification
SOC	State of Cambodia
US	United States
USAID	United States Agency for International Development
UNDP	United Nation Development Program
UNHDR	United Nation Human Development Report
UNICEF	United Nations Children's Fund
WFP	World Food Program
WB	World Bank

## CHAPTER I

### INTRODUCTION

Cambodia is still largely an agrarian society, where agriculture is both the main source of revenue and the single largest employment sector; in 2006, agriculture represented 30.1% of Gross Domestic Product (GDP) and employed 79.7 percent of Cambodia's total population (Sophal, 2009). Approximately 36 percent of Cambodians live below the poverty line<sup>1</sup> and around 85% of the population is living in rural areas (World Bank, 2006). The majority of these people depend on agriculture for their livelihood at the subsistence-level using traditional agricultural methods, and consequently agricultural productivity is low. Under these circumstances, access to and control over productive land assets is crucial to both livelihoods and poverty reduction in Cambodia.

The Royal Government of Cambodia has indicated in its Rectangular Strategy Phase II 2004-2008 that its agriculture policy is "to improve agricultural productivity and diversification, thereby enabling the agriculture sector to serve as the dynamic driving force for economic growth and poverty reduction" (Agrifood and CamConsult, 2006). To develop its agricultural sector, the Cambodian government is promoting contract farming, seeking Foreign Direct Investment (FDI) and promoting agricultural exports. Investors from Kuwait, Qatar, South Korea and China are entering Cambodia seeking to invest in the agricultural sector, as well as to provide loan, grants and technical assistance.

This thesis examines organic-rice contract farming in Cambodia. Firstly, I analyze the costs and benefits of organic-rice contract farming on participating farmers' livelihoods. Secondly, I study the terms and conditions of contract farming

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<sup>1</sup> Poverty lines in Cambodia are expressed as the income required to meet a minimum requirement of daily per capita food and nonfood consumption calculated at current prices for each region. This is approximately equivalent to 1 US\$ per day (or 4000 Riels) (World Bank, 2009) [See footnote 6 for further details]

and seek to understand the reasons why some farmers do not participate in contract farming. Finally, I look at the changing land ownership within the community and the influence that contract farming plays in this.

## **1.1. Background of the study**

This section first discusses about agriculture in Cambodia in general. It then explores the key issues surrounding contract farming systems, and looks into the experience of contract farming systems in Cambodia to date. Finally, it identifies new major drivers of investment for rice contract farming in Cambodia, led by Kuwait and Qatar investment.

### **1.1.1. Agriculture in Cambodia**

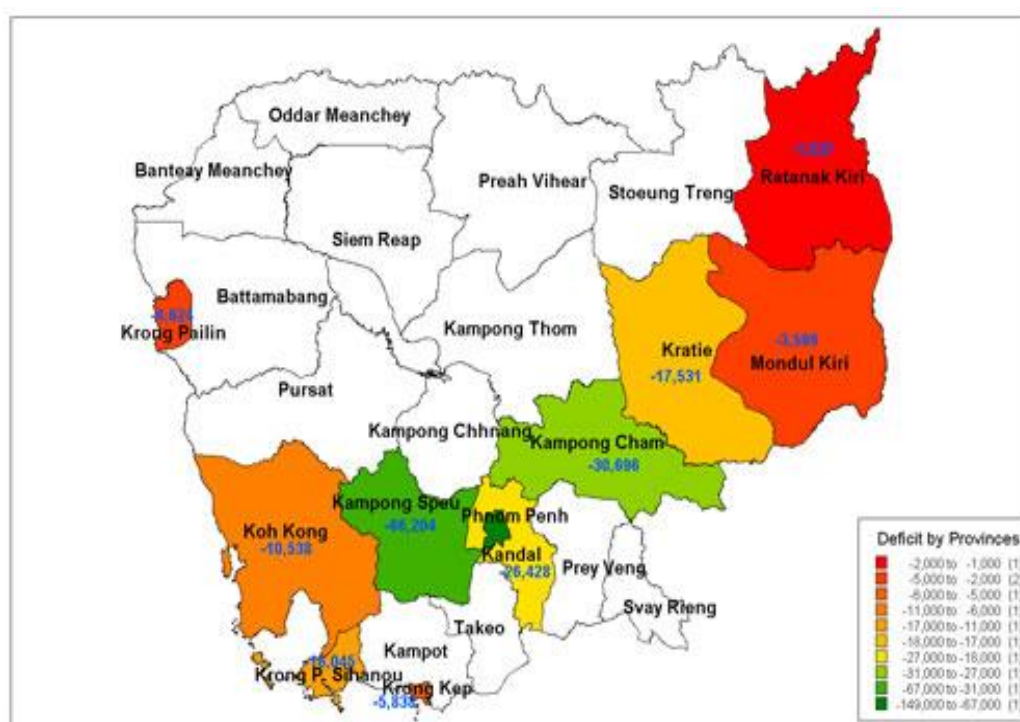
As the dominant subsistence and income-generating activity in Cambodia's rural areas, agriculture plays an essential role in rural livelihoods. Most of Cambodia's agricultural land has historically been used for rice farming and other small-scale agricultural activities, includes raising livestock and producing grain, vegetables, and fruit crops. Based on Food and Agriculture Organization (FAO) estimations from 2007, Cambodia's total land area was 17,652,000 hectares, of which 5,455,000 hectares (69 percent) was classified as agricultural land (FAO, 2007). Yet, despite its importance, overall the agriculture sector in Cambodia remains underdeveloped due to a lack of investment and reliance on old cultivation techniques and low quality seeds.

Rice production in Cambodia utilizes 84 percent of the total cultivated land, and provides 65-75 percent of the population's staple food (World Food Programme [WFP], 2007). Throughout the country, not all provinces are rice production areas. Ministry of Agriculture, Forestry and Fishery (MAFF) data indicates that there are 11



provinces facing rice deficits (see Map 1.1). These are: Kampong Cham, Kampong Speu, Kandal, Kratie, Koh Kong, Mondul Kiri, Ratanakiri, Krong Preah Sihanouk, Krong Kep, Krong Pailin, and Phnom Penh municipality. It is estimated that at the national level there are 463.000 tons of milled rice surplus (MAFF, 2005). However, at the community level people are experiencing rice deficits, particularly among very poor farm households and when faced with severe drought.

**Map 1.1. Rice Deficit by Province 2004-2005**



Source: Ministry of Agriculture, Forestry and Fishery (MAFF), 2005

The Cambodian agriculture and agro-industry sector has developed significantly in recent years and is recognized to have a high potential for investment and employment creation, and to be a major potential driver of economic growth (Agrifood and CamConsult, 2006). However, the sector is starting from a low base and suffers from fragmented and weak supply chains, low productivity and underdeveloped infrastructure. Support structures, such as extension services and market mechanism, that could enable increased yield, quality and access to markets are also deficient.

### 1.1.2. The Nature of Land Tenure in Cambodia

Land is an extremely important economic resource or asset in Cambodia. From her research on land tenure in Cambodia, Guttal (2006) expressed that land is valued as an emblem of rootedness, belonging and stability, and is widely regarded as the very basis of social organization in the country. For Cambodian people, land is a livelihood as 85 percent of the population relies on agriculture, forest, rivers, and other natural resource extraction for their primary livelihood (Ministry of Environment [MoE], 2004). The major economic uses that dominate rural land include subsistence agriculture, fisheries and foraging in surrounding forests and woodlands as a main source of food, employment and income for Cambodia's rural communities.

Land tenure in Cambodia remains insecure for many of the rural poor, and acts as a disincentive for productive investments and limits access to credit. The majority of farm producers in Cambodia do not have officially documented land titles, and therefore have diminished capacity to secure affordable lines of credit for either crop production or land improvements, for example irrigation. Generally small farmers can not access credit from formal sector lenders such as commercial banks because they do not have collateral, such as land certificates, and also feel insecure to take loans. They usually borrow money from money lenders with high interest rate<sup>2</sup> and become indebted if the crop fails. The severe shortage of agricultural credit in Cambodia reduces farmers' capacity to continue to increase productivity and output, due to their inability to adequately finance purchases of improved higher-yielding seed, fertilizer, pesticides, farm machinery, and grain storage equipment (Shean, 2010).

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<sup>2</sup> Based on interview with villagers, the interest rate of MFIs in Cambodia is 30 percent/ month and interest rate from money lenders may higher than MFIs. Farmers usually borrow money from MFI to buy plough machine or expand their business.

According to the 2004 Cambodia Socio-Economic Survey (CSES), secure land tenure in the form of a land title certificates increases land rental value by 57 percent, sale value by 38 percent, crop yields by 65 percent and household consumption by 24 percent (WFP, 2007). In other words, land titling is important not only to secure land ownership, but also to increase the value of the land and to then get access to credit and investment.

However, in Cambodia, possessing land titles alone does not always equal an absolute increase in land security; there are cases, for example, where corrupt government officials have fabricated fake land certificates that are then used by powerful people to steal land from their legal owners.<sup>3</sup> Based on Guttal's findings (2006), one of the most common ways for rural communities to lose their land is through land grabbing by wealthy and powerful individuals and private companies. Most rural families do not have legal land titles or certificates that assure them of security of tenure. Individuals and families with money and political connections are able to purchase fake and backdated land titles and certificates that "prove" their legal claims to specific plots. Often, the person making the claim is a person in authority, such as the village or commune chief, or a well connected functionary from the district or province, and is supported by the local police and courts.

Land inequality has risen in Cambodia, indicated by the fact that between 1999 and 2003-2004 the share of land held by the poorest two-fifths of the population reduced from 8.4 percent to 5.4 percent, while that of the richest one-fifth rose from 59 to 70 percent (United Nation Development Program [UNDP], 2007). Land distribution has been unequal in Cambodia since the allocation of land in 1989, which was portioned out according to the number of working family members. As a result, larger households received more land and those with a smaller labor pool, particularly female headed households, received a smaller area of land. Since then, pressures on the land have been exacerbated by population growth, leading to smaller plot sizes in

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<sup>3</sup> Interview with NGO Forum on Cambodia, July 6, 2010

densely populated areas. The Cambodia people who spend the Khmer Rouge in refugee camp along the Thai-Cambodian border also started to return in the 1980s, many of the original villages of birth looking for agricultural lands to start a new live. Furthermore, Cambodia's economy is not growing sufficiently fast enough to provide employment or self-employment opportunities for the increasing number of households that are short of land or landless to reduce their poverty and secure their livelihoods (WFP, 2007).

As a key asset for rural people, land is very important for the majority of Cambodia's population who make a living as small-holding farmers and that meet the majority of their food and income needs directly from the land. Access to land and the ability to use it effectively are of great importance for poverty reduction, economic growth and private sector investment, as well as for empowering the poor and ensuring good governance. Evidence from several countries demonstrates that access to land is effective in helping rural households generate income (De Janvry, *et al.*, 2001). At the same time, access to land is neither the only strategy out of poverty, nor is it sufficient to guarantee escaping poverty.

### **1.1.3. Contract Farming in Cambodia**

Based on the Draft Sub-decree on Contract Farming (2010), the Cambodian government defines contract farming as “the implementation framework of contract based agricultural production with the intention to strengthen, take responsibilities, build trust, and fairness between producing and purchasing party ensuring prices, purchases, and supply of agricultural crops both on quantity and quality, increasing processing and exporting of agricultural crops to contribute to national economic development and poverty reduction of the people parallel to the policies and strategies of the Royal Government”.

At present, there are a limited number of examples of contract farming in Cambodia, despite its potential for dramatically increasing farmer incomes and productivity. One example of rice contract farming in Cambodia, examined by Cai, *et al* (2008), is the case of organic rice farmers contracted by the *Angkor Kasekam Roungreung* (AKR) company, which has a rice mill located in Kandal Province. Cai *et al*'s study contrasted contract farmers and non-contract farmers to determine the factors leading to the farmers' decision to sign a contract with the company. The study then assessed their performance under the contract farming agreement. Cai *et al*'s research, however, was limited to a statistical analysis of the economic performance of contract farming. It did not study the wider changes to farmers' livelihoods or changes in land ownership as a result of contract farming.

The general perspective about contract farming in Cambodia, including amongst non-government organizations (NGOs), is that participating farmers are happy with the contract farming system.<sup>4</sup> The farmers receive high-quality rice seeds, learn new techniques from the company, and gain a higher price for their crops compared to the domestic market price. However, farmers are concerned about the safety of the pesticides that they are sometimes required to use in the contract farming, despite that the company teaches them how to use them. Yet, this assessment is based loosely on circumstantial evidence, and more systematic study is required before reaching such conclusions.

#### **1.1.4. The 2008 Food Crisis as a Driver for Investment in Contract Farming in Cambodia**

The most visible driver of recent land concessions and other agricultural investment globally was the 2008 food crisis (Grain, 2008). The main causes of the food crisis in 2008 were increased pressures on natural resources, water scarcity, export restrictions imposed by major producers when food prices were high, and high

demand for bio-fuel. Countries that depend heavily on food imports for their food security are now searching the world for cheap overseas farmland to grow food and then export it home. Governments from the Gulf States, including Kuwait and Qatar, as well as South Korea, Japan and China, for example, are looking to stabilize their food supplies by acquiring foreign land for food production in the hopes of averting domestic social unrest and political instability over food price and supply. These investments are targeted towards developing countries where production costs are much lower and where land and water are more abundant. Other factors that influence these investments include geographic proximity and climatic conditions for preferred staple crops.

Cambodia has become a major target of this global agricultural investment trend. Cambodia has land deals under negotiation with several countries, worth as much as US\$3 billion in agriculture-related foreign investment and apparently involving millions of hectares of land (Grain, 2008). The largest reported potential deal so far in Cambodia is a bilateral deal with Kuwait involving a US\$546 million loan in exchange for a 70-90 year lease covering a "large area" of rice lands in Kampong Thom province, where Kuwait will organize production for exporting rice back to Kuwait. The size of the land concession has been estimated at somewhere between 50,000 and 130,000 hectares (Goodman, 2009). Qatar has also been expressing its interest in similar deals.

Most of these deals, however, are still at the negotiation stages and provisionally appear to involve leasing rather than outright purchasing of agricultural lands, where Gulf state companies will pay rent for the land, provide inputs, and contractually agree to buy the products. However, it remains unclear if the Gulf state investment form would be purchased at a fixed future rate or prevailing market prices, and what percentage would be paid to local farmers who actually work the lands (Asia Times, 2008).

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<sup>4</sup> Pers. comm., NGO Forum on Cambodia, 2010

## 1.2. Statement of the Problem

Food importing countries that have land and water constraints but are rich in capital are interested in farmland investment through contract farming deals to guarantee food supply at a price that is good for them. This situation appears to be leading towards a new trend for investment in Cambodia by Kuwait and Qatar in rice contract farming system. Rice contract farming is not widespread in Cambodia at present, but following Kuwait and Qatar's growing interest in this investment it is anticipated to expand widely in the near future.

The expansion of rice contract farming has potential costs and benefits. Contract farming has the potential to inject much needed investment into agriculture and infrastructure in rural areas. It could also enable farmers to access credit, inputs, technical advice and marketing information directly from food processors or market intermediaries thereby reducing risk and increasing profit. Yet, the disadvantages of contract farming include loss of farmer bargaining power and a potential reduction in profit margins, increased emphasis on improving production quality, and, ultimately, less secure livelihoods (Agrifood and CamConsult, 2006).

Local governments often favor contract farming in the belief that it will produce greater spillover or linkage effects with the local economy (Setboonsarng, 2005). Governments at the national level also generally support contract farming, believing that it will attract more investment, increase GDP and reduce poverty in rural areas. However, an export-orientated rice contract farming system could also undermine local and national food security, since the food grown under export-orientated contract farming is committed for consumption overseas rather than domestically.

Taking account of the factors above, this study examines an existing organic-rice contract farming system in Cambodia and the changes that it has brought to

farmers' livelihood. The study also examines land tenure security changes that result from contract farming, and factors resulting in both participation and exclusion from contract farming.

### **1.3. Research Questions**

My main research question is “Under what conditions will organic-rice contract farming be beneficial for farmers' livelihood in Cambodia?”

To investigate this question, I will look at the case of *Angkor Kasekam Roun groeung Co. Ltd.*, an organic rice export business headquartered in Kandal province and with its contract farming operations extending into surrounding provinces, including Kampong Speu province where this study's fieldwork is undertaken. I ask the following sub-questions:

1. What are the changes that occur to farmers' livelihoods security due to the adoption of contract farming systems in a community?
2. What are *Angkor Kasekam Roun groeung Co. Ltd.*'s terms and conditions for organic-rice contract farming? Who is included and excluded from organic-rice contract farming, why, and what are the social implications?
3. What changes in land tenure security occur in a community as a result of contract farming?

### **1.4. Objective of Research**

1. To determine the terms and conditions of organic-rice contract farming and identify who joins and who doesn't, the reason behind why farmers choose to participate in contract farming, and to examine the social implication of exclusion from contract farming.
2. To examine the positive and negatives impacts of organic-rice contract farming system on farmers' livelihood.



3. To examine the changes in land tenure in a community because of contract farming.

### **1.5. Hypothesis**

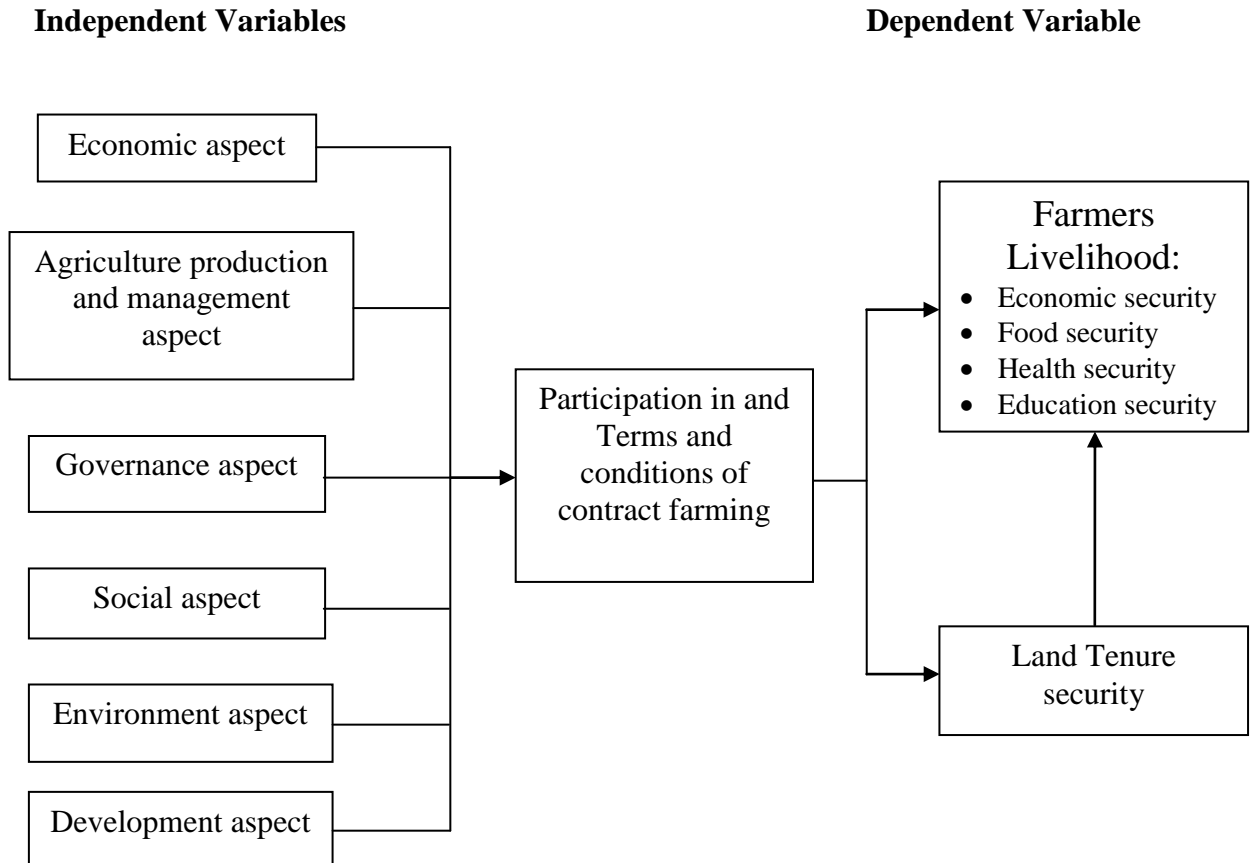
The experience of organic-rice contract farming in Cambodia to date has improved participating farmers' livelihoods (strengthened technical ability, access to markets, inputs, and access to credit and access to high yield seeds) and incomes (due to guaranteed price and increased yields). Organic-rice contract farming has also resulted in more secure land tenure system for contract farmers as the government has issued land titles to these farmers.

Organic- rice contract farming has at the same time increased inequality in the community, as it has led to the marginalization of small farmers who do not have the capital or productive assets, such as land size or family labor. This is resulting in changing land ownership, where large scale farmers are buying small farmers' land to expand their business leaving small farmers landless.

### **1.6. Conceptual Framework**

The conceptual framework below takes account of the concept of farmers' livelihood, participation in and the terms of contract farming, and land tenure (see figure 1.1). The dependent variables are farmers' livelihood and land tenure, whereas the independent variables are participation in and the terms of contract farming including: economic aspect; agricultural production and management; governance aspect; social aspect; environment aspect; and development aspect. The unit of analysis is the community level, and the research is founded on interviews with focus groups, individual farmers and key informants.

**Figure 1.1 Conceptual Framework Model for Contract Farming System,  
Farmers' Livelihood and Land Tenure**



### 1.6.1. Participation in and terms and conditions of contract farming

The existing literature on contract farming identifies several major areas where contract farming can provide benefit for farmers, but the choice to participate or not in a contract arrangement is in principle the farmer's decision. To measure participation in contract farming, I will use the framework recommended by Oxfam (2008) that assesses the positive and negative impacts of contract farming for farmers. Oxfam identify six aspects, namely: economic, social, agricultural production and management, governance, environment and development aspect.

- **Economic aspect:** *To assess whether farmers are better off or worse off in their livelihood, and to identify economic gains or losses from contract farming.*

The economic aspect examines the pricing mechanism and profit margins between farmer and buyer of the contract farming scheme, and the implications of price and profit margins on the farmers' livelihood. Another important economic aspect of contract farming is access to credit and farming inputs. Participating in contract farming will guarantee farmers access to credit and farming inputs from the company, and farmers then repay the debt after the harvest season. Access to credit and input, however, can be risky for the farmer because they will be bound to the company and if they become indebted, due to crop failure for example, then they may be required to become laborers for the company or the farmer may try and default on the loan. Moreover, how farmers' access the market under contract farming arrangements is also vital in determining farmers' income and profit. Gaining access to new markets is one of the main reasons for farmers to participate in contract farming, because farmers are in general concerned about profit and the marketing of their product. However, it is still an open question as to whether contract farming in Cambodia increases market access for the farmers or results in farmers becoming tied to a single buyer that is then leading towards agricultural monopolies in Cambodia.

- **Agricultural production and management aspect:** *To assess the agricultural production and management transition as a result of contract farming.*

This aspect includes understanding farmer empowerment, and considers both technical and managerial skills. Contract farming could be beneficial to farmers since they gain access to new technologies, learn new farming techniques and increase their farm business managerial skills. However, contract farming can also undermine farmers' power in price and profit-sharing negotiations. Farmers may also become dependant on the company for

access to inputs, credit and the market. This aspect also accounts for changes in cropping patterns, and whether this change is beneficial for farmers or not and how this affects farmers' incomes. Contract farming usually changes the cropping patterns from traditional methods to modern ones, and farmers often need to learn about how to use fertilizers, pesticides, and other agricultural inputs. Sometimes the company does not allow farmers to plant other crops except the crop stipulated by the company, and this situation can affect farmers' food security. Another important consideration in this aspect is output quality and productivity, which is important in determining the price of the commodity on the market. Usually the company has a quality standard that the farmers are required to meet. If the farmer fails to meet this standard, the company will reduce the purchase price or will not accept the crop. This situation is difficult for farmers because on the one hand the farmers are expected to sell the crop to company, but on the other hand farmers should be ready to find another market if the company rejects their crop. During periods of agricultural transition, whether contract farming increases the quality and productivity of output compared to traditional farming needs to be critically questioned.

- **Governance aspect:** *to assess whether the contract farming mechanism is fair or not, the nature of the agreement, and the nature of the relationship between the company and contracted farmers.*

This aspect considers the transparency of the contract - especially for price determination - as it is important for farmers to know their rights and obligations under contract farming and to make sure that they have enough information about the terms and conditions of contract farming. This aspect also considers whether the company provides sufficient information on market price and access to the market. Another governance aspect is the bargaining power of the farmers under contract farming. Are farmers joining contract-farming schemes voluntarily or through coercion? How they become involved is an important question to answer to then understand contract farmers'

bargaining position, which in turn is important to determine whether farmers are being exploited by the company or not. Small farmers need to know not only that they gain financially from the contracting company, but also that they are not being cheated out of a fair share of the total profit through company manipulation. Usually contracting companies do not allow farmers to mobilize or establish farmer associations because they prefer to solve disputes individually, which at the same time disempowers farmers and weakens their bargaining position.

- **Social aspect**

Contract farming is often reported to be accompanied by undesirable social and cultural changes in the communities where it is established. These issues are linked to modifications in the patterns of employment, land ownership and social status, amongst others. This aspect therefore includes working conditions and the rights and obligations of farmers under contract farming arrangements, and asks whether contract farming exploits the farmers or not. In principle, under contract farming farmers have a better living standard and well-being because they get access to credit, inputs, and training services from the company. However, whether contract farming in all its forms and under all conditions is beneficial and increases farmers' living standards and wellbeing needs to be critically examined. For example, are small farmers with only a little land able to partake in contract farming, and if so are they more vulnerable to experiencing negative consequences as a result? In terms of employment, it is important to examine how contract farming is shaped by gender considerations and size of family. Does the company prefer to cooperate with female- or male-headed households and do they prefer families with many or few members? Another element to be considered here is land consolidation and land conflicts as a result of contract farming. The social and cultural changes in a community as a result of contract farming also need to be understood. Under this aspect, the implication of contract farming on land

tenure security is also considered, and this is discussed in more detail in section 1.6.3.

- **Environment aspect.** *Impact on the environment as a consequence of the new production patterns brought about by contract farming.*

The change from traditional farming to intensive and monocrop agriculture required by contract farming impacts the environment because often cash crop farming is a form of high input production in terms of the use of water and agrochemicals, such as fertilizer and pesticides.<sup>5</sup> Changes in agricultural cropping patterns in the long run can become a threat to the quantity and quality of fresh water, because some crops, including organic-rice, require a lot of water. Another potential environmental damage from more intensive production is declining soil fertility, soil erosion and pollution from agrochemicals.

- **Development aspect**

The development aspect amalgamates all of the above issues of contract farming and considers whether the overall implementation of contract farming is beneficial or not for the company and farmers. This aspect includes the exclusion of small farmers who only own small plots of land. Another aspect is fairness of the financial agreement between company and farmers, asking whether the terms and conditions of contract farming guarantee fairness in the financial agreement. It highlights the importance of maintaining a contract farming governance mechanism that deals with issues of transparency, fairness, effectiveness and efficiency, accountability, and participation.

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<sup>5</sup> This study focuses on organic rice contract farming, however, which by definition uses less agrochemical inputs in rice cultivation.

- **The role of farmer networks in negotiating with contract farming companies**

Contract farming is, strictly speaking, a contractual arrangement between farmers and companies. The formal relationship between individual farmers and the company in negotiating a contract farming scheme is, however, not the only relationship that effects the terms of contract farming. Farmer networking and sharing information with each other is an important factor in a farmers' decision whether to participate or not in contract farming, and can also play an important role in the success of contract farming arrangements through the power of organized group actions (Setboonsarng, 2008). Through networking, farmers can learn about the contract farming mechanism, how to bargain with the company and make sure that they are not cheated by the company. Other sources of information, for example from the media or the government, can also play an important role. Solidarity in the community and a sense of farmer empowerment is important to guarantee that contract farming arrangements do not bring negative impacts for farmers. A strong community identity can serve to generate social capital and facilitate a constructive relationship between farmers and company.

- **The Role of the State in contract farming**

Government can also play a key role in contract farming. Singh (2005) concludes that benefits from contract farming for a farming community also depend on the government's policies for agricultural development. Government can play a significant role in contract farming by providing appropriate laws of contract, and fair legal institutional mechanisms that allow local groups to organize and then be recognized as a legal entity, for example in the form of cooperatives (Vermeulen and Lorenzo Cotula, 2010). By creating a cooperative to serve as an intermediary or negotiator, the voices of farmers can be heard as a collective force that protects individual farmers since they gain more bargaining power in contract negotiation with the company.

Another positive role that the government can take is to promote fair contract farming through developing and disseminating model contracts for key crops, and by monitoring the performance of contracting companies, as well ensuring that the rights of both parties are recognized and protected under the law. The government can also provide credit support, tax benefits and other policy incentives to encourage responsible companies to engage in contract farming. Land titling for farmers engaged in contract farming would also create greater security for farmers and strengthen contract farming arrangements.

### **1.6.2. Farmers' Livelihood and Resilience**

Livelihoods in many rural areas of the world are complex and dynamic; perhaps the one constant is year to year uncertainty of survival. Marschke (2005, quoting De Haan and Zoomers, 2003) states that the concept of livelihood is about individuals, households or groups making a living, attempting to meet their various consumption and economic necessities, coping with uncertainties and responding to new opportunities. Chambers and Conway (1992) suggest that “a livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities, assets and entitlements, while not undermining the natural resource base”.

To measure the impact of contract farming on farmers' livelihood changes, in this study I use the Household Livelihood Security Approach (HHLS). According to this framework, household livelihood security is defined as “a family's or community's ability to maintain and improve its income, assets and social wellbeing from year to year” (Lindenberg, 2002). This approach was introduced by Christian Action for Research and Education (CARE), one of the world's largest international relief and development non-profit organizations, and today the approach is widely used by both Non Government Organizations (NGOs) and donor agencies.



The HHLS approach consists of five household livelihood security areas: economic security, food security, health security, education security and empowerment (Lindenberg, 2002).

- **Economic security** is important to understand the sources of household income and ownership of durable assets, which are the main indicators that reflect the wealth and socio-economic status of rural households. This aspect includes income, assets and entitlements
- **Food security** is important to understand the availability or limited or uncertain availability of nutritionally adequate and safe foods or the limited or uncertain ability to acquire acceptable foods to stay healthy and do activities. This aspect includes food and nutrition
- **Health security.** Being healthy is important for people to live because when sick people cannot work or conduct their daily activities. Providing health facilities accessible to every household can reduce health risks. This aspect includes access to clean and safe water, sanitation facilities around the house, and access to health care facilities.
- **Education security.** Education level is very important in family decision making and has significant effects on the extent to which a household is able to meet its requirements and manage family difficulties. This aspect includes the considering the level of education and access to education facilities.
- **Empowerment** refers to increasing the spiritual, political, social, or economic strength of individuals and communities. It often involves empowered people that develop confidence in their own capacities. In contract farming, empowerment is very important to strengthen the bargaining position of farmers and the wider community, where community members can participate and share their ideas and voice about current issues regarding contract farming. This aspect includes community participation and the density of civic organization.

In this study, I do not analyze each aspect deeply due to time limitations. Instead I selectively emphasize the aspects that are relevant to changes in farmers' livelihood as they participate in contract farming.

### **1.6.3. Changes in land tenure/ land ownership**

Land tenure insecurity is one of the most important factors in creating rural poverty and food insecurity and is highly related to the resilience of farmers' livelihood. **Land tenure** is the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land (FAO, 2002). According to Maxwell and Wiebe (1999), land tenure is the system of rights and institutions, i.e., rules invented by societies to regulate behavior that govern access to and use of land and other resources. Rules of tenure define how property rights to land are to be allocated within societies. They define how access is granted to rights to use, control, and transfer land, as well as associated responsibilities and restraints. In simple terms, land tenure systems determine who can use what resources for how long, and under what conditions.

Ensuring land tenure security and issuing title deeds for cultivated land and community land can encourage farmers to invest in sustainable agricultural practices as well as to conserve and rehabilitate community land. Owning land and being secure in its tenure provides a means of livelihood to farmers, facilitates access to credit markets, leads to higher investments in children's education, and gives rural communities more voice and ability to negotiate (World Bank, 2006).

Securing land tenure has been regarded as one of the most important policies of the Cambodian government, as reflected in the 2001 Land Law. According to the policy, the government of Cambodia supports accelerating the issuance of land titles, establishing a legal framework to enforce property rights, and setting up territorial master plans and zoning rules, including a comprehensive program for the registration

and titling of land (MoE, 2004). In practice, however, the process has been contested and on occasion has resulted in conflict between communities and the government (Guttal, 2006; NGO Forum on Cambodia, 2007). According to Cambodia's 2001 Land Law, land classification and ownership rights are divided into (Sovannarith *et al.*, 2001):

- **State Property**, which includes "State Public Property" such as forests and protected areas where the state seeks to conserve these resources and does not permit them to be exploited for commercial purposes, and "State Private Property" such as land designated for economic and social development that is used for both commercial exploitation and redistribution for social purposes
- **Private Property**, which incorporates land that is permitted to be owned by individuals and communities

I use the analytical framework prepared by the Cambodia Development Resource Institute (CDRI, 2000) to understand the land ownership changes in a community. The key variables that are investigated are:

- 1) Land ownership and land consolidation: According to the 2001 Land law, land can be owned as a private property by the individual or the community, and can be either residential land or agricultural land. As noted above, land ownership is important, for example for inheritance. However, land ownership can change as a result of the introduction of a contract farming system as small farmers sell their land to large land owners and wealthier farmers.
- 2) Land tenure status: A reliable land tenure system is important to guarantee farmers access to land and use other resources. Contract farming systems sometimes encourage the government to issue land titles, strengthening land tenure security. On the other hand, if farmers do not have a land title, it threatens to increase landlessness and inequality because contract farming provides an incentive for politically powerful people to buy or occupy land through illegitimate means.

## 1.7. Research Methodology

This research uses multiple qualitative and quantitative methods to explain the impact of organic-rice contract farming on Cambodian farmers' livelihood and land ownership changes. For the quantitative methods, semi-structured questionnaire were used to interview individually 16 respondents for contract farmers and 20 respondents for non-contract farmers, as well as in interviewing key informants. For qualitative method, I use descriptive analysis of information collected through open-ended questions in focus group discussions and observation in the villages studied.

I conducted field work in Cambodia for 3 weeks in Phnom Penh and Kampong Speu Province. During the field work, I coordinated with a local NGO called the Center for Education and Development of Agriculture in Cambodia (CEDAC) to facilitate the field work and for translation. While in Kampong Speu Province, I interviewed contract farmers and non-contract farmers to collect information about the terms and condition of contract farming and the local-level impacts of the contract farming system, and interviewed key informants, including the village heads and the commune chief in the province. In Phnom Penh, I focused on gathering data about the status of contract farming in Cambodia and the current issues about rural farmers' livelihood from government officials, research centers, and non-government organizations.

Kampong Speu is a large province with abundant land for both agricultural production and industry. The total land area is about 7,017 km<sup>2</sup> with a total population is 716,517 person in 2008 (MAFF, 2008). For administrative purposes, this province is divided into 8 districts. This province is the main palm sugar and palm wine producer in Cambodia. The province also produces mangoes, watermelon, cassava and cashew nuts. Kampong Speu's total rice production in 2008-2009 was 272,621 tons, harvested from 110,751 ha of land giving an average rice yield of 2.462 ton/ha (MAFF, 2010).

### 1.7.1. Data Resources

This research uses both primary and secondary sources of information. For primary sources, I conducted in-depth interviews with key informants, organized Focus Group Discussions (FGD), and undertook individual interviews using semi-structure questionnaires. Secondary sources of information include journals, textbooks, newspapers, articles, research findings, publications, and reports. The key informants' interviews are listed in Table 1.1.

**Table 1.1: Key informant interviews**

Phnom Penh	Kampong Speu
1) Government official: Ministry of Agriculture, Forestry and Fishery (MAFF) 2) NGOs: NGO Forum on Cambodia, Center for Education and Development of Agriculture in Cambodia (CEDAC), Cambodia Economic Association (CEA), Farmer Nature Network (FNN), Social Action for Cambodia (SAC) 3) Research Center: Cambodia Development Resource Institute (CDRI), Cambodia Institute for Research and Rural Development (CIRD). 4) <i>Angkor Kasekam Roungroeung Co Ltd.</i> *	1) Government officials in Kampong Speu province 2) Village head 3) Commune council chief

\* The company declined to be interviewed

### 1.7.2. Understanding Terms of Contract Farming and Farmers Participation in Contract Farming

To understand the terms and conditions of the contract farming system in place and other aspects surrounding it (see section 1.6.1), I interviewed key informants using semi-structured questionnaires adapted from Oxfam's questionnaire

(Oxfam 2008). Key informants included the village heads and local government officers (Table 1.1). Then, I verified this information from the key informants during the FGD and individual interviews with contract farmers.

To measure farmers' participation in organic-rice contract farming and the cost and benefit of contract farming, I conduct FGD (further details on FGD guideline see Appendix C) with farmers, followed by in-depth interviews with 16 participating farmers using semi-structured questionnaires adapted from Oxfam's questionnaire (see Appendix A). I also interviewed 20 non-participating farmers with semi structured questionnaires to determine why they are not participating (see Appendix B).

### **1.7.3. Understanding changes in farmers' livelihood as a result of contract farming**

To measure the changes that occur due to organic-rice contract farming and its implications, in terms of farmers' livelihoods and long-term issues, such as farmers' health and the environment, I used the Household Security Livelihood Approach (HHLS) by Lindenberg (2002) (further details in section 1.6.2). I interviewed key informants and 16 farmers participating in contract farming using semi-structured questionnaires and observed their living condition, such as housing conditions, ownership of durable assets such as motorbikes, car, TV, livestock, furniture, and the number of family member and their occupation.

### **1.7.4. Understanding changes in land tenure**

To identify the changes in land ownership in the community due to organic-rice contract farming, I used semi-structured questionnaires adapted from CDRI's methodology (details in section 1.6.3). The questionnaires are designed to determine

the current land tenure situation in the community and changes in land access, land ownership, and land tenure status after contract farming. I conducted face to face interviews with key informants, and undertook FGDs with community members, then verified the information from the key informants and the FGD with the 16 participating farmers and 20 non-participating farmers that I interviewed individually.

### **1.8. Significance of Research**

There is a lack of research on organic-rice contract farming in Cambodia, including on the costs or benefits to farmers' livelihood and on land tenure changes resulting from organic-rice contract farming. This study, therefore, examines the experience of contract farming in Cambodia at present, in anticipation that it will become far more widespread as a result of the impending Kuwait and Qatar investments in rice contract farming that is already at an advanced stage of negotiation and possibly even underway. This study also contributes new research findings and fills a knowledge gap on farmers' livelihood and land ownership changes as a result of organic-rice contract farming, since research to date has not dealt with these issues.

As a result, this research can help the Cambodian government and others to predict the food security situation in Cambodia if Kuwait and Qatar investment in rice contract farming proceeds, and the potential changes in land ownership and the social issues that might arise. It also seeks to determine how contract farming can be undertaken in a way that is beneficial to both farmers and the companies, with the risks and benefits shared fairly. Furthermore, Cambodia is now preparing its Sub-Decree on Contract Farming and this research was undertaken to contribute more information about organic rice contract farming in Cambodia to this process.

### **1.9. Research Scope and Limitation**

The main limitation experienced in this study was the time constraints in conducting the field research. I was only able to survey contract farmers and non contract farmers of the *Angkor Kasekam Rongroeuung Co. Ltd* and conduct in depth interview with key informants, although it would have been useful to widen the breadth of the research to investigate other companies and other provinces. Access to official information and the company was also a constraint; the company did not make itself available to be interviewed. Although I speak conversational Khmer, there was a language barrier in understand the farmers' ideas during the in-depth interview. Also, because the company had not given official permission to study its operations, this limited the extent of field work that could be undertaken.

### **1.10. Ethical Consideration**

Ethical considerations are an important aspect of any study. This research did not contain any risk/ potential threat or danger to the subjects of the research. The purpose of the research was explained to both the company (although I was unable to conduct a full interview with them) and the interviewees beforehand. During the field work, I asked permission from village head before doing interview in the village and received consent from all the interviewees, who joined the interview voluntarily.

I also respect the privacy of the interviewees and keep their names anonymous and confidential. All the facts, figures and documents of the government, NGOs, research institutions analyzed in this study are represented objectively. All sources of information are cited accordingly and data and quotations have not taken out of context. On completing the thesis, I will share my research findings and the report with CEDAC, who will also share it the communities with who I have worked.



## **CHAPTER II**

### **LITERATURE REVIEW**

This section discusses about how export-orientated organic rice production has become a driver of major investment in Cambodia. It explores the key issues surrounding contract farming systems including definitions of contract farming, models of contract farming, the costs and benefits of contract farming, and reasons why farmers may participate in contract farming. Finally, it summarizes research undertaken to date in Cambodia on changes to farmers' livelihoods and land tenure due to contract farming.

#### **2.1. Organic Farming in Cambodia**

The "organic farming movement" is still very new and relatively small in Cambodia compared to neighboring Southeast Asian countries, such as Thailand. It is estimated that only 0.2 percent of the paddy rice field, or around 5,000 of a total of 1.8 million rice farming households, have converted certified organic farming in Cambodia (Makarady, 2007). According to Makarady (2007), organic produce grown in Cambodia includes rice, vegetables, mangoes, banana, pineapple, coconut, palm oil, soybean, mung bean, maize, sweet potato, ground nut, sesame, cattle, chicken, black pepper and fresh water fish.

In Cambodia, however, there are many agricultural operations which could be classed as organic since many Cambodian farmers have never used chemical fertilizers or pesticides. Instead, they are using compost for fertilizer and botanical forms of pesticide. However, despite the fact that Cambodian farmers also use chemical fertilizers for infertile soils, and even then only small amounts, it is difficult to quantify the scale of these activities outside of official certification arrangements and formal market mechanisms.

Although the absolute size is still relatively small, the production of certified organic rice is booming in Cambodia; hundreds of Cambodian farmers are switching to certified organic production because of the high demand in Western countries, as well as the rising domestic demand. Cambodian rice farmers, long vulnerable to fluctuating prices and heavy regional competition from Thailand and Vietnam, are looking to organic rice to help them carve out a niche in the international market, particularly from the United States (US) and European Union (EU). Moreover, in Cambodia, many farmers have experienced debt because they have taken credit to buy chemical fertilizers. These factors support farmers to convert to 'certified' organic farming, because it reduces expenditure on fertilizers, increases the sale price of the rice, and improves farmers' health through reduced exposure to agrochemicals.

In organic farming, farmers are encouraged to use animal manure and plant compost instead of chemical fertilizers, and this is a requirement of organic certification. Although this is often more labor intensive, the resulting monetary savings can be used, for example, to grow other crops or send children to school. If farmers use natural fertilizer, this can also prevent the illnesses associated with using agrochemicals; At present, many farmers and farm workers in Cambodia get sick because they can't read the labels and direction on the chemicals (Middleton and Makarady, 2004). Some of the agrochemicals used in Cambodia, such as Methyl Parathion, are so dangerous that they are prohibited in many other countries. Using chemical fertilizer in the long run can also deteriorate the soil fertility and pollute fresh water resources.

In 2005 fully certified organic rice was harvested for the second time. Organic-farming cooperatives established by CEDAC in Kampot and Kampong Thom provinces have been able to sell around 250 tons of organic rice for a price premium of between 10 and 20 percent higher compared to conventional rice price (Makarady, 2007).

## **2.2. Contract Farming Systems**

The broad definition of contract farming is a binding agreement between private companies and (groupings of) local farmers (Vermeulen and Lorenzo Cotula, 2010). Contract farming represents an agreement between farmers and contractors (mostly processing and/ or marketing firms) for the production and supply of agricultural products (Cai *et al*, 2008).

Under contract farming agreements, the growers or local farmers should grow and deliver to the contracting company agricultural produce of a specified quantity and quality at an agreed date. In exchange, the company provides upfront inputs, such as credit, seeds, fertilizers, pesticides, and technical advice, all of which may be charged against the final purchase price, and agrees to buy the produce supplied at a specified of price (Eaton and Shepherd, 2001; Setboonsarng, 2008; Vermeulen and Lorenzo Cotula, 2010). The contract farming scheme agreement not only specifies the inputs and outputs however, but also the conditions for production and marketing, includes provisions about the product quantity and quality, its price, the production technology (in terms of trainings and/ or inputs provided to farmers) and other elements, such as risk sharing and transaction conditions (Oxfam, 2008).

### **2.2.1. Contract Farming Models**

Contract farming arrangements can be structured in a number of ways depending on the crop, the objectives and resources of the contractor, and the experience of the farmers (Eaton and Shepherd, 2001). Sriboonchitta and Wiboonpongse (2008) argue that the type of contract farming model should be dictated by the market demand, production and processing requirements, and the economic and social viability of larger-scale versus small-holder production. The contractor could be a private firm or a cooperative. Vermeulen and Lorenzo Cotula

(2010; quoting Eaton and Shepherd 2001) classify contract farming schemes into five broad models:

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

Eaton and Shepherd (2001) report that the “intermediary contract farming model” is one of the most predominant in Southeast Asia, including in Thailand and Indonesia. For example, in Thailand large food processing companies and fresh vegetable entrepreneurs purchase crops from individual “collectors” or from farmer committees that have their own informal arrangements with farmers (Oxfam, 2008). Contracts are generally signed at the time of planting on a one year basis that specify how much produce the company will buy and at what price. Some contract agreements also mention the quality standards required for the produce and the penalty when the produce does not fulfill the standard requirement.

### 2.2.2. The Costs and Benefits of Contract Farming

A review of the literature reveals many considerations of costs and benefits for farmers and companies that enter into contract farming agreements.

- *Costs of contract farming to the farmer*

There are many reports documentation how farmers have become worse off through contract farming arrangements that argue in particular that it is an elaborate way of taking advantage of small-scale farmers. Most of these cases identify underlying questions about the fairness of contract farming for farmers (e.g. Oxfam, 2008). Regarding the costs of contract farming, Oxfam (2008) categorized the negative impacts of contract farming for farmers into:

- **An unbalanced partnership**

The unbalanced power relationship between the company and the farmers can induce farmers to be exploited under monopsony control, whereby farmers are tied to one purchaser. Generally, the company possesses more information about prices and the markets available, greater resources, and more organizational ability than small farmers. Porter and Phillip-Howard (1997, Quoted from Little, 1994) argue that contract farming is exploitative when it involves a highly unequal power relationship so that contract farmers are essentially relegated to the status of hired hands.

Moreover, small-scale farmers are not in a position of negotiation a fair contract with the company and have to follow the terms and conditions set by the company, regarding for example the quality of seed, the inputs available, payment delays, price setting and profit sharing. This circumstance occurs because there is limited or no negotiation space and farmers are isolated and rarely gather in trade unions or farmers association. Studying contract farming in Thailand, Delfroge (2007) found that whilst many contract farmers seem to be willing to raise their concerns collectively, the only place where they meet is the gatherings held by the company itself.

- **Agricultural transition**

Contract farming can also introduce new agricultural systems that sometimes do not prove to be beneficial. Bijman (2002) found that contract farming limits farmers' flexibility and control over farming practices by binding them to a particular crop or livestock enterprises, so they cannot adjust their production mixes to benefit from overall market opportunities. Setboonsarng (2008) concludes that the transition from subsistence farming to cash crop production has the potential to render households more vulnerable to food shortages and nutritional loss. Farmers also face greater production risk in the case of newly introduced crops, which may take time to adapt to a new growing environment and also requires new growing techniques that are new to farmers and must be learned.

- **Farmer's empowerment and independence**

Generally, contract farming increases farmers' empowerment through agricultural extension, management skill transfer, and spill-over effects in the community. Some observers note, however, that farmers actually lose their managerial autonomy and independence under contract farming arrangements (Oxfam, 2008). According to Wiboonpoongse (2003), some farmers lose their entrepreneurial skills because they are under the close supervision of the company. Through a growing dependence on the company, farmers may also lose their power to make decisions over what kind of crop they want to plant, to negotiate price, to acquire inputs, to manage their crops, and market their output.

- **Risk to indebtedness**

Contract farmers bear the risk of indebtedness to the company, as the company advances credit to the farmer that is then deducted from payments for the purchased crops. Based on the contract farming agreement, farmers agree to sell a specified output to the company. If the crop fails, however, farmers are still required to repay the cost of farm inputs (seed, fertilizer, pesticide, etc) to the company without receiving a payment for the lost crop, resulting in indebtedness to the company. Risk

of indebtedness is higher for long-term investments like tree crops, or where contract farming introduces new crop to an area as the yield may turn out to be lower than expected (Eaton and Shepherd, 2001).

- **Social and cultural issues**

Oxfam (2008) also identifies that contract farming can bring undesirable social and cultural changes to communities where it is established. These issues are linked to modifications in the pattern of employment, land ownership and social status. Another concern is that contract farming companies tend to prefer to work with medium- and large-scale growers, leading to the marginalization of smallholders who have a small plot of land thus exacerbating rural inequality (Singh, 2002).

- *Costs of contract farming to the company*

From the company's perspective, a degree of supply risk may remain, particularly linked to insufficient or inconsistent quality and quantity of product or default by contract growers (Glover and Kusterer, 1990). Furthermore, contract farming may be difficult to enforce when farmers become tempted to sell produce on to the open market if market prices rise above contract prices. For example, farmers may sell the provided fertilizer for cash or sell the produce immediately after harvest to gain money faster, to seek higher prices or to avoid repaying the company. The limited literacy and education of some small farmers may also increase risks for the company, and a widely dispersed smallholder population also increases the company's transaction costs.

- *Benefits for the contract farmer*

Contract farming also provides certain advantages for the contracted farmer. Contract farming enables smallholder farmers to gain access to credit, seeds and technologies, which can stimulate the transfer of technology and management skills (da Silva, 2005). Procuring inputs through the company may also generate economies

of scale that may be passed through to the farmers. Credit may also be accessed directly through a third party bank using the contract farming contract as collateral (Glover and Kusterer, 1990; Eaton and Shepherd, 2001; da Silva, 2005; Vermeulen and Lorenzo Cotula, 2010). According to World Development Report (WDR, 2008; Miyata and Minot, 2009), contract farming also enables smallholder farmers to participate in new high value product markets and improves quality standards, thus increasing and stabilizing farmer's income by accessing these markets.

- *Benefits for the contract farming company*

Contract farming can also be beneficial for companies because contract farming can deliver benefits typically associated with large-farm production systems, including increased output with reduced input costs. Smallholder farmers are often the most efficient agricultural producers and they have advantages over large farms in terms of reduced labor-related transaction costs, including hired labor costs and the costs of managing large-scale farming operations. Evidence indicates that family farming units tend to achieve comparable or even better productivity than large-scale commercially-managed farms because of the incentive structures and the comparative advantage in micromanaging farming operations (da Silva, 2005). Moreover, contract farming companies have a comparative advantage in the marketplace in terms of product quality. Shepherd (2001) and da Silva (2005) summarized the farmers' and firms' benefits in contract farming in the table 2.1 as follows:



**Table 2.1. The Benefits of Contract Farming for Company and Farmers**

<b>Benefits for the company</b>	<b>Benefits for the farmers</b>
<ul style="list-style-type: none"> <li>• Production reliability and shared risk</li> <li>• Quality consistency</li> <li>• Reduced input and labor costs</li> <li>• Flexible production capacity</li> <li>• Promotion of farm inputs</li> <li>• Political acceptability</li> <li>• Access to agricultural credit, financial incentives and subsidies</li> <li>• Overcoming land constraints</li> <li>• Better inputs (for high value, labor intensive, agricultural enterprises)</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of inputs and production</li> <li>• Access to credit</li> <li>• Guaranteed and fixed pricing</li> <li>• Income stability</li> <li>• Access to reliable and/ or new market</li> <li>• Possibility to make use of by products and residues</li> <li>• Introduction of appropriate technology</li> <li>• Skill transfer</li> </ul>

Source: Adopted from Eaton and Shepherd, 2001

### **2.2.3. Reason Why Farmers Participate in Contract Farming**

The existing literature on contract farming identifies several major areas where contract farming can provide benefit for farmers, but the choice to participate or not in a contract arrangement is in principle the farmer's decision. Farmers' expectation from contract farming is essentially a satisfactory regular cash income and, in some cases, the availability of inputs (notably credit facilities and fertilizers) which are normally unavailable or that are more expensively obtained through other sources. Based on these expectations, farmers voluntarily participate in contract farming.

In addition, a satisfaction from both farmers and firms over contract farming, in particular profitability, is certainly a key factor in the continued participation in contract farming (Sribooncitta and Wiboonpongse, 2008). According to Vermeulen and Cotula (2010), the higher prices and a more stable income provided by contract farming - that is linked to access to export markets and to the guaranteed purchase

prices - have proved to be attractive to many farmers who join contract farming arrangements.

Based on farmer survey in Thailand by Sribooncitta, *et al.*, (1996), farmers joined contract farming for a number of reasons, namely: Market certainty for their produce; Price stability; Provision of input on credit; After observing their neighbors gaining a higher income; Opportunities to gain knowledge and technical skills; Others reason, including a lack of alternatives and expectation of higher price.

### **2.3. Rural Livelihoods in Cambodia**

Cambodia remains one of the world's poorest countries. Despite relatively good economic indicators, poor social indicators – notably high infant mortality and poor access to safe water – mean that Cambodia is ranked only 137 of 182 countries in the 2009 Human Development Index (HDI) (UNDP, 2009). Based on Cambodia's Socio-economic Survey (CSES) conducted in 2003-04, the proportion of those subsisting below the poverty line was on average 35 percent.<sup>6</sup> The incidence of poverty in rural areas was 39 percent, while in urban areas outside Phnom Penh it was 25 percent and in Phnom Penh it stood at just five percent.

Despite the above statistics, the poor in Cambodia are not an easily definable group to an outsider. Food security, land holdings and levels of debt are embodied in local categories of *neak min* (people who have); *neak kuesom* (people with enough), *neak kroo* (poor folk) and *neak toal* (poorer than poor) (Turton, 2000). Conway's study on Cambodia (1999) concludes that a more accurate way of representing poverty and wealth is in terms of ownership of assets, but that these factors vary

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<sup>6</sup> The "poverty line" is defined as the amount of money per day required to purchase 2,100 calories of food, plus the money required for non-food purchases needed to meet basic needs. In Cambodia, in 2003-4, the poverty line was 1,629 Riels for Phnom Penh, 1,214 Riels for other urban areas and 1,036 Riels for rural areas

considerably from community to community depending on their importance to the predominant livelihood strategies found there. For instance in one village, where nonagricultural activities are important, motorcycles and electronic goods defined the rich. While, in another village, where the rich were more dependent on rice production and foraging, wealth was related to assets such as ploughs, carts, baskets and crop sprayers.

Beside a high poverty level in rural areas, people also lack health and educational services, with most of them relying on provincial centers for health care needs. Regarding food security, although Cambodia produces enough food to feed its people, 20 percent of the country's population remain food-poor and do not get the minimum average of 2,100 calories per day required to satisfy basic nutritional needs (NHDR, 2007).

#### **2.4. Land and Forest Tenure in Cambodia**

For most Cambodians, economic and social life is tied to land and natural resources. The large majority of the population lives in rural areas, engaged in traditional land-based social systems and dependent on agriculture, fishing, and forests for existence. The use and customary claims by rural people on land and natural resources – on forests and fisheries, in particular – have not been recognized or incorporated in the laws, policies, and institutions of the state, and in resulting official procedures and actions of the government. Moreover, the dissemination of information and education on land matters is limited and knowledge of land tenure and land rights amongst Cambodian people is very poor (MoE, 2004).

### **2.4.1. Land Tenure Security in Cambodia**

In Cambodia peoples' ownership of land depends on the historical experiences. During pre-colonial times, all land was formally owned by the sovereign and households were free to cultivate as much land as they wished. Between 1864 and 1953, the French colonial government introduced the system of formal private property rights, but succeeded only in limited areas. After independence in 1953, the Cambodian government retained the French system, but limited progress was made on the formal registration of property rights. During the Pol Pot regime (1975-1979), all land was collectivized, and records, cadastral maps, and titles destroyed. After the fall of Khmer Rouge in 1979, a new system of collective land management was implemented. Privatization of land started gradually in the mid 1980s and private property rights to land were officially reintroduced in 1989.

In 1989, the Government of the State of Cambodia (SOC) started to allocate agricultural land to rural communities and established ownership rights for residential land up to 2000 square meters and possession rights for cultivated land of less than five hectares (Guttal, 2006). Households with agriculture as their main occupation received land according to household size and land that was not used was reverted to the state. However, land distribution in 1989 was unequal since land allocation was according to the number of working family members. As a result, larger households received more land and those with a smaller labor pool, particularly female-headed households, have subsequently been at a greater disadvantage (Agrifood and CamConsult, 2006).

In the 1990s, Cambodia was catapulted into a free market economy, private property regimes started to define land use and ownership, and an unregulated land market started to burgeon. The Constitution that the new Royal Kingdom of Cambodia (RGC) adopted in 1993 provided for legal private and public (state) ownership of land, and a Land law introduced in 1992 extended private property

rights to Cambodian citizens. Through this law, people could apply for land certificates to confirm occupancy and use rights in rural areas and for ownership rights for dwellings in Phnom Penh (Guttal, 2006).

The 2001 Land Law effectively ends the occupation and possession of land in the private domain of the state. Its reforms include extending private ownership rights to both residential land and agricultural land and officially certifying ownership in a government document known as a title certificate (Sar, 2010). It enables delegation of land administration from the central to capital/provincial level and charges the land registries with responsibility for cadastral mapping and titling of all State and private land in the Kingdom. It also enables the creation of a single land registry authority with the duty of registering all land in the Kingdom. However, the accurate estimation is difficult to do due to a lack of information concerning land classification and titling. About 80 percent of Cambodia's land area is under state ownership with the remaining 20 percent in private ownership (MoE, 2004).

There have been various critiques of the Cambodia land titling project (Land Management and Administration Project [LMAP]) supported by the World Bank. The concerns of the NGO Forum on Cambodia (2003) focuses on questions of prioritization within the Cambodian land reform agenda. NGO Forum suggests that the priority for land titling should be targeted towards those communities whose resource tenure is most threatened, for example those living near forestry or land concessions along national roads or in semi-urban areas. Further, NGO Forum advocates for more effort behind land redistribution for landless farmers and the safeguarding of Common Property Resources (CPR). For much of the rural poor in Cambodia, land tenure is not specifically threatened (as a result of the stipulations in the 2001 Land Law) and farmers are not necessarily blocked from access to credit using land as collateral (Barney, 2005).

In Cambodia, not more than 14 percent of the estimated 4.5 million applicants have received formal certificates of ownership since the early 1990s (CDRI, 2007). Among these applicants, female-headed household possess less land certificates than male-headed households. This can be explained by the fact that high transaction costs (e.g. time, official/ unofficial fees) associated with obtaining land certificate can not be afforded by poorer households, which include many single female-headed households (So, *et al.*, 2002). Moreover, some people lack trust in the ability of government officials to enforce land rights, especially when powerful actors are involved. As a result, people with wealth and rank are far more likely to seek land titles than people without such resources (CDRI, 2007). Instead of certificates, most people in rural areas use other documents to demonstrate ownership, such as receipts for land certificate applications, land surveys, and land documents issued by commune or village heads.

#### **2.4.2. Forest Tenure Security in Cambodia**

Forest tenure in Cambodia reflects the features, issues, and ambiguities that characterize land tenure in general. Under current and proposed forest law, all "forest" in Cambodia is the public property of the State. Jurisdiction and authority for forests is generally assigned to the MAFF Department of Forestry and Wildlife; however, designated protected areas are assigned to the Ministry of Environment, and wetland and mangrove forests are assigned to the MAFF Department of Fisheries (MRC, 2010).

Forest land in Cambodia is State property under public domain. These resources are categorized as Common Property Resources (CPR)<sup>7</sup>, and includes woodlands, all grasslands and most flooded areas around Tonle Sap which are

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<sup>7</sup> Common Property Resource (CPR) lands are generally used by those living in the surrounding to collect a variety of materials for household use and food items, including resins, herbal medicines, fire woods, wild animals, and house building materials (MoE, 2004).

traditionally open access areas<sup>8</sup> (Ministry of Land Management, Urban Planning and Construction [MLMUPC], 2001). As common property resources, forests provide rural households a means for diversifying their subsistence and income-generating activities, optimizing their labor resources during different seasons, and "insuring" against the risks of agricultural failures. Moreover, people with no land, little money for capital investments, and few alternative livelihood opportunities can still often collect forest products for subsistence.

The land use and ownership status of common property resources are poorly defined legally because there is no clear delineation between State property and public assets (MoE, 2004). Moreover, the State property ownership status of CPRs is not in line with their historical user-dependency by people within villages that are organized at the commune level. For instance, current forest law and forest management practice by the State does not recognize customary tenure<sup>9</sup> and private ownership of 'forest' (Mekong River Commission [MRC], 2010). As a result, the absence of title registered land within CPR areas makes the tenure status of CPRs very fluid (MoE, 2004). Such land can become concentrated in the hands of people or groups that can afford informal payment or have a capital to seize the forest land. Even when communities did try to expand their farmlands by clearing new forests, their attempts would often be thwarted by businessmen from outside colluding with local and provincial authorities who clear the forest instead (Guttal, 2006).

Encroachment into common property forest areas has increased in recent years due to limited arable land for agricultural, a growing population of young, landless people who have limited employment and livelihood options in their home areas, and improving road networks that facilitate access to the forest. Forest land has changed to

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<sup>8</sup> Open access areas are referred to as a 'commons' because everyone shares right of use. Open access provides greater social equity because it avoids creating classes with access and without access; however, it often results in excessive use when too many people have access, which leads to resource degradation, decreased productivity, and therefore declining shares for everyone or sometimes called "tragedy of the commons"

<sup>9</sup> Customary tenure is the set of rules, understandings, and processes which determine land use – and the benefits from land use – based on cultural traditions in society. Customary tenure reflects traditional beliefs and political organization, over which the modern nation and its legal system is an overlay.

informal privatized ownership for people who have power and the ability to expand their farmland by clearing the forest. From MoE statistics, in the last 30 years, cleared land increases from 27 percent to 39 percent of the country's total surface area, with a decrease in forest cover from 73 percent to 61 percent (MoE, 2004). The implications of a loss of local forest resource access are often serious.

## **2.5. Summary**

Contract farming is a type of agricultural production under contractual arrangements between farmers and companies, specifying one or more conditions of production and/ or marketing of an agricultural commodity. Contract farming enables smallholder farmers to gain access to market, credit, seeds and technologies, which can stimulate the increasing farmer's income. Contract farming can undermine farmers' bargaining power, change in crop pattern, and loss of decision making, and marginalization upon land ownership. In Cambodia, contract farming can be used to increase farmers' livelihood since the majority of the farmers in rural areas lack of extension services from government, limited access to basic education and health facilities, and blocked to access credit from formal financial resources due to the absence of land ownership. Contract farming enables farmers to increase their income, fill the gap for farmers to improve their agricultural productivity, access extension services from the company, and securing land title to access credit/ loans.

Land is a livelihood for Cambodian people. The large majority lives in rural areas and relies on traditional land-based social systems and dependent on agriculture, fishing, and forests for existence. Unfortunately, land tenure in Cambodia remains insecure for many of the rural poor, and acts as a disincentive for productive investments and limits access to credit. The Cambodian people lack of information and education on land matters and limited knowledge of land tenure and land rights amongst Cambodian people. Moreover, divergences between customary and statutory resource tenure systems are not clear.



## CHAPTER III

### PROFILE OF STUDY AREA AND ANGKOR KASEKAM ROUNGREUNG

#### CO. LTD CASE STUDY

This chapter details a profile of the study area in Kampong Speu province, and *Angkor Kasekam ROUNGREUNG* Company (AKR) as a case study. Kampong Speu was selected as the target study area because AKR contracts with farmers in 5 districts in this province, namely: Kong Pisei, Basedth, Samrorng Tong, Phnom Sruoch, and Oudong (AKR, 2005). AKR has been established for almost 10 years, and its main business is organic rice processing and export. AKR works with more than 30,000 contract farmers, and is the only company in Cambodia that has a formal rice contract farming agreement with the government to export organic rice (Hang Chuon Naron, 2008). As such, AKR is a perfect company to study to understand the context and practice of organic rice contract farming in Cambodia and its impact on contract farmers' livelihood.

#### 3.1. Overview of Kampong Speu province

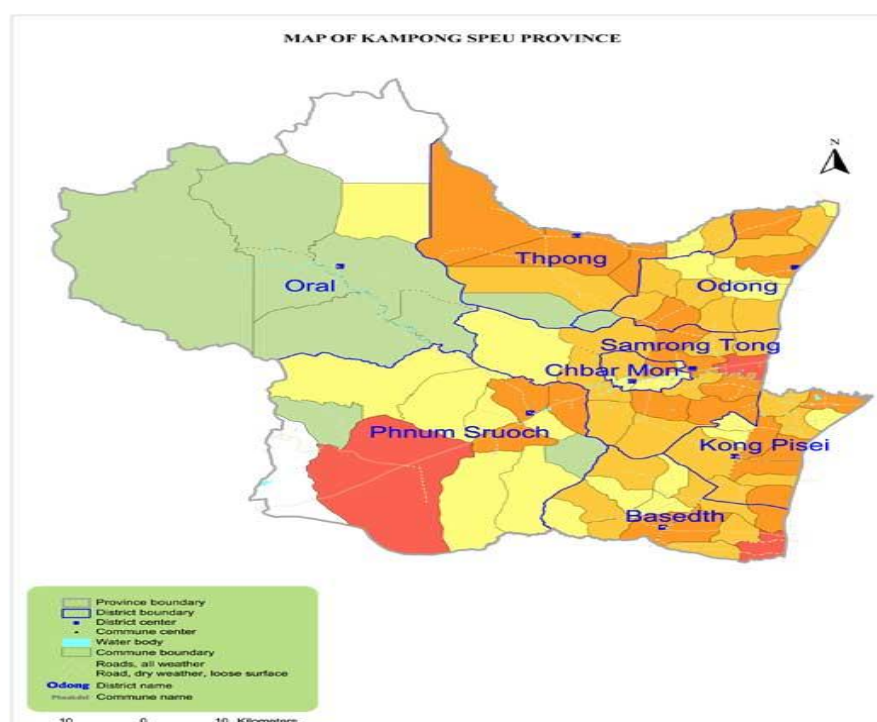
*Speu* is the Khmer word for star fruit, although Kampong Speu province is actually famous for its palm sugar and wine. Kampong Speu is located 40 kilometers (km) to the west of Phnom Penh and can be reached within an hour by motor bike from Phnom Penh. It borders with Kampong Chhnang and Pursat to the North, Phnom Penh to the East, Kampot and Takeo to the South and Koh Kong to the West. It is located along the main transport corridor between Phnom Penh, the country's capital, and Sihanoukville, Cambodia's only deep sea port.

With a large area of paddy fields in the east in lowlands and in the upland forested areas in the west, Kampong Speu is a province with abundant land suitable for both agricultural production and industry (United States Agency for International Development [USAID], 2008). Kampong Speu's total land area is about 7,017 km<sup>2</sup>

and it is classified as a rural province. Its economy depends on rice farming, fruit cropping and fisheries, especially the local economies of rural households that depend on agriculture and its related sub-sectors. The main commercial commodities produced in this province are rice, palm sugar, and wine. It also produces mangoes, watermelon, cassava and cashew nuts. In the fishery sector, the province produces fish and shrimp for local consumption and the export market. Kampong Speu is also famous for its beef soup since many villagers breed cows.

Based on general population census in 2008, the total population in Kampong Speu is 716,517 person, consisting of 347,594 males (48%) and 368,923 females (52%) (National Institute of Statistics [NIS], 2008). That women make up the majority of the population may be a reflection of Cambodia's turbulent past; many of them are widows or female-headed household who live below the poverty line with limited access to basic health, education, and social services (European Commission for Humanitarian Aid Office [ECHO], 2002). The people of Kampong Speu live in 8 districts, composed of 87 communes and 1.358 villages (see Map 3.1).

**Map 3.1. Kampong Speu Province**



### 3.2. Overview of Tangkrouch Commune, Samrorng Tong District, Kampong Speu province

Tangkrouch commune is located in Samrorng Tong district, Kampong Speu province (see map 3.1). This commune is located 15 km from Kampong Speu city and can be reached in an hour by motorbike. This commune was selected as the study area because AKR works with many farmers in this commune. Field work was undertaken in three villages in Tangkrouch commune, namely: Kres Thom, Thum Phiem, and Chong Tnol. AKR Company has been working with farmers in these villages since 2004.<sup>10</sup> The characteristics of the three villages are detailed in table 3.1 below.

Tangkrouch commune has 21 villages with total of 1,733 households, the majority of which are Khmer people.<sup>11</sup> The total land area of the commune is 3,675 hectares (Ha), including 1,532 Ha of rice field and 1,447 Ha of forest land. Only 142 of the 1,733 households have officially issued land titles. Despite the fact that the majority of the villagers do not possess land titles, according to the commune chief, conflict over land seldom occurs in this commune.

**Table 3.1. Characteristics of Village Study Area**

Characteristic	Kres Thom	Thum Phiem	Chong Tnol
Number of households	74	70	40
Number of contract farmers (households)	More than 20	7	5
Average age of household head	48	51	40
Average education	Grade school	Grade school	Grade school
Average number of family members	6	6	7
Average area of agricultural land	4 Ha	3 Ha	3 Ha

<sup>10</sup> Interview with contract farmer 12, Thum Phiem village, July 14, 2010

<sup>11</sup> Interview with commune chief. Tangkrouch commune. July 15, 2010

From table 3.1, **Kres Thom** village has 74 households and more than 20 farmers are contract farmers. On the average, the head of household age is 48 with grade school education background, and an average of 6 family members. Some families has more than 8 family members, so they have enough labor to work their farms and also they also dare to cut into forest land to expand their rice field area, as well as to collect wood to make charcoal. The average paddy field area in Kres Thom village is 4 Ha per household, ranging between 2 and 5 Ha.

**Thum Phiem** village has 70 households, but only 7 farmers have entered into a contract farming agreement with AKR company. Farmers in this village have less land than Kres Thom village, with an average of 3 Ha per household. The villagers were not so keen to participate in contract farming this year because of the high requirements stipulated by the company.

**Chong Tnol** village has 40 households and only 5 households who have become contract farmers with AKR. The total agriculture land in this village is 68 ha. An interview with village head<sup>12</sup> revealed that the farmers did not sign a contract with the company this year because there had been little rain, so they were worry about the rice yield. Moreover, a limited number of farmers wanted to test the rice seed from the company first to determine whether is it good or bad.

### **3.2.1. Social and Economic Status in the case study villages**

In order to categorize the general wealth status in three villages study area, I use observations of annual income, land holdings, fixed assets ownership, and household goods data to categorize the groups of villagers into 4 general categories,

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<sup>12</sup> Interview with village head. Chong Tnol Village. July 15, 2010

namely: *neak mien* (people who have); *neak kuesom* (people with enough), *neak kroo* (poor folk) and *neak toal* (poorer than poor). In the villages surveyed<sup>13</sup>:

- *Neak mien* have houses on stilts with tiled roofs, made from cement and wood, have a lot of rooms, good toilets, larger plots of land, and greater quantities of medium and large livestock. They also have ploughing machines, vehicles, water pump machines, and household goods such as TVs, refrigerator, and generators. They produce enough rice for their own consumption, have a better income, and have a good education (at least grade 9). They have visions for the future and want to expand their businesses.
- *Neak kuesom* houses are small, thatched, made of wood and cement, tiled roofs, and some are ground dwelling rather than on stilts. They have not more than 2 ha of land and a small amount of cattle. They have vehicles, such as motor bikes, and some household goods, such as TVs and generators.
- *Neak kroo* houses are small, made from wood, ground dwelling, roofs from wood or leaves, cement floor, and lack of sanitation facility.
- *Neak toal* houses are made from bamboo with leaves for the roofing, soil floors, and they do not have kitchen and sanitation facilities. The very poor households usually do not have land, cattle, and assets. They rely on hired labor as a source of income and are prone to food insecurity.

The general challenges for households in the villages studied are the lack of piped water, no electricity, and poor sanitation infrastructure. Some houses do not have a proper bathroom and toilet. All households collect clean water for cooking and drinking from rainfall and keep it in large jars. Each house generally has more than three large jars to store water. Besides rainfall, they can also recover clean water from the groundwater using a water-pump. Only a limited number of villagers can access this water because not everybody have water pump at their houses and rely on water from stream or ponds. Therefore, sometimes water must be brought in from

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<sup>13</sup> Personal observation, 3 villages study area, July 12-17, 2010

neighboring villages. The villagers also lack access to electricity since there is no electricity transmission from Kampong Speu city to these villages. For lightning at night, the villagers often use generators (for less than 6 hours). Some better off household have TVs/ radio and water pump machine, but poorer household do not have these assets.<sup>14</sup>

The infrastructure in these villages, such as road, school, and health care facilities, is poor. The access roads to the villages are soil roads and are very difficult to pass in the rainy season. The villagers use ox-carts to transport their paddy rice, or seedlings and fertilizer to the rice fields. Wealthier households (*Neak mien*) have at least 2 cows to help them to cultivate the rice fields, while poorer households (*Neak kroo*) do not have any cattle. Beside ox-carts, the villagers also use motor bike for transportation if they own one.<sup>15</sup>

Education and health services for these villages are located quite far from the villages themselves. The nearest health center is in the *Wat* (Pagoda), but for serious illnesses the villagers must go to the hospital in Kampong Speu city or Phnom Penh. Children attend a primary school that is about 1.5 km away, traveling by bicycle or walking. Only a few children can attend high school because the school is 10 km away. The girls in these villages have a higher incidence of high school dropout than boys since the high school is located far away from the village and the parents worry for their safety.

Kres Thom, Thum Piem and Chong Tnol village of Tangkrouch commune receives very little aid from the government.<sup>16</sup> The government has helped the commune to build roads and some other communal infrastructure. There are also some non-government organizations (NGOs) working in the commune, including the

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<sup>14</sup> Personal observation, 3 villages study area, July 12-17, 2010

<sup>15</sup> Personal observation, 3 villages study area, July 12-17, 2010

<sup>16</sup> Interview with commune chief, Tangkrouch commune, July 15, 2010

Center for Education and Development of Agriculture in Cambodia (CEDAC), United Nations Children's Fund (UNICEF), Micro Finance Institutions (MFIs), and Srey Khmer. For example, CEDAC has helped establish a self-help group project in these villages, including MFIs that provides credit to farmers to start planting season or expand their business.

### 3.3. *Angkor Kasekam Roungreung (AKR) Co. Ltd*

The main rice contract farming companies in Cambodia are: *Angkor Kasekam Roungreung Co. Ltd. (AKR)*; CEDAC Enterprise which work in 8 provinces (Kampong Cham, Svay Rieng, Prey Veng, Kampong Chhnang, Takeo, Kampot, Kampong Speu, and Sihanoukville); *Apiwat Bandanh Kasekar (ABK)* which work in Takeo and Prey Veng provinces; Center for Livestock and Agriculture Development (CELAGRID), work in 5 provinces: Takeo, Kandal, Kampong Speu, Kampong Cham, and Pursat; and *Khmer Kasekar Roungreung (KKR)* which operates in Kampong Thom.

*Angkor Kasekam Roungreung Co. Ltd. (AKR)*, however, is the largest rice contract farming operation in Cambodia. AKR is a private firm established in 1999 by Cambodian shareholders. The company's headquarters and milling house are located on 15 hectares of land, about 3 km off National Road 4 in Ang Snuol village, Kandal province. Its main business is to export **non-certified organic** *Neang Malis* rice, a fragrant, long grain, high-quality rice variety from Cambodia to overseas markets at a premium over the competing Jasmine rice from Thailand (Agrifood and CamConsult, 2006; Cai, *et al.*, 2008). In order to compete effectively, AKR specializes in the production of organic *Neang Malis* rice and it enters into contractual agreements with farmers to produce this pure variety. AKR has sought to create a well-organized supply chain with a network of farmers and suppliers under contract farming schemes in several provinces of Cambodia (Kandal, Kampong Speu, Takeo, and Kampot) which were selected based on their agronomic conditions that are suitable for the

cultivation of *Neang Malis* (Cai, *et al.*, 2008). Contract farmers grow *Neang Malis* rice in a traditional way without chemical pesticides or fertilizers. On average, they are able to harvest approximately 2 tons of rice per hectare, or up to 3 tons per hectare with improved irrigation systems (AKR, 2005).

### 3.3.1. AKR's Contract Farmers

According to Cai *et al.*'s (2008) findings, at first AKR only worked with approximately 100 contracted farmers since the farmers did not trust the company's contract arrangement and the company's milling capacity was also low, until larger rice milling machines were acquired. However, based on interviews with villagers in this study, some farmers stated that they decided not to join AKR company at first because the rice seeds from the company were of poor quality at that time and they experienced delays in payments from the company, sometimes having to wait up to 2 days to receive payment from the company.<sup>17</sup> The total number of contract farmers has increased significantly from 27,346 in 2003 to 32,005 in 2004, but then reducing slightly in 29,403 in 2005 (see Table 3.2).

**Table 3.2. Growth of AKR Contract Farming 2003-2005**

Province	2003		2004		2005	
	Families	Percentages	Families	Percentages	Families	Percentages
Kampong Speu	22,668	82.89	27,122	84.74	25,181	83.4
Kampot	474	1.73	461	1.44	474	1.6
Kandal	1,520	5.56	1,666	5.21	2,752	9.1
Phnom Penh	169	0.62	259	0.81	1,604	5.3
Takeo	2,515	9.20	2,497	7.80	179	0.6
Total	27,346	100.00	32,005	100.00	30,190	100.00

Source: AKR, 2005.

<sup>17</sup> Interview with contract farmer 1, Kres Thom village, July 12, 2010



From the table above, more than 80% of the contracted farmers are located in Kampong Speu since it is located close to the AKR headquarter and rice mill, and the road infrastructure conditions are generally good (AKR, 2005).

Based on Agrifood and CamConsult (2006) study on AKR, the growing number of contract farmers is in response to improved operations by the company, including the installation of a new milling machine and a better management system that has reduced payment delays and prepared better contract arrangements. The farmers have also responded to the contract price, now that they know that AKR's *Neang Malis* organic rice price is higher than the conventional rice price. In addition, farmer's knowledge about growing organic rice is also improving since the company has approached them and they got information from other sources including CEDAC, government officials, and the mass media.

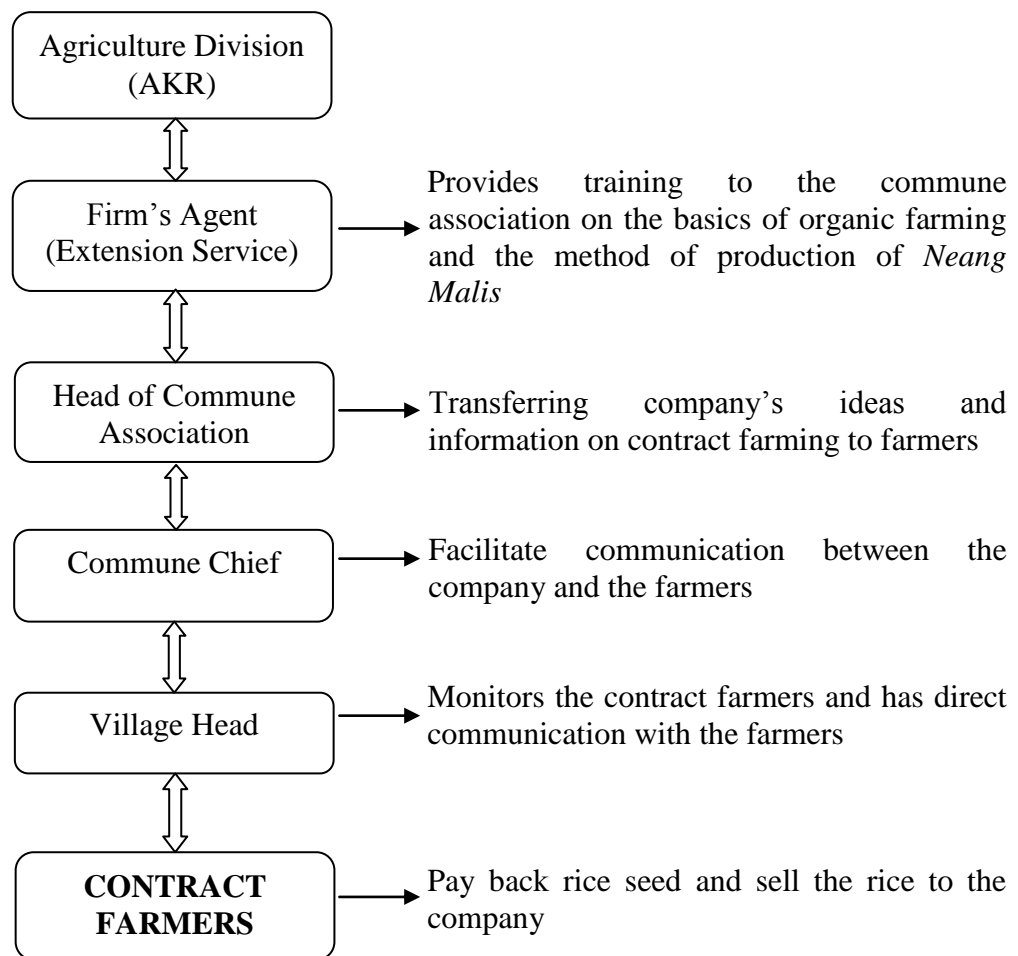
### **3.3.2. Overview of AKR's Contract Farming System**

Generally, before becoming contract farmers, farmers in Kampong Speu province plant conventional rice. They start to learn about contract farming when the company comes to their village and introduce them to their operation. During the visit, the company's staff explains about the contract farming system including the benefits for the farmers, such as how the company will provide rice seeds, a higher price, and technical training about how to grow the rice, and they also explain the terms and conditions of the contract itself. From the interview with contract farmers, if the farmers are interested to join the company's arrangement they become a contract farmer voluntarily.

As a first step to becoming a contract farmer for AKR, the farmer must apply to be a member of the commune association, which in turn requires approval by the association head. Once approval has been granted, the farmers are subject to strict contractual obligations that are detailed in the contract paper. The contract farmer can

also sign directly with the company and then automatically becomes a member of the association. After signing or affixing their thumb print to the contract paper, each farmer enters into an agreement with AKR voluntarily and commits to closely follow the company's instructions and only grow the company's rice seed (see figure 3.1).<sup>18</sup>

**Figure 3.1. AKR Contract Farming System Hierarchy**



In general, most farmers do not only plant company rice seed, but also their own rice seed for domestic consumption.

<sup>18</sup> Interview with contract farmer 2, Kres Thom village, July 12, 2010

### 3.3.3. AKR Commune Association

In order to enforce contracts and monitor the farming process, AKR establishes commune associations (Cai, *et al.*, 2008). The commune association is the locus where contracts are signed, seeds are distributed, basic technical advice is provided, and paddy is collected for AKR. Since they work at a lower hierarchical levels, to the commune association concentrates on issues of production, building trust, and contract enforcement. Each commune association consists of an association head, commune chief, village head, and village representatives who are members of the association (see figure 3.1).

Working in the farm-level base, the commune associations routinely observe the progress of the members and report every stage of production, including plowing, transplanting, water management, and harvesting to AKR (Cai, *et al.*, 2008). Besides monitoring the farmers' work, the association has several roles. This includes reporting to AKR any issues related to the production process, such as drought, flood, disease, insect and other significant issues that affect the production cycle. This is important because when the contract farmers default the contract and fail to repay the rice seed and sell rice to company due to the causes above, the company is less likely to punish the contract farmers.

The policy of the company is implemented through these associations and extension services are provided via its agents. According to Cai, *et al* (2008), at present these associations are tightly controlled by the company and have little bargaining power towards the company. From the interviews in this study, it is found that the company selects directly the representatives who become members of the commune association from the members of the commune council and make sure that they will able to work with company. This practice has given the association considerable influence and authority to enforce decisions. In return, the company provides profit sharing for the head and the association as an incentive, related to the

amount of rice sold to the firm. Based on interview with village head, the company provides 60 Riel/ kg of output to the village head and 70 Riel/ kg to the commune chief. But, the village head also receives a penalty if a contract farmer (under their supervision) fails to sell their output to the company and defaults on the agreement. The village head must compensate AKR 1,000,000 Riel (US\$ 250) per defaulting farmer.

Regarding this penalty, the village head selects the farmers in the village who want to join the contract. In order to reduce risk, the village head will choose farmers who have ability to fulfill company's requirements and little risk to default the contract. In this process, the social capital in term of trust between the village head and contract farmer is established. The contract farmers feel bad if their leader in the village gets into trouble with the company, so they will try their best to accomplish the contract requirements. On the other side, the village head will help his contract farmers if they have problem with the company and try to protect his villagers. This situation improves the mutual relation between the village head and farmers and discourages the contract farmer from defaulting on the contract. It seems that the company benefits from the existing local administrative and informal relationships as a form of "invisible capital" to enforce the contract agreement and monitoring the contract farmer at the farm level.

#### **3.3.4. AKR Contract Arrangement**

According to AKR's contract arrangement, the contracting begins when the company distributes the *Neang Malis* seeds on a credit basis during July and ends when they buy back the output during October-January of the following year.<sup>19</sup> After harvesting, the farmers are required to repay the credit seeds and transport the harvested paddy to the company's rice mills. The contract also states the amount of seeds that the farmer must return and the minimum guaranteed price above the

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<sup>19</sup> Interview with contract farmer 3, Kres Thom village, July 12, 2010

domestic rice market price, as well as the possible penalty to the farmer for non-performance of the contract. However, there is no clause in the contract on penalties for the company if it does not buy the rice at guaranteed price.

Interviews with the contract farmers revealed that the terms of the AKR contract schemes change year to year. The scheme in 2010 can be divided into two main points, requirement and punishment, as detailed below:

- **Requirement**

According to the AKR contract scheme in 2010, farmers are provided credit rice seed of 30 kg for 1 Ha of rice field, 60 kg for 2 Ha, or 90 kg for 3 Ha of rice fields (depending on how much area they commit to plant). After harvesting, the farmers are required to return the same weight of rice seeds to pay back this credit. In other words, for every 30 kg of seed distributed, they have to return 30 kg of rice seed back to AKR (see table 3.4). Then, as mention in the contract paper, the farmers also have to sell 1.5 ton of good quality rice to AKR, meaning that the rice is clean, dry enough, and of good grain. In exchange, the farmers are guaranteed a premium price for their paddy rice of 30 Riel higher than market price for each 1 kg of rice.<sup>20</sup>

**Table 3.4. AKR Contract Farming Requirements in 2010**

Rice seed credit	Required land	Rice seed which have to return	Contracted rice which have to sell	Guaranteed price
30 kg	1 Ha	30 kg	1.5 ton	30 Riel/ kg higher than market price
60 kg	2 Ha	60 kg	3 ton	
90 kg	3 Ha	90 kg	4.5 ton	

In addition, the company contributes 40,000 Riels (US\$ 10)<sup>21</sup> to cover the transportation costs of each farmer who transports rice by themselves, but usually the

<sup>20</sup> The price of rice in Cambodia is 1.300 – 1.500 Riel per kg for organic rice (approximately)

<sup>21</sup> US\$ 1 = 4,000 Riels

contract farmers in the village rent a truck and the company pays the cost. The company also maintains a private extension service which works with commune associations to promote proper farming techniques and to monitor supply.

This year's contract farming requirements are heavier and more difficult for members than previous years because they have to repay the rice seed and commit to sell to the company 1.5 tons of rice. In the previous contract schemes, the contract only mentioned that the farmer had to repay double the rice seed given to them on credit, but they were not committed to sell to the company 1.5 tons of paddy rice. According to FGD<sup>22</sup> with farmers in Thum Phiem village, the company first approached the village in 2004, and the farmers started to join the company in 2006. 32 contract farmers signed contracts in 2006 and they planted *Neang Malis* rice seed. The contract stated that the company would provide the farmer with 25 kg of rice seed and the contract farmers should pay back to the company 25 kg of rice seed after harvest. However, that year there were problems with drought and disease and the contract farmers were unable to sell rice to company. As a penalty, the contract farmers were required to return to the company double the amount of rice seed (50 kg) credited.

In the second contract in 2007, there were 32 contract farmers too and they planted *Champa Meas* (Golden Champa) rice seed. The company provided rice seed again and the contract farmers were able to sell rice to company, but this time in return for the credited rice they were required to pay back to the company 3 times the originally credited rice seed (75 kg). If the contract farmer failed to sell their output to the company, the farmer was required to compensate AKR at the rate of 100 Riel/ kg of output, based on the volume harvested reported by village head, the association or the company who evaluated the quantity of output. In other words, the company did not stipulate how much rice was to be sold to the company, but they did expect all output to be sold to them.

During the third year of contract in 2010, only 7 families signed a contract with the company and they planted *Kong Neang Soy* rice seed. The significant reduction in the number of contract farmers in the village this year is because the villagers were afraid about the high requirements from the company, namely the commitment to sell at least 1.5 tons of rice per hectare planted. The farmers were also worried about the rice yield from their farm this year due to drought. In the earlier years of contract farming, whilst the farmers were required to sell rice to company, the company was more lenient with their requirements because the farmers suffered from natural disasters (drought and disease) and the farmers' crops had failed. Moreover, it was also the early years of the company working in the village and they were still testing the rice seeds.

- **Penalty**

The company sets a penalty for contract farmers in order to prevent contract default and maintain output quality. Yet, the contract in 2010 does not mention any punishment for company if they default on purchasing the rice or reject the output from the contract farmers.

A penalty to the contract farmers occurs if the rice does not meet the rice quality standard required, or if farmers default on the contract. If the farmers' rice does not meet the standards required by company, the company will deduct 10 percent of the total rice weight in calculating its payment to the farmer. To maintain the output quality, AKR expects that the rice should be dry enough (contain 5 percent moisture), a mature grain, and clean with "no strange matters". However, these specifications are not clearly defined in the contract. As a result, some contract farmers misunderstand the quality standards expected by AKR and are unhappy when they get penalty.<sup>23</sup> To test rice quality, the company uses machines that cannot be understood by the farmers. In effect, the quality of rice is judged solely by the

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<sup>22</sup> Focus Group Discussion with village head, contract farmer and non-contract farmer, Thum Phiem village, July 16, 2010

company, which puts the farmers at a disadvantage and with virtually no bargaining power.

According to the 2010 contract, when contract farmers fail to sell their contracted rice as stated in the contract paper, they are required to pay to AKR US\$7 per 1 kg of rice seed not returned. Furthermore, if contract farmer default the agreement then the company will exclude them from membership to the commune association and bars their membership in future. This heavy penalty for contract farmers is hindered farmers to join with contract farming.

### **3.4. Summary**

Angkor Kasekam Roungreung (AKR) is the largest rice contract farming operation in Cambodia and its main business to export non-certified organic *Neang Malis* rice. The AKR Company works with contract farmers in 5 districts in Kampong Speu province. The majority of the company contract farmers come from this province because it has sandy soil which is suitable to plant *Neang Malis* rice seed and it is located near to the company rice milling. The social economic status of contract farmer in this study area shows that the villagers have unequal land distribution and most of them depend on rain fed cultivation. The education and health facility in these villages are poor and they lack of access to clean water and electricity.

In order to enforce contracts and monitor the farming process, AKR establishes commune associations which work in the farm level base. At present, these associations are tightly controlled by the company and have little bargaining power towards the company. Village head plays an important role in the commune association because he monitors the contract farmers and communicates directly with

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<sup>23</sup> Interview with contract farmer 4, Kres Thom village, July 12, 2010



the farmers. As a result, the company provides 60 Riel/ kg of output to the village head, but he also receives a penalty if a contract farmer (under their supervision) fails to sell their output to the company and defaults on the agreement. The penalty to village head discourage contract farmer to default the contracting and working hard to fulfill the company's requirement because they does want their village head get troubles with company. It can be concluded that the company benefits from the existing local administrative and informal relationships as a form of "invisible social capital" to enforce the contract agreement and monitoring the contract farmer at the farm level.

## **CHAPTER IV**

### **THE IMPACT OF CONTRACT FARMING ON CONTRACT**

#### **FARMERS' LIVELIHOOD**

Contract farming schemes need to be assessed to understand their impact on contract farmers' livelihood. In the current case study, it is found that the contract farmers are generally happy with their experience of contract farming to date, although they do face some day to day problems which have implications for their income. Based on interviews with 16 *Angkor Kasekam Roungreung* company contract farmers in nearby 3 villages, this chapter will examine the impact of contract farming on farmers' livelihood using the Households Livelihood Security (HHLS) approach. The first part describes the social economic characteristics of contract farmers and the second part analyzes the impact of contract farming on farmers' livelihood.

#### **4.1. Social Economic Characteristics of Households**

The fieldwork survey was conducted in July 2010 with 16 contract farmer and 20 non-contract farmer households in Kres Thom, Thum Phiem, and Chong Tnol villages, Tang Krouch commune, Samrorn Thong district. Table 4.1 presents the respondents' basic characteristics, which are discussed in more detail below.

##### **4.1.1. Household Head Characteristics**

On average, contract farmers' household heads are older (47.5 years old) and less likely to be female. Their educational background majority was grade school and their experience with contract farming an average of 4 years (table 4.1). From the field work, farmers who are older, have a lot of experience and are male-headed household tended to have large areas of land because they have better access to first hand information and are therefore in a better position to make decisions. In the

community, other farmers will follow the decisions of successful farmers in order to learn from their experience and to better their livelihoods. If one farmer succeeds with contract farming, other farmers are more likely to join afterwards.

**Table 4.1. Characteristics of Contract Farmers**

<b>Variables</b>	<b>Contract Farmers</b>	<b>Non Contract Farmers</b>
Average age of household head	47.5	39.0
(Max)	(69)	(53)
(Min)	(22)	(23)
Average education of household head	Grade school	Grade school
(Max)	High school	Vocational training
(Min)	Grade school	No study
Average years attended contract farming	4 years	0
(Max)	(6)	-
(Min)	(1)	-
Average number of family members	6 person	5 person
(Max)	(11)	(8)
(Min)	(4)	(2)
Average number of family members who works in agriculture	4 person	3 person
(Max)	(8)	(6)
(Min)	(2)	(2)
Average rice field (ha)	4,3 ha	1.4 ha
(Max)	(13)	(3)
(Min)	(1.5)	(0.1)
Average forest land (ha)	2.2 ha	0.87 ha
(Max)	(10)	(4.5)
(Min)	(0.5)	(0.5)
Average household annual income (million Riel per year)	6.87	2.70
(Max)	(12.0)	(9.0)
(Min)	(4.0)	(1.0)

#### **4.1.2. Family size**

On average, contract farmers have larger families and more land compared to non-contract farmers (table 4.1). The average family size for contract farmers is 6 persons per household, which is greater than non-contract farmers' average family

size of 5 person per household. The average number of family members who work in the agriculture sector for contract farmers and non-contract farmers is 4 and 3 persons respectively.

Based on the interviews with contract farmers, it was found that many of the family members, especially women and children, work in agriculture because they have a large area of land that requires more labor. They do not only work on the farm to cultivate rice and vegetables, but also animal rising including pigs and cows. Non-contract families have less family member who work in agriculture. Most of them rely on farming and hired labor for their livelihoods, including guarding cattle for other families, hired labor on others farms, working in garment factories in Kampong Speu and Phnom Penh, and cutting down trees in the forest.

#### **4.1.3. Farm Size**

Contract farming households have more land than non-contract farming households (table 4.1). On average, contract farmers have 4.3 Ha of rice field per household, while non-contract farmers have 1.4 Ha of rice field per household. There is unequal distribution of land in these villages because each household has different access to land and source of land (further details in chapter 6). Several recent studies, point to rising land inequality in Cambodia, citing Gini-coefficients in the range of 0.50 – 0.61 for agricultural land (CDRI, 2007). The reasons include demographic pressures, large unsettled populations, weak credit markets, and speculative land purchases by wealthy urban residents for investment purposes (So, *et al*, 2001).

Beside rice field area, contract farmers also have informal possession of more forest land.<sup>24</sup> Forest land is important for farmers because, once cleared, it has fertile soil and produces good rice yields whilst requiring little fertilizer. Therefore, contract

farmers clear their forest to plant AKR's rice seed in order to ensure that they get the high rice yields expected by the company. On average, contract farmers control 2.2 Ha of forest land per household, compared to 0.87 Ha per household for non contract farmers.

#### **4.1.4. Households Economic Conditions**

On average, contract farmers have a better economic condition than non-contract farmers. Contract farmers' average annual income is 6.87 million Riels<sup>25</sup>, which is greater than non-contract farming household whose average annual income is 2.70 million Riels. For contract farmers, the main source of income is from agriculture, while for non-contract farmers the income is derived from a mixture of agriculture (farm) and hired labor (off-farm) sources. Contract farmers have more land and higher rice yields (around 2.34 ton/ Ha) which also increase their income, more so because the company also offers a higher price for their rice. Non-contract farmer either own no animals or have only small animals, such as chickens, compared to contract farmers who tend to also own larger animals, such as ox, pigs or cows. Non-contract farmers also have less land area and less household goods than contract farmers.

#### **4.2. The Impact of Contract Farming on Farmer's Livelihood**

In order to analyze the impact of contract farming on farmer's livelihoods, this study uses the household livelihood security approach (HHLS) framework, which consists of 5 aspects, namely: economic security; food security; health security;

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<sup>24</sup> The nature of the "ownership" of the forest land is that once a family clears forest land for agriculture, then it is recognized informally as belonging to them (without a formal land certificate)

<sup>25</sup> This annual income is according to farmers' estimation. Moreover, there are many forms of non-monetary income, such as rice for household consumption, land, etc that are not captured by the measurement of cash income (i.e. a family could be resource rich, but cash poor)

education security; and empowerment. This approach is used to assess whether farmers' living standards are better or worse off due to contract farming.

#### 4.2.1. Economic Security

Each farmer has a different experience of higher incomes under contract farming. If the farmer that signs-up for the contract scheme is more hard working or more skilled than another, they will experience higher income. From in depth interviews, one contract farmer said:<sup>26</sup>

*“My farm produce is a good rice yield and the company never deducts a penalty from my rice because it is dry enough, so I always get a higher price, which increases my income. Since I joined the company, I have experienced a better living standard and can buy everything”*

Using an independent sample test and comparing the reported income of the 16 contract farmer and 20 non contract farmers, it is found that there is a significant income difference between contract farmers and non-contract farmers (table 4.2).

**Table 4.2. Different of Income by Farmer's Status**

<b>Status</b>	<b>Mean</b>	<b>t</b>	<b>Significant</b>
Contract Farmer	6.87	4.472	0.000**
Non-contract Farmer	2.70		

Note: \*\* significant at the 0.01 level

However, the higher income from contract farming is not the main factor in improving contract farmers' livelihood, because they also generate income from other sources including non-farm activities and productive assets ownership. The contract farmer's economic security status can be seen in table 4.3 below.

**Table 4.3. Economic Security**

		Contract Farmer	
		Yes	No
<b>Source of Income</b>	Sell rice	16	0
	Sell non-rice (grocery)	16	0
	Sell livestock	3	13
	Non-farm income	11	5
	Others (specify)	0	0
<b>Fixed Assets ownership</b>	Own a motorbike or car	15	1
	Own a bicycle	13	3
	Own a tractor	12	4
	Own a rice miller	9	7
	Own a TV	16	0
	Own a pumping machine	15	1
	Own livestock (cow)	16	0

Contract farmers own large areas of land and fixed assets. Among their assets, contract farmers have their own farm equipment and tools, including pumps, hand tractor and rice mill. They also have household goods, such as generators, TVs, motorbikes, bicycle, and some have a car. Contract farmers also have cattle such as pigs and cows for animal labor, but that also function as an investment; they can sell their pigs or cows if they need emergency cash money. Besides increasing income from farm activities, contract farmers have the potential for significant economic security due to their ownership of these productive assets.

Based on table 4.3 the main sources of income for contract farmers come from selling rice. Other sources of income are non-farm activities, such as owning a small shop, selling palm wine, selling livestock, raising pigs, and official employment, for example as a government official or a teacher. Some contract farmers also receive remittances from family members who work in garment factories in Phnom Penh. Not many contract farmers sell their livestock, particularly their cows because they use them as animal labor and as a means of transportation in the village.

<sup>26</sup> Interview with contract farmer 14, Thum Phiem village, July 15, 2010

In a case study in Chiang Mai, Thailand 50% of the farmers earned off-farm income prior to, and after, joining contract farming and they felt that contract farming had neither affected their off-farm activities nor their income. However, after the contract, it was found that 74% of respondents enjoyed higher household income (Sriboonchitta, *et al.*, 1996).

According to Cai, *et al.*'s (2008) finding, Cambodian contract farmers on average have more income from other crops than non-contract farmer. They argued that contract farmers receive higher rice prices and revenues, have a lower percentage of non-cash costs in total production costs because of the use of more family labor, less use of chemical fertilizers and a higher use of compost and irrigation. The findings indicated that contract farmers are more orientated towards rice and other agriculture for commercial purposes when compared to non-contract farmers (who are more subsistence focused).

My interviews with contract farmers also revealed that most contract farmers depend on rice cultivation and selling rice as their main sources of income. Contract farmers who have large areas of land usually spend their time on farm activities<sup>27</sup> and use more family labor. They also diversify their activities beyond rice production, for example selling livestock (pigs), vegetables and other consumer goods to increase their income. Some farmers are even renting out plough machines, hand-tractors, and water pump machine for irrigation.

Several studies have found that contract farming projects do appear to contribute to smallholder welfare and improve farmer incomes, at least in the short term (Baumann, 2000). A comparative study on income from contract farming by Glover and Kusterer (1990) in South East Asia, Latin America, and Africa identified a rise in income because of contract farming. Similarly, a study by Ramaswami, *et al*

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<sup>27</sup> Farm activities include rice cultivation, raising pigs and cows, growing vegetables etc



(2006) in Indian poultry growers found the incomes of contract farmers to be significantly higher than they would have been without contract farming.

#### 4.2.2. Food security

Table 4.4 presents the food security status of the contract farmers. Overall, all of the contract farmers reported that they were able to meet their household rice requirements from their own rice production. They said that they had never experienced food insecurity and that they do not have rice insufficient months.

**Table 4.4. Food Security Aspect**

Question	Yes		No		Value
	N	(%)	n	(%)	
Do you have enough rice for your daily needs?	-	-	-	-	Enough
Do you experience food insecurity?	0	0	16	100	
Do you think contract farming has increased your food insecurity?	0	0	16	100	

The interviewed contract farmers said that contract farming did not increase food insecurity for their families. This is because contract farmers not only grow rice for the company, but they also plant rice for their own consumption. Based on their experience in rice farming, they can determine how much rice to sell and how much rice is required to meet the food demands of their family.

The farmers can also estimate their annual rice production from the rice field area they plant and their average rice yields. One contract farmer said that he has 2 ha of paddy field which produces a yield of 4 ton/ ha on average. He then sells 1.5 tons to company, 1 ton to middlemen and he keeps 1.5 tons for family consumption for the year. When he has a shortage of rice he buys it from the market. In Cambodia, farmers usually sell rice to gain cash income; when they have a surplus of rice, they

will sell it in the market at a low price to buy household goods. When they have a lack of rice, they will purchase rice back from the market (but at a higher price).

According to Sothat Ngao, a researcher in Cambodia Economic Association (CEA), contract farming in Cambodia which requires farmers to sell crops to a company and implement a monoculture crop system does not affect farmers' food security. Food insecurity does not occur under AKR's contract farming because the company provides extension services about "integrated farming systems" and encourages farmers to grow other crops after the harvest in order to increase their income. Moreover, contract farmers also benefit from a higher income from company, and contract farming also opens up job opportunities for non-contracted farmers to work on contract farmers' farm as hired labor. This increased income also helps contribute towards food security.

According to the NGO Forum on Cambodia, many contract farming agreements are based on mono-cropping and often the introduction of new non-traditional crop (Pers.comm NGO Forum on Cambodia, 2010). These arrangements force farmers to become more reliant on the income produced from the contract-farmed crops and necessitate them to purchase rather than grow food for their households. This then creates the risk that if food prices rise, in particular in the areas where contract farming is occurring, it will reduce the overall benefits from contract farming as profit-margins will be reduced (NGO Forum, 2010). However, for the farmers interviewed in this study, they largely still grow their own rice for domestic consumption and sell additional rice to the company or middlemen.

#### **4.2.3. Health Security**

Attaining health security is important for rural livelihoods to make a sustainable living. For rural people, the cost of health care and major health shocks are significant expenditures for them, requiring taking out loans or selling assets

including land, and can initiate spirals of indebtedness.<sup>28</sup> In the three villages studied, the villagers still lack access to health services, and suffer from poor sanitation and limited access to clean water. Table 4.5 below assesses the health security of the contract farmers interviewed.

**Table 4.5. Health Security Aspect**

Question	Yes		No	
	n	(%)	n	(%)
Can you access clean and fresh water?	3	18.8	13	81.3
Do you have sanitation facilities?	9	56.3	7	43.8
Do you face difficulties accessing health care?	5	31.3	11	68.8
Can you afford medical expenses and medicine?	16	100	0	0
Do you go to hospital?	15	93.8	1	6.3
Have you use pesticides and fertilizers before contract farming organic rice?	13	81.3	3	18.8
Is contract farming improving your health?	1	6.3	15	93.8
Do you have health insurance from the company?	0	0	16	100

From the interviews with contract farmers, it is found that 80 percent of the respondents do not have access to clean water, which can have severe consequences for health. The villagers still lack piped water, and most of the households depend on rainfall for cooking and drinking. They store the water in big jars and use it for a couple days. Some wells and pumps have been constructed, funded by external assistance and the government, but there are not enough for all villagers to use. Some contract farmers therefore use their own personal water-pumps to recover groundwater for their own consumption. For washing and cleaning, the villagers use water from local ponds or a nearby stream. In order to prevent health problems related to dirty water, the villagers always boil their water and wash their hands before eating. Furthermore, 55 percent of the contract farmer respondents reported that they have sanitation facilities, such as bathroom and toilets, while the remainder do not.

From the interviews, 69 percent of contract farmer households said that they do not have difficulty to access to health care. However, from my observation, the

<sup>28</sup> Interview with Social Action for Cambodia (SAC), July 6, 2010

nearest government clinic is 15 km away in Kampong Speu city, and there is only one small clinic with limited medical staff located about 1 km from the villages, where the majority of villagers go for simple illnesses. Yet, the quality of health services in rural areas of Cambodia is often poor and public health services lack medicines and staff, while private practitioners are sometimes unqualified or poorly trained, and expensive. The interviewees reported that they can afford to pay their medical expenses and always go to hospital in case of serious illness in Kampong Speu city or Phnom Penh. AKR does not provide health insurance for contract farmers and 94 percent confirmed that they have not observed an improvement in their health since participating in contract farming.

The interviews with contract farmers revealed that before entering contract farming arrangements 81% used fertilizer and pesticides for rice cultivation. Even though it is against the company's rules to use fertilizer and pesticides for the organic rice production, the farmers still continue to use it in small amounts.

#### 4.2.4. Education Security

Education level is very important in family decision-making and has a significant influence on the extent to which households are able to manage difficulties. Table 4.6 summarizes the education security aspect for contract farmers.

**Table 4.6. Education Security Aspect**

Question	Yes		No	
	n	(%)	n	(%)
Can your household access education facilities and afford to use them?	12	75	4	25
Is there any increase in your household's level of education due to contract farming	7	43.8	9	56.3

From the interviews, on average only 2 people in each contract farmer's household had completed their primary-level education. Primary education is compulsory and (in principle) free in Cambodia; around 75 percent of the respondents said that they could access and afford the education facilities. However, the education facilities for these villages are poor, because there is only one primary school building that is located around 1.5 km from the villages. Furthermore, only a few students continue to and complete higher education from these villages because the high school is located 10 km away from village, which is a considerable distance for daily travel. If they do study at high school, they have to travel or else stay at their relative's house; both choices reduces the amount of labor available to the family.

Children from these villages who attend high school are more likely to be boys than girls, because parents usually support their boys to attain higher education than girls. Furthermore, the girls have a high incidence of higher school dropout than boys since higher education is far away from the village, so the parents worry with their safety. Very few children attend higher school and villagers rarely cited examples of local children attending university.

From the interviews, 56 percent of respondents said that there is no increasing education level as a result of contract farming. Despite the increased income from contract farming, they still cannot send their children to higher education because of the limited availability of education facilities. While another 44 percent of the respondents state there is increasing in education level because their children get better education than parent's education. The highest education in contract farmer households is high school.

In Cambodia, the problems that hamper increased education enrolment are complex. Poverty is the biggest obstacle to the education of children particularly in rural areas. The children of the poor are deprived of their opportunities for schooling because they are needed for household chores or income earning jobs to support the

families and their younger siblings (WFP, 2006). Other reasons for limited schooling among children of the poor include the inability of the household to pay for school uniforms/ books, that children are needed at home and the distance to school, among others. Furthermore, the quality of education is poor due to a lack of trained teachers and facilities, such as books and libraries (Fitzgerald, et al., 2007).

#### 4.2.5. Empowerment

Table 4.7 illustrates the empowerment aspect to understand the farmers bargaining position towards AKR Company. From the interview, all of the respondents stated that there is not a Farmer Association in community. The contract farmers stated that the company does not allow the farmers to form a Farmer Association because the company has a Commune Association to monitor the contract farming in the village. At the Commune Association contracts are signed, seeds are distributed, basic technical advice is provided, and paddy is collected for AKR. Since the Commune Association works at a lower hierarchical level, they have to concentrate on issues of production, building trust, and contract enforcement (Chai, *et al.*, 2008). Each Commune Association consists of an association head, the commune chief, the village head, and village representatives who are members of the association.

**Table 4.7. Empowerment Aspect**

Question	Yes		No	
	n	(%)	n	(%)
Do you have a Farmer Association in your community?	0	0	16	100
Do you think a Farmer Association is important?	16	100	0	0
Could a Farmer Association be used to bargain with the company?	16	100	0	0
Do you get any support from NGOs	13	81.3	3	18.8

The respondents also stated that a Farmer Association is important to them to increase their bargaining power with the company. Farmer Association can be used to

coordinate farmers and share information to solve problems in their community. However, it is not easy to form a Farmer Association in Cambodia. From the interview with Cambodia Institute for Research and Rural Development (CIRD)<sup>29</sup>, Cambodian farmers are not well organized and they tend to work individually. This happens in part because of their experience from the past during the Pol Pot regime when farmer groups were coercive and victimized the farmers. Moreover, he said, it also depends on the farmers' interest; if they have no interest with other farmers they will not want to form as a group. Economic behavior, however, is clearly embedded in the networks of social relations among farmers. For many farmers, it is clear that if they work individually they can not negotiate with the company because they lack information to negotiate and their voices are not heard as a collective voice.

Contract farming have some elements which it seems would encourage collective action: many smallholders, a common adversary, a degree of interdependence, the contract, and a tangible and common issue for negotiation (Baumann, 2000). The Farmer Association should grow from contract farmers' initiatives if they consider forming as a group with shared goals to improve their livelihood and to increase their bargaining position with the company. Around the world, farmers' groups appear not only to improve the bargaining power of smallholders, but also serve to lessen some of the criticism of contract farming. Moreover, effective farmer organizations can act as a basis of community empowerment; they serve to generate social capital and therefore contribute to sustainable poverty reduction (Setboonsarng, 2008). Glover and Kusterer (1990) also point out that farmers association that represent the farmer's interests, whilst increasing their bargain power, can also improve coordination between companies and farmers which can benefit the company too.

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<sup>29</sup> Interview with CIRD, July 18, 2010

### 4.3. Summary

Despite contract farmer experiences increasing income, but it does not bring much benefit for farmers' livelihood in terms of health and education security. Farmers still face of limited clean water and sanitation facility. Even though, they do not have difficulty to access health care, but the nearest health care in the village is very poor, limited staff and medicine. In the education security, most of the contract farmers stated that there is no much increasing in education since the villagers still lack of education facility and infrastructure. The level of education attainment in this village study is low and high rate of drops for girls not to continue to higher education. In the food security, contract farmer state that they have enough food for one year consumption and inform that contract farming does not threat their food security.

Under AKR contract farming, the farmers do not have bargaining power because the company does not allow them to make farmer association. Majority of contract schemes sets by the company includes price mechanism, quality standards, profit sharing, and penalty. Although contract farmers discuss about contract schemes in a groups (not individually) with company, but they still do not have opportunity to give suggestions in the contract scheme. At present, contract farmers realize that farmer association is important to increase their bargaining power to negotiate with company and their voices will be heard as a collective voice because they work together.



## CHAPTER V

### UNDERSTANDING THE TERMS AND CONDITIONS AND FARMERS'

#### PARTICIPATION IN CONTRACT FARMING

This chapter examines the terms and conditions of *Angkor Kasekam Roungreung* Company's contract farming. It is important to understand how the contract schemes work to understand the role this plays in whether contract farmers are better off or worst off under AKR contract farming. This chapter also analyzes how the farmers' participate in contract farming, including why they participate or not, and what are the social implications for non-contract farmers.

#### 5.1. Analysis of AKR Terms and Conditions in Contract Farming

##### 5.1.1 Economic Aspect

Based on the interview with 16 contract farmer, table 5.1 below the economic aspects of the AKR contract scheme.

**Table 5.1. Economic Aspect**

Question	Yes		No	
	n	(%)	n	(%)
Do you get good price from the company?	16	100	0	0
Do you have good bargaining power in price setting with company?	0	0	16	100
Does the company set the price?	16	100	0	0
Do you receive a credit from company?	5	31.3	11	68.8
Do you receive a credit from MFIs or money lenders?	6	37.5	10	62.5
Do you have a secure market through the company?	16	100	0	0
Do you ever sell your crops to middlemen or the market	15	93.8	1	6.3
Do you gain access to inputs (rice seed) from the company?	16	100	0	0

- *Price Mechanism and arrangement*

In 2010 AKR contract schemes, all 16 AKR contract farmer respondents have experienced receiving a good price for their rice, as the company promises a price of 30 Riel/ kg higher than the price in the market<sup>30</sup> (table 5.1). At the time of the fieldwork, the market price for organic rice was around 1,250 Riel/ kg, therefore the company offers a price of between 1,260 and 1,280 Riel/ kg. Besides the better price, the company also guarantees price stability for the contract farmers; even if the price in the market goes down, the company's price remains stable. During that time, contract farmers can keep their excess contracted rice in the company's warehouse in order to wait the price increases or stable.

Usually, the price is agreed between the AKR company and the farmer in January during the harvest season. The company and contract farmers do discuss the price, but in actual fact the company itself sets the price. All respondents said that they do not have the power to bargain with the company. Based on Focus Group Discussion (FGD, July 16, 2010) in Thum Phiem village, the contract farmers said that they had discussed with each other about their expected price and then tried to bargain with company to increase the premium to 100 Riel/ kg because the rice was very good quality and they had invested extra labor in production, but the company would not agree.

Regarding the price-setting system, the contract farmers do not have much information about how the company sets the final price and in the end have to accept the price stated by the company. Farmers have little influence over the price setting since they transport the rice to the company's mill before agreeing the price, and it is impractical to take the paddy back to the village.

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<sup>30</sup> Rice price in the market in Cambodia is free market mechanism, depend on supply and demand.

- *Access to input and credit*

All respondents agreed that contract farming increase their access to inputs through the company, in particular rice seed; they can take either 30 kg, 60 kg, or 90 kg depending on their farm size. Fertilizer and pesticide inputs are not provided by the company because the farmers are required to grow organic rice. Most of the villagers are interest to contract with the company because they want to receive the good rice seed so that they get a better rice yield and a higher price.

Beside rice seed, AKR also provides the contract farmers with credit up to a maximum of US\$125 without interest rate. The credits are given on the security of the land or the anticipated value of the crop. The AKR credit scheme uses rice saved in the company's warehouse as a collateral. One villager said that if they store their rice in the company's warehouse, the company will provide credit without an interest rate.<sup>31</sup> Despite this, most contract farmers do not take a credit from the company; only 5 respondents reported that they take credit from company and another 6 respondents stated they take credit from MFIs instead.

Usually, the villagers keep their rice at home for daily consumption and future investment. If they need emergency money, they can then sell it at anytime to middlemen or in the market. The villagers' main sources of credit are from Micro Finance Institution (MFIs) that offer an interest rate of 30% per month. The farmers rely less on informal sources of credit, such as from friends, family, relatives, or moneylenders.<sup>32</sup> The farmers take loans to expand their business, to buy more land or a tractor or ploughing machine, or for emergency situations, such as health care.

According to others research, small farmers have found access to credit from contracting company to be very helpful, since they are often credit constrained and unqualified to receive loans from formal institution because they do not have

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<sup>31</sup> Interview with contract farmer 5, Kres Thom village, July 12, 2010

collateral (Glover and Kusterer, 1990). Moreover, if they borrow from banks or other credit institution, they will face higher interest rate. Therefore, it is surprising to find in this study that farmers do not access AKRs credit and loans regularly. The contract farmers are less likely to borrow money from the company because their farming depends on rain fed, so they afraid if they could not repay the credit and being indebted with company.

- *Access to market*

All respondents stated that contract farming provided secure market access for their crops. Under the AKR contract scheme, farmers must sell their contracted rice to company. Farmers must not sell their production to other traders except as may be authorized by the commune association. If there is evidence that the farmers have broken the contract and sold their rice to other traders the company will exclude them from membership to the commune association and bars their membership in the future.

However, farmers believe that as long as the contracted volume is delivered to the company, it will not penalize them for selling excess paddy to traders. Therefore, the contract farmers only sell the contracted amount of rice to the company, but then may sell the surplus rice either to the company or to middlemen. In addition, the farmers also grow their own rice using other seeds, which they consume themselves, or sell to middlemen or in the market.

15 respondents confirmed that they sold their contracted rice surplus not only to AKR but also to the middlemen or traders, and a small number also sell directly to the market. Although the price from the middlemen is lower than the price from the company, some farmers prefer to sell rice to middlemen because:

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<sup>32</sup> Interview with contract farmer 11, Kres Thom village, July 15, 2010

- a) They do not need to spend costs on transportation to the company's rice mill because middlemen come directly to the village.
- b) They never get a penalty on the rice quality because middlemen accept all rice without concern for quality standards.
- c) They can sell their rice to middlemen anytime that they need money, rather than at specified times as required by the company
- d) They can receive payment immediately rather than wait for payment from the company.<sup>33</sup>
- e) They can sell any amount of rice, rather than a specified minimum amount as required by the company.
- f) They can be surer of fair weighing of the crop

Sales to middlemen represent a challenge to the company because they also offer a high price for farmers who grow a good quality of rice. As a result, the middlemen often compete on price with the company; the villagers said that when the company offers a high price to the farmers, the middlemen also increase their price, although it is still below the company's price.<sup>34</sup>

### **5.1.2. Agricultural production and management aspect**

Contract farming may introduce new agricultural patterns that sometimes do not prove to be beneficial for the farmers; for example the company require farmers to plant crops as stipulated in their contract, which are selected by the company rather than the farmers (Oxfam, 2008). The experience of contract farmers regarding agricultural and management aspects of contract farming are summarized in table 5.2 below.

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<sup>33</sup> Farmers had experience delay in payment from the company in 2006 because the company lacked money to buy farmers' rice.

<sup>34</sup> Interview with contract farmer 6, Kres Thom village, July 12, 2010

**Table 5.2. Agricultural production and Management Aspect**

Question	Yes		No	
	n	(%)	n	(%)
Do you receive extension services from the company?	7	43.8	9	56.3
Is knowledge and technical expertise transferred from company?	8	50.0	8	50.0
Are your farming skills improving?	7	43.8	9	56.3
Did you have to change your crop pattern?	10	62.5	6	43.8
Are you satisfied with the new crop pattern?	12	75.0	4	25.0
Is the new crop pattern increasing your income?	7	43.8	9	56.3
Is new crop pattern increasing the quality and productivity of you output	11	68.8	5	31.3
Do you have to deliver high quality output to the company?	16	100	0	0

- *Extension Services*

From the table 5.2, 44 percent of the respondents report that they receive extension service from company and reveal that their farming skills have improved (50 percent). In general, training for contract farmers should cover farming techniques, such as selecting good seeds, how to control water, efficient use of farm resources, improved methods for applying agrochemicals, and knowledge of the importance of quality and the characteristics and demands of export markets. According to interviews with the AKR contract farmers, the training from the company focuses on farming techniques, especially rice seed selection, and it lacks training on managerial skills to increase human resources. Contract farmers also stated that the company's staffs never visit the villages directly to give training, but if the farmers need advice they can go to the company's office.

The training service for farmers in these villages is not only from the company, but also from the Center for Education and Development of Agriculture in Cambodia (CEDAC). 56 percent of interviewed farmers receive new knowledge on farming techniques and change their crop pattern from CEDAC; the staffs come directly to the village and the farmers say that they learn a lot about how to grow organic rice from them.

- *Changes in Crop Pattern*

Contract farmers have to adapt to the company's required farming techniques and follow the instruction written in the contract agreement. 62 percent of the respondents said that as a result they had to change their crop patterns. This year, for example, the farmers are required to follow the SRI (System of Rice Intensification) methodology and are prohibited from using any form of chemical input, such as fertilizers and pesticides. Under the contract scheme, farmers have to apply techniques introduced by the company (ridging, fertilizing, transplanting, pest control, etc.) to produce a high quality of rice. Moreover, the contracted rice must meet the quality standard requirement of the company.

Regarding changing in crop pattern, 75 percent of contract farmers are satisfied with new crop pattern because it may lead to increasing income (44 percent) and increased output quality and productivity (69 percent). The remaining farmers (25 percent) state that there has been no income improvement after changing their cropping pattern.

Even though the company forbids the farmers to use fertilizer and pesticides for company rice, some contract farmers still use these chemical inputs a little, especially when the soil quality is poorer. They argued that they have to use it because they are afraid of not meeting the high production requirements of the company (to sell 1.5 ton/ ha). More than 50 percent of the interviewees use fertilizer for company rice and pesticides to kill insect, snails, and crabs, but the amount is not much due to the high price that is relatively unaffordable to the farmers.<sup>35</sup>

Other non-contract farmers use pesticides and fertilizers for their own rice production to increase their profits. Farmers who have access to the local market or middlemen who will buy rice grown with agrochemicals have moved on to intensify

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<sup>35</sup> Interview with contract farmer 7, Kres Thom village, July 12, 2010

their farming practices to increase profit. Generally, farmers in the village buy their fertilizer from market or buy it from the company fertilizer on credit.<sup>36</sup>

- *Outputs Quality and Productivity*

All interviewed contract farmers agreed that they were required to provide quality output under the contract scheme. The quality of the output is determined by the moisture content (contain less than 5 percent of moisture), clean grain (*sa'at*), and the homogeneity of the produce. According to CEDAC's staff, these requirements are quite difficult for farmers because in Cambodia only 15 percent of farmers can dry their rice sufficiently in the direct sunlight. In addition, these requirements require the farmers to use more labor to clean and dry the paddy. Most of the farmers are unhappy with being made to attain this quality, but they are unable to negotiate with the company these quality standards and therefore have to accept the company's decision.

From the interviews it is clear that the farmers do not receive much information about the quality standards from the company and they feel cheated when the company deducts the rice weight as a penalty for not attaining the standards. The farmers' said that if the grain of the contracted rice is not dry enough or fulfill the quality standard then the company will deduct 10 percent of the total weight of the rice;<sup>37</sup> for example, if a farmer sells 100 kg of rice to the company, the company will only count 90 kg. To some farmers, it seems that the company uses the standard quality to make price lower to reduce the farmers' benefit from contract farming.

Hightower (1975, in Glover 1984) suggests that companies may raise quality standards not only to control production volumes, but also to get a portion of the crop at a very low price.

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<sup>36</sup> In the beginning of planting season, the farmers buy fertilizer from company fertilizer in the head and pay it later

<sup>37</sup> Interview with contract farmer 13, Thum Phiem village, July 14, 2010



### 5.1.3. Governance aspect

Table 5.3 illustrates the attitudes of contract farmers towards the governance aspects. 50 percent of the interviewed contract farmers felt that the company provides enough information about the contract farming scheme, including information on contract requirements and punishments. 50 percent, however, disagreed because the company does not provide clear information about profit-sharing, the quality standard requirements, and about fair scaling methods. They also note that the contracts do not clearly state AKR's liabilities if it does not buy the contracted rice at the predetermined prices; the contract states that AKR is obliged to buy rice from the farmers at a minimum price without specifying the purchase in detail.

**Table 5.3. Governance Aspect**

Question	Yes		No	
	n	(%)	n	(%)
Does the company provide you with enough information?	8	50.0	8	50.0
Have you lost your decision ability and freedom?	14	87.5	2	12.5
Does the company allow you to create a farmer organization?	1	6.3	15	93.8
Do you think the company consent (honest/ committed) with agreement	2	12.5	14	87.5

Beside from the company staff, farmers get information about contract farming from the village head, previous contract farmers, and other contract farmers. The company itself distributes leaflet and brochures to inform farmers about the terms and conditions of the contract scheme. The farmers choose to participate in the contract farming voluntarily. They keep one copy of the contract, whilst other copies are with the head of the commune association and the company.

In general for contract farming, contract farmers are effectively workers for the company since they depend entirely on the company for their inputs, credit, extension services, and market for their crops (Oxfam, 2008). From the interviews, 87

percent of respondents felt like they had lost their decision-making ability and flexibility because they have to follow the strict regulations of the company. Moreover, 87 percent of respondents state that the company does not consent with agreement. The AKR contract farmers see that the company does not committed with the contract scheme. For instance, the company deducts the rice weight and does not provide information about standard quality. Some contract farmers showed that company's scaling is not fair.

In addition, 94 percent of the interviewees said that the company does not allow them to create a farmers' organization. The contract farmers want to have a farmers' organization to facilitate coordination amongst them so that they can help each other, share information and increase their power to bargain with the company.

For fair contract farming to occur, researchers have previously concluded that farmer organizations are important to negotiate with the company because they provides a forum where farmers can express their dissatisfaction over prices, timing, standard requirements, and increase the likelihood that a firm will recognize its social and environmental responsibilities (Delfroge, 2007). Similarly, Prowse (2007) argues that farmer associations can help balance the power between firms and farmers, in terms of collective bargaining and negotiation process.

#### **5.1.4. Social Aspect**

It is important to assess the impact of contract farming from social aspect to understand the changing social conditions, culture, and land ownership in the community (table 5.4).

**Table 5.4. Social Aspect**

Question	Yes		No	
	n	(%)	n	(%)
Do you have good working condition under contract farming?	10	62.5	6	37.5
Do you get a better standard of living under contract farming?	13	81.3	3	18.8
Does the company differentiate between male and female households?	0	0	16	100
Do you think contract farming will secure land tenure?	0	0	16	100
Is there any increase in landlessness due to contract farming?	0	0	16	100
Do you think contract farming excludes small farmers?	2	12.5	14	87.5
Do you think that contract farming changes culture and tradition in the community?	2	12.5	14	87.5

- ***Working conditions***

62 percent of the respondents said that they have good working condition under contract farming (table 5.4). This is despite the fact that under organic rice contract farming farmers use more labor since they implement the System of Rice Intensification (SRI) method of rice cultivation.<sup>38</sup> Contract farmers with larger families can manage their production better and allocate more family labor to work on the farm. Moreover, ones with larger families also have cows as animal labor which helps them to plough the soil, transport fertilizer, etc. Some farmers also buy hand tractors to improve their productivity.

- ***Living Standard and Well Being***

81 percent of the contract farmers interviewed experienced a better livelihood since participating in the contract farming due to an increasing income; the remaining 19 percent felt no change in their livelihood. According to the contract farmers interviewed, their livelihood changed a little bit because they received a higher price from the company for their rice, although they also benefited from other sources of

income such as selling charcoal, selling livestock, and selling daily consumption goods.

However, one contract farmer said that the farmers don't gain a better livelihood because although they get a high price from company, the company also inflicts weight deductions at the same time:<sup>39</sup>

*“The price difference between the company and the middlemen or market price is only 5 percent, but the deduction of the company is more than 10 percent”*

In addition, the farmers need to transport their paddy from their village to the company rice mills, which is quite far from the village and rice is bulky and heavy (and the farmers are required to transport 1.5 ton or more). Even though the company says it repays the cost of transportation, in fact the amount provided is not enough to cover the transportation cost.

- ***Farmer Selection Bias toward Head Household***

Almost all interviewees said that AKR contract farming does not differentiate between male- and female-headed household, although it does require that farmers provide at least 1 ha of land if they want to take company rice seed. The consequence of this regulation is that it precludes landless people and excludes small farmers who have land less than 1 ha. Despite this clause, 14 percent of the contract farmers interviewed said that AKR contract farming does not excludes small farmers.

- ***Land Tenure Security***

From the interviews with contract farmer, all respondent said that AKR contract farming does not ask about or require land certificate to enter contract

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<sup>38</sup> The SRI is a method to increase rice yields which requires less water and less expenditure on fertilizer, but is more labor intensive

<sup>39</sup> Interview with contract farmer 16, Chong Tnol village, July 15, 2010

farming. At the same time, the company does not help farmers to get land certificates, and therefore is not an active agent to strengthen land security. On the other hand, whilst Oxfam (2008) suggest that land conflicts can be generated by contract farming when it involves large scale of farming this was not reported in the villages studied.

The interviewees said that AKR contract farming also does not increase land transfer from small to large-scale farmers in these villages, because contract farmers prefer cutting down trees in the forest, which is common land, to expand their paddy field rather than buying existing agricultural land from small farmers. However, this deforestation has potential to increase land conflicts in the future due to an unclear demarcation of the land boundaries and therefore possible overlapping claims.

#### 5.1.5. Environment aspect

There should be no agro-chemicals in AKR's contract farming, as the rice grown is organic. From table 5.5 below, 69 percent of the respondents said that contract farming will not be dangerous for the environment because they use fertilizer and pesticides only a little. As noted in section (5.1.2), the AKR contract expects the contract farmer not to use chemicals, but some farmers still use it a little for poor quality soil to increase rice yields. The contract farmers also believe that fertilizer usage will not increase soil erosion (81 percent) and does not threaten the fresh water quality (69 percent). Table 5.5 summarizes the elements of the environment aspect under contract farming.

**Table 5.5. Environment Aspect**

Question	Yes		No	
	n	(%)	n	(%)
Do you think that contract farming will be dangerous for the environment since it increases the use of chemical inputs (fertilizer and pesticides)	5	31.3	11	68.8
Do you think that contract farming will lead to land conversion, change biodiversity and habitat	10	62.5	6	37.5
Do you think that contract farming will increase soil	3	18.8	13	81.3

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erosion and pollution				
Do you think that contract farming will threaten the quantity and quality of water	5	31.3	11	68.8
Do you think that contract farming will increase deforestation	11	68.8	5	31.3

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62 percent of the interviewees said that contract farming may lead to land conversion<sup>40</sup> and 69 percent said that AKR contract farming increases deforestation. This is occurring because of the high requirements of the company that drives villagers to clear forest land in order to expand their agricultural land. As the farmers are afraid of company's penalty if they don't grow sufficient rice, the farmers plant company rice seed on the freshly cleared forest land, which is very fertile, to get high yields.

Deforestation due to AKR contract farming will continue unless the company or the authorities act to address the issue. If deforestation does not stop, however, this will affect farmers' livelihood in the long-term, in particular poorer families who especially depend on the forest's resources for their livelihood. Traditional households (both rich and poor) in these villages depend on *prei* (forests/wild land) for basic household goods and foodstuff (protein and vegetables). Forest is also important for hunting and gathering activities, mainly conducted by poorer families.

From the interviews, overall contract farmers in Thum Phiem and Chong Tnol village said the contract farming does not lead to deforestation, while the contract farmers in Kres Thom village confessed that contract farming does increase deforestation. This difference can be explained by forest land ownership among the villagers; In Thum Phiem and Chong Tnol village, large numbers of farmers do not have forest land and only plant company rice on their paddy fields, whereas in Kres Thom village on average the farmers have 1.5-2 ha of forest land per household and the contract farmers plant AKR's rice on both paddy field and forest land.

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<sup>40</sup> Land conversion in here means the changing of land using or function, for instance from forest land to agricultural land.

### 5.1.6. Development aspect

Development aspects synthesize all issues of contract farming and seeks to evaluate whether contract farming is beneficial or not for the company and participating farmers. This aspect includes small-farmer exclusion, fairness of the financial agreement, and equity and distribution of contract farming impact (table 5.6).

**Table 5.6. Development Aspect**

Question	Yes		No	
	n	(%)	n	(%)
Do you think that contract farming is an available option for small-scale farmers?	9	56.3	7	43.8
Do you think that the company offers a fair financial agreement?	5	31.3	11	68.8
Do you lose flexibility and autonomy under contract farming	16	100	0	0

- *Exclusion of small farmers*

From the interviews, 56 percent of the contract farmers said that AKR contracts were available to small farmers as long as they had a sufficient area of rice field, although it did also depend on their ability.

Oxfam (2008) suggest that in general contract farming may lead to the marginalization of poor farmers who can not demonstrate the capacity and ability required by the contract scheme (Oxfam, 2008). Contract farming has also been reported to exclude poorest farmers when agribusiness firms seek contracts with large-scale farmers to reduce transaction cost. According to Setboonsarng (2008), although contract farming appears to involve small farms, such arrangements may exclude the poorest of the poor. Landless peasants and households possessing only limited marginal lands tend to be overlooked by contract farming companies.

- *Fairness of financial agreement*

69 percent of the contract farmers interviewed said that the AKR company is not fair in financial agreement, especially regarding the pricing mechanism and profit sharing. They said that by engaging in contract farming it does increase their income, but they have to work hard to get the higher yields and good quality of rice expected. All interviewed contract farmers said that they lost their flexibility and autonomy under contract farming because they have to follow all of the company's instructions, such as its farming techniques and how to select good rice seeds. They also do not get profit sharing from the company.

## 5.2. Participating and not-participating in contract farming

### 5.2.1. Participating in Contract Farming

In general, the main factor drawing smallholders to join contract farming projects is the price that company will pay for the product and a guaranteed market (Baumann, 2000). Contract farming proves attractive to many local farmers due to the higher and more stable incomes, and due to the training opportunities (Vermeulen and Lorenzo Cotula, 2010). From the interviews with 16 AKR contract farmers, several reasons were identified as to why they participate in contract farming (table 5.7).

**Table 5.7. Reasons for Participating in Contract Farming**

Variables	Yes		No	
	n	(%)	N	(%)
Good rice seed	14	87.5	2	12.5
High price	12	75.0	4	25.0
Secure income	13	81.3	3	18.8
Secure market access	8	50.0	6	43.8
Access to credit	5	31.3	11	68.8
Extension service	7	43.8	9	56.3
Fair scaling	4	25.0	12	75.0



From the table above, 75 percent of the respondents said that they participate in contract farming as the company offers a higher price, 87 percent due to the good rice seeds provided by the company, and 81 percent because of the secure income.

Based on their research on contract farming scheme in Africa, Porter and Phillips-Howards (1997) found that what small farmer want from contract schemes is essentially a satisfactory regular cash income and, in some cases, the availability of inputs normally unavailable or more expensively obtained through other sources (notably credit facilities and fertilizer). This is similar to the AKR contract farmers, who join the contract farming due to the high price offered by the company that increases their income, and to receive the company's rice seed, which is better than the farmer's rice seed.<sup>41</sup>

Research findings from Norsida and Nolila (2010) on contract farming among vegetables and fruits in Malaysia found that by engaging in contract farming the smallholders believed it increased their competitive edge, guaranteed their income, and enabled them to produce high quality vegetables and fruits. In addition, Sriboonchitta, *et al* (2008) found that the landless farmer in Thailand felt that working on contract farms provided them with good opportunities to make an income when labor was the only resource that they had (Sriboonchitta, *et al.* 2008).

Access to credit is also an incentive for smallholders joining contract farming schemes. From the interview, 31 percent respondents state that access to credit is one of reasons to participate in AKR contract farming. The credit can be given in cash, in kind, or in the advance of service or capital inputs to invest in farming. 75 percent of respondents said that the company does not provide fair scaling when weighing their rice. 44 percent of the interviewees also said that they are provided with extension services by the company, although they are not satisfied with this service yet because

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<sup>41</sup> Interview with contract farmer 8, Kres Thom village, July 12, 2010

the company only provides advice from its main office, which is quite far from the village.

### 5.2.2. Reasons Not for Participating in Contract Farming

The distinction between selection by the company and self-selection by the farmer is important. Farmers who have the capacity to work with the company, if there is no discrimination by the company, would be expected to be the ones most likely to enter into contracts, whereas small-holder farmers who lack the ability to fulfill the company requirements will be less likely to participate in contract farming. In considering the company's requirement, farmers must take account of their farm size, the fertility of the soil, previous farming experience, and family labor.

Most contract farming schemes identify criteria for all their farmers. According to Baumann (2000), apart from a secure title to land, these can include a minimum land size, good health, a proven ability to hire labor or enough family labor. Sometimes companies may even prefer a married status, a certain education level, or prior experience with the crop.

The reasons why the farmers decide not to participate in AKR's contract farming are summarized in table 5.8.

**Table 5.8. Reasons for Not Participating in AKR Contract Farming**

Variables	Yes		No	
	n	(%)	n	(%)
High requirements by the company	15	75	5	25
Heavy penalties by the company	7	35	13	65
Too little land	12	60	8	40
Poor soil quality	6	30	14	70
Lack of information	7	35	13	65

Overall, the non-contract farmers knew about contract farming, believed it would improve their living standard, but said they faced difficulties to participate. They were interested in contract farming due to high price offered by the company, the good rice seeds, and the perceived ease to sell rice.

From the interviews with 20 non-contract farmers, it was found that about 75 percent of the respondents said that they did not participate in the AKR contract farming because of the high requirements of the company. They noted that the contract farmers are required to repay the same amount of rice seed as the company gave them, and in addition sell 1.5 tons of contracted rice to the company.

For small scale farmers, who own less than 1 hectare of land or whose soil quality is not good resulting in low rice yields, this specification is impossible. One villager said that:<sup>42</sup>

*“I want to join with the company because it is easy to get good rice seeds, easy to sell rice and I will get a good price, but the requirements are very difficult. I worry about my rice field, because it does not produce a lot of rice this year due to less rain.”*

Generally, contract farming companies prefer to work with larger growers. Key and Runsten (1999), and Little and Watts (1994) argue that larger growers can undertake more production and therefore their overheads associated with the contract are a smaller proportion of the total cost. Moreover, larger growers are better able to bear crop risks, may already possess expertise in crop husbandry and labor management, and often have storage and transport facility (Wilson, 1990). Whilst not at this scale, AKR does exclude some small farmers indirectly who cannot produce at least 1.5 tons of rice. One villager said:<sup>43</sup>

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<sup>42</sup> Interview with non-contract farmers 2, Kres Thom village, July 13, 2010

<sup>43</sup> Interview with non-contract farmers 1, Kres Thom, July 12, 2010

*“I went to the company to get rice seed, but the company did not allow me to take their rice seed because I do not have the qualifications to produce at least 1.5 tons of rice”*

35 percent of the interviewees stated that they do not participate in contract farming because of the heavy penalty of the company. However, 45 percent of the respondents also said that they did not receive much information about the company’s penalties; they only heard that the company provides good rice seeds and offers a higher price. When they heard about the penalties, many did not want to join the company. One villager said:<sup>44</sup>

*“I like the company because the rice seeds from company give a good yield and company price is higher than market. But I cannot participate in contract farming because I only have a small rice field and I worry that I would be unable to sell the rice to company. I don’t know about the penalty too.”*

Some non-contract farmers cannot join with the company because they have only a few family members, even though they have more than 2 hectares of land, and they do not have enough money to hire labor.<sup>45</sup> On average, non-contract farmers have small families (5 persons) and less family labor (3 person) per household than contract farmers (see section 4.1.2). As larger areas of land - as required by the company to produce a minimum amount of rice to sell - require more labor, a larger family size tends to be an advantage for contract farming.

Some non-contract farmers previously did contract farming with AKR. They quit from the contracts because the requirements were too high or the penalty of contract scheme this year is too tough. One villager said:

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<sup>44</sup> Interview with non-contract farmers 3, Kres Thom, July 13, 2010

<sup>45</sup> Interview with non-contract farmers 4, Thum Phiem, July 14, 2010

*“Last year I took rice from company and I could sell it to company, but this year the company set a high requirement so I stopped contract farming and now sell my rice to middlemen”.*

About 60 percent of the respondents reported that they do not participate in contract farming due to shortage of land. On average, non-contract farmers have 1.5 hectare of paddy land and 0.875 hectare of forest land, which is less than contract farmers (see section 4.1.3). According to studies by AKR themselves, farmers should own at least one hectare of land so as to be able to meet the contract requirements (Cai, *et al.*, 2008). It is a common for Cambodian farmers to split their land between commercial operation and crops for self-consumption. Farmers who have a small plot of land tend to have insufficient land remaining to meet AKR’s minimum requirements.

30 percent of the interviewees also said that they do not have good soil and so worry that because of this they will not be able to meet the company’s requirements since their soil is not good, they need to use fertilizer to increase the rice yield, but they said that they do not have enough money to buy fertilizer. Furthermore, as AKR’s rice is supposed to be organic, in principle they would not be permitted to use fertilizer.

In general, contract farming companies will choose to operate in areas that have good soil fertility and possibly irrigation too. The AKR website explains that AKR operates only in provinces that are suitable to grow *Neang Malis* rice. It is well found that farmers with more fertile farms gain higher margins from contract farming because they do not need to use fertilizer and can achieve lower unit costs (Simmons, 2000).

### **5.3. Summary**

The AKR contract farming scheme in 2010 seems strict to contract farmers with its high requirements and penalties. The contract farmers do not have the ability to negotiate with the company because they cannot organize themselves in to a farmer association. The contract schemes are a highly centralized where the company is the center of decision-making. Moreover, not all the villagers can enter into contract farming, as it depends on their ability to meet the contract requirements, such as owning a minimum area of and less family labor. As the contract farming has become heavier and more difficult, fewer farmers are participating.

## **CHAPTER VI**

### **THE IMPACT OF CONTRACT FARMING ON LAND TENURE SECURITY**

This chapter will examine the impact of contract farming on land tenure security, and asks whether contract farming is increasing land security amongst smallholders or leading to land consolidation by agribusiness. First, I discuss land ownership in Cambodia, and then about the sources of land and the nature of farmers' land holdings and describe the relationship between contract farming and land tenure, and why land tenure and land rights are important considerations in contract farming. In the final section, I will explain the impact of contract farming on land tenure based on field work in three villages, namely Kres Thon, Thum Phiem, and Chong Tnol in Samrorng Thong district, Kampong Speu province. To analyze land tenure change, I interviewed 16 contract farmers and 20 non-contract farmers.

#### **6.1. Land Ownership in Cambodia**

Many Cambodian farmers lack secure land rights, which makes them vulnerable to land grabbing, land encroachment, and other types of land conflict. According to CDRI (2007), land conflict is now increasing in rural areas as land use patterns evolve from subsistence to commercial farming systems, and as more diverse interests compete for increasingly scarce land resource. Land grabbing by powerful local and external actors is also increasing in rural areas in many provinces, including in Kampong Speu and Mondolkiri provinces. In urban areas, conflict over land is also occurring as people and businesses compete for commercially valuable land. Another source of conflict concerns private individuals, including migrants, who encroach upon private and public land (So, *et al*, 2001). The World Bank points out that many land disputes often involve competing claims for the same land and can be attributed to a lack of clearly demarcated boundaries between private individual owners and state entities, or between private individuals (World Bank, 2002).

Owning land rights will increase agricultural investment, and therefore productivity and land values (CDRI, 2007). Markussen (2008) identified three channels; (1) land right increases incentives to invest by increasing the confidence of the landowner that he will be able to reap the benefits from investment. By owning land title, people are more likely to invest resources in productive activities when they are confident that they are the owner of the land and will enjoy the benefits of such investment in the future. For example, farmers in agricultural sector may invest more in variable inputs, equipment, and machinery, and infrastructure improvement. (2) Land rights may also affect productivity by easing access to credit. This is happen because land titles are expected to increase people's access to formal credit institution and stimulate a more efficient financial services sector, which is a key macro economic growth in the long run; and (3) land right can increase agricultural productivity by facilitating trade in land. Yet, here also lies a risk, as some may be tricked out of their land. Moreover, land right also support efforts to govern land market more efficiently so that scarce resources are eventually allocated to their most productive use. Secure and predictable property rights help to reduce procedural uncertainties and provide more accurate information about land values.

## **6.2. Farmers' Source of Land and Landholding**

Table 6.1 presents the sources of land in Cambodia. From interviews with contract farmers and non contract farmers, they received their land during the 1980s land distribution or *krom sameki*, were given land by relatives or family, or bought land. According to land distribution of 1989, household with more working members received additional plots of land. Many non-contract farmers received land from relatives or family, especially newly married couples; under Cambodian culture, parents must sub-divide their land into plots in order to meet the inheritance needs of their children.



**Table 6.1. Source of land**

Source	Contract Farmer		Non-contract Farmer	
	Yes	No	Yes	No
1980s distribution/ <i>krom sameki</i>	13	3	9	11
Given by relatives/ family	6	10	11	9
Bought	15	1	11	9
Cleared land/ occupied free	13	3	9	11
Given by authorities	0	16	0	20

From the interview with respondents, it is found that a significantly higher proportion of contract farmers gained land by clearing it themselves (81 percent), mainly forest land, than non contract farmer (45 percent). This has occurred because non-contract farmers lack family labor and do not have much money to cover the cost of land clearance. Contract farmers who clear forest intend to use forest land to plant company rice because it has good soil, produces high yields, and does not need a lot of fertilizer, so they can minimize the cost of production and obey the company's requirement not to use chemical input, as well as meet the required output level. One contract farmer told me:<sup>46</sup>

*“When I agree to take rice seed from the company I wondered how to achieve the company's requirement. After discussing with my family, we decide to clear the forest and plant the company's rice seed there and sell it to them”*

Farmers also believe that the forest land is common land, so they can take as much as they want if they have money to clear the forest. Many farmers also cut down the trees to earn additional income by selling fire woods and charcoal and to expand their agricultural land. One interviewed farmer said that<sup>47</sup> farmers spend between US\$ 500 to 600 to clear 1 hectare of forest. This money is big enough for non-contract farmers to clear the forest. This situation illustrates that unequal opportunity to access forest land is occurred in this village where villager who has capital and power gain

<sup>46</sup> Interview with contract farmer 5, Kres Thom village, July 12, 2010

<sup>47</sup> Interview with contract farmer 5, Kres Thom village, July 12, 2010

more advantage to access forest land than poor farmer. For instance, the village head<sup>48</sup> has more than 10 ha of forest land compare to other villagers who owned 2 ha of forest land.

On average, contract farmers own 2.21 ha of forest land per household, while non-contract farmer own 0.87 ha of forest land per households. The farmers also said that most of the forest land does not have land certificates and is prone to land conflict among the villagers as a result of overlapping land claims and unclear demarcation. Some farmers also worried about the long term land security of their forest land because it does not have land certificate, and decide to sell it with cheap price. One villager told me:<sup>49</sup>

*“I worry about my forest land because it does not have a land certificate, but I do not worry my rice fields even though it does not have land certificate since my parents gave it to me and everybody in the village knows that”.*

**Table 6.2. Agricultural land access between contract and non contract farmer**

Landholding	No. of Household			
	Contract farmer	Percentage (%)	Non-contract farmer	Percentage (%)
Less than 1.0 hectare (0.01 - < 1.0 ha)	0	0	8	40
1.0 – 2.9 ha	4	25	5	25
3.0 – 4.9 ha	6	37.5	7	35
5.0 – 6.9 ha	4	25	0	0
7.0 – 8.9 ha	0	0	0	0
9.0 – 10.9 ha	1	6.25	0	0
>= 11 ha	1	6.25	0	0

Table 6.2 contrasts land ownership between contract and non-contract farmer. The majority of contract farmers have land more than 3 ha of land, while the most

<sup>48</sup> Interview with village head, Chong Tnol village, July 15, 2010

<sup>49</sup> Interview with contract farmer 9, Kres Thom village, July 12, 2010

non-contract farmers have less than 1 hectare. The Kres Thom village head said that the village's population has been growing in recent years (an increase of seven families in five years, or 2 percent per year), but the land area has stayed the same and there is no more land available to farm apart from forest land.

The changing of land use from forest land to agricultural land and other livelihood purposes is increasing in this area because a lot of villagers tend to clearing forest land and then recognize it as private ownership.<sup>50</sup> The implication of land transfer from state land to private land will increase inequality to access to forest and livelihood conflicts with surrounding communities. Conflicts are typically based upon a loss of access to customary resources and increase a competition over forest land among the villagers in the same village or competition between villages in the community.

Moreover, land inequality and landlessness have risen as some smaller-scale farmers have sold their land to larger-scale farmers. The reasons for this included that some households owned small plots of land that were uneconomic, some had no means to cultivate them, and some were indebted and in need of cash. Some villagers had sold land that is located very far from the village because they the transportation cost is expensive, and some sold land that didn't have a land certificate because they feel unsecure with the land.

### **6.3. The Impact of Contract Farming on Land Tenure Security**

Security of tenure exists when a person's right to land is recognized by others and protected in the case of specific challenges (FAO, 2002). People with insecure tenure face the risk that their rights to land will be threatened by competing claims,

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<sup>50</sup> Under current forest law, all "forest" in Cambodia is the property of the State and it can not be transferred into private ownership.

and even lost as a result of eviction. Without security of tenure, households are significantly impaired in their ability to secure sufficient food and to enjoy sustainable rural livelihoods. Table 6.3 presents the impact of contract farming on land tenure security based the interviews with 16 contract farmers and 20 non-contract farmers.

**Table 6.3. Land Tenure Analysis**

Question	Contract Farmer		Non-contract Farmer	
	Yes	No	Yes	No
Do you have less than 1 hectare of land?	1	15	8	12
Do you have a land certificate?	0	16	5	15
Do you feel secure with your land tenure	4	12	15	5
Have you sold your land for contract farming?	1	15	1	19
Have you sold land since 2000?	10	6	3	17
Are you involved in a land dispute?	2	14	1	19
Is contract farming increasing landlessness?	6	10	4	16
Are there an increasing number of “landlords” in your community	0	16	16	4
Does the company ask you to provide a land certificate	0	16	0	20
Do you think contract farming promotes land tenure security	0	16	0	20

Based on the interview with respondents, large numbers of non-contract farmer have less than 1 hectare of land compared to contract farmers. Some of them are newly-wed couples, newcomers to the village, distressed sales, and or poor people who have never owned land. All 16 contract farmers do not have land certificate and 12 of contract farmers feel insecure with their land, while 15 non-contract farmers do not have land certificate and 15 of them feel secure with their land. It seems that, without a land certificate, contract farmer feels more land insecure because they own larger plots of land compared to non-contract farmer.

Non-contract farmer who have a land certificate state that they received “land paper” from the commune chief (*mae khum*) and village head (*mae phum*) and that

this paper is enough to show that they possess the land. Other non-contract farmers who do not have a land certificate simply think that it is not necessary to have a land certificate. They feel secure with their land tenure because they think that almost all of the villagers also do not have a land certificate and they were born and live in the same village for a long time, so they know and trust each other.

Contract farmer who do not have land certificates feel insecure with their land because they've heard about "economic land concessions" from villagers in other villages. The villager expects that if they possess land certificate, they can fight or argue with the government to prevent their land to be evicted. Yet, possessing land title in Cambodia does not mean have land security since a lot of cases show that people are forced to leave their land despite they have land certificate. Moreover, some of them are worry about their land when they are involved in land conflicts and they do not have evidence of their land ownership. One villager said:<sup>51</sup>

*"The land certificate is important as evidence. Since I do not have a land certificate, I worry about my land because I received information about economic land concessions in other village when a lot of people were forced to leave their land"*

From this situation, we can conclude that land titles or land registration is actually important to farmers who feel that they need to have proof that they are the owners of the land. According to FAO (2002), if farmers have tenure security they will be more likely to make long-term land improvements because they feel more certain that they will benefit from the investment. Moreover, there are fewer land disputes freeing up resources that might otherwise have been used for litigation. Similarly, Markussen (2008) concludes that land right documents have a positive effect on investment and productivity. Their study show that "plots with paper" have a higher value of output per hectare, a higher reported sales value, and are more likely

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<sup>51</sup> Interview with contract farmer 10, Kres Thom village, July 13, 2010

to be irrigated. Plots with paper are also likely to have been exposed to land conflicts in the past.

Tenure security is one of the factors that affect the way that households utilize assets. In general, if tenure is secure, the standard of living is *relatively* high given available household resources and an environment conducive to production. If tenure becomes insecure, the household becomes less productive and the standard of living declines (FAO, 2002).

From table 6.3, that the majority of farmers have not sold their land due to contract farming. The availability of forest land to clear agriculture reduces the farmers' motivation to buy land from other villagers. Since contract farmers have a larger number of family members and the capital available to them to clear forest land, they prefer to maximize their family labor to expand agricultural land by clearing forest rather than buying land from other farmers.

However, some contract farmers did sell their land to other villagers for several reasons, including needing cash, poor soil quality, and that they did not have a land certificate. For instance, a 53 year old villager from Kres Thom village sold 3 ha of land in 2005 to urban people from Kampong Speu city at a price of US\$100 per ha because he did not a land certificate and felt insecure in its ownership. The land price now in 2010 in total is US\$ 30,000.<sup>52</sup> Land prices are rising rapidly in Cambodia, in particular in urban areas like Phnom Penh, because many investors are seeking land in Cambodia, for example from South Korea, and wealthy Cambodians are buying land for speculative purposes.<sup>53</sup> As a consequence, when it is seen that the value of land is increasing in the context of expanding land markets, people now assume that even small plots of land are potentially valuable, and as a result cases of land disputes are

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<sup>52</sup> Interview with contract farmer 11, Kres Thom village, July 13, 2010

<sup>53</sup> Interview with NGO Forum, July 6, 2010

increasing. Land speculation is also taking a lot of land out of productive use in Cambodia.

### **6.3.1. Land Disputes**

A couple of land disputes are also occurring in this commune and most of them are forest land dispute. Two interviewees said that they were involved in forest land disputes arising because of unclear demarcation and land claim overlaps. Land titles are not available for forest land as it actually belongs to the State. Unfortunately, it was not possible to hear the reaction from the local government, Ministry of Agriculture (MAFF) and Ministry of Environment regarding this deforestation issue. Nor was it possible to hear a reaction from the company, despite the fact that it is the contract farmers that are expanding their land into the forest for AKR contract farming.

However, in other cases, it has been found that land conflicts are generated by contract farming when it involves large-scale farming (Oxfam, 2008). Contract farming will promote land insecurity if contract farmers have economic expectations for a higher yield and increasing income. As a result, they will expand their production by buying more land. On the other hand, poor farmers will sell their land since the price of land increases as a result of contract farming that is generating high incomes and secure returns. Land transfer occurs when there is supply and demand, namely when poor people need money immediately and large farmer wants to expand their business.

According to the NGO Forum on Cambodia (2010), if contract farming is expanded to a wide-scale it may increase the consolidation of land by agro-business, which may lead to increase threats, intimidation or land grabbing of farmers in order to consolidate the land. Key and Runsten (1999) also state that in the context of

liberalized land markets, contract farming that excludes small holders can lead to more concentrated land ownership and displacement of the rural poor.

### 6.3.2. Landlessness

From the interviews with farmers, 62 percent of contract farmers and 80 percent of non-contract farmers stated that contract farming does not increase landlessness in their village. The villagers who owned less than 1 ha of land is widespread among non-contract farmers. Some of them become landless because they have never owned much land, they are newly-weds, they are new migrants, or they have given the land to their children. The commune chief said that the entire commune, around 80 percent is poor because they only have a small plot of land (less than 1 hectare), widower, and sometimes do not have rice full in a year. Family members of families who do not have much land to cultivate look for work in the city as garment workers or work as hired labor in the village.

16 non-contract farming interviewees also said that there were an increasing number of “landlords”<sup>54</sup> in their community, while all contract farmers disagreed and said that this is not the case. In Kres Thom village, for instance, 10 families out of a total of 70 households have more than 10 hectares of rice fields.<sup>55</sup> Almost all of the respondents said that AKR contract farming does not promote land tenure security and that company’s contract scheme does not require land certificate for farmers to participate in contract farming.

From their study on suitable land tenure arrangements for contract farming, Commonwealth Development Corporation (CDC) recommends that to secure land tenure during the lifetime of the smallholder there should be: an acceptable method

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<sup>54</sup> Landlord defines as the villager who has land more than the average in the village

<sup>55</sup> Interview with contract farmer 10, Kres Thom village, July 13, 2010



for inheritance or sale of land; a mechanism to prevent the misuse of the land; and an acceptable collateral for loans as essential (Baumann, 2000). AKR's contract farming could be used to promote land tenure security for farmers and to encourage the government to accelerate land titling programs, because land titles would also secure the company's operation and build confidence with their contract farmers. It would also enable contract farmers to access formal credit institutions, such as commercial banks; currently, the farmers are required to keep their rice in the company's warehouse if they want to take credit from the company, and credit constraints are the most significant obstacle faced by farmers to improving their productivity.

#### **6.4. Summary**

The AKR contract farming does not increase land tenure security for farmers because the company does not require farmers to provide a land certificate. Some contract schemes required a land title from farmers to guarantee their operation, but in the AKR contract scheme does not involve a land certificate since a majority of the villagers do not have it. The company required a contract farmer to have at least 1 ha to plant the company's rice seed. However, contract farming increases unequal opportunity for farmers to access forest land. Contract farmers who have capital and power gain more advantage to access forest land than poor farmers. The changing of land use from forest land to agricultural land and other livelihood purposes is increasing in this area because a lot of villagers tend to clear forest land and then recognize it as private ownership. Moreover, land conflicts, particularly forest land as a result of contract farming, are reported in this area due to unclear demarcation and overlap ownership.

Buying and selling agriculture land from small farmer to large farmer due to contract farming does not happen because the contract farmer prefers to clear forest land than buy land from other villagers. Some villagers had sold land that is located very far from the village because the transportation cost is expensive, and some sold land that didn't have a land certificate because they feel insecure with the land.

## CHAPTER VII

### CONCLUSION AND RECOMMENDATIONS

This chapter summarizes the research finding from the field work in Kampong Speu province by assessing the hypothesis and asking whether contract farming has improved farmers' livelihood, increased land tenure security, and what are the terms and condition and farmer's participation in contract farming. This study has interviewed contract farmers from *Angkor Kasekam Roungreung* Company (AKR) to understand how the rice contract farming works in Cambodia, and non-contract farmers from the same villages. The first part summarizes the key findings of the field work. I then answer the main research question, asking how can rice contract farming be beneficial for farmers' livelihoods in Cambodia? Finally, I offer some conclusions and recommendations.

#### 7.1. Summary Findings

Based on the field work in Kres Thom, Thum Phiem, and Chong Tnol village, Tang Krouch commune, Samrorng Thong district, Kampong Speu province, and interviews with 16 AKR contract farmers and 20 non-contract farmers, there were several important findings:

##### 7.1.1. The Impact of AKR Contract Farming on Farmers' Livelihood

Most of the AKR contract farmers have experienced increasing income since participating in contract farming because they get a higher price and good rice yield. However, this income was not enough to live on alone and farmers had to rely on other farm and non-farm activities. Furthermore, whilst contract farmers did see increasing income, they were not satisfied with the contract arrangement, particularly the requirements and penalties of the company.

Besides increasing income, contract farmers also get good rice seed and extension services from company, such as training, access to credit, and warehouse facilities for farmers who want to keep their surplus rice with the company. Under contract farming arrangements in general, extension services from the company is important to farmers, especially when extension service from the government are inadequate to support farmers in rural areas.

### **7.1.2. AKR's Terms and Conditions**

The AKR contract agreement details the farmers' and the company's rights and obligations, including the amount of seed that the farmers must return to the company on harvest, as well as the minimum guaranteed price to the farmer and possible penalties to the farmers if they do not meet the contract requirements or default on the contract. From the interviews with contract farmers, it was found that the company has set a high requirement and heavy penalties for the contract scheme this year. As a result, the number of contract farmers with AKR has dropped significantly, for example from 32 farmers to 7 farmers in Thum Phiem village and similarly in Kres Thom and Chong Tnol village. Most of the farmers are afraid that they cannot accomplish these new requirements and will be penalized by the company. The farmers are worried about drought this year, as there had been little rain.

The farmers felt that the company does not provide enough information to them about the pricing mechanism and profit sharing in the contract scheme. The contract farmers also have little bargain power to negotiate in price setting and have to accept the sale price agreed from the company. They often experience weight deduction that the company justifies due to their quality standard requirements, making many of the farmers dissatisfied as the company does not provide enough

explanation about these quality standards tests. Moreover, a lot of risk is carried by the farmers as the company does not provide compensation if there is a crop failure.

At present, the farmers do not have a farmer organization, and AKR will not allow the farmers to form a farmer organization. Instead, the company has established a Commune Association under their management. Although this has farmers representatives included, the farmers' voices are not heard. Instead, the company tends to use the Commune Association to enforce their contract scheme and to monitor the contract farmers' operation to make sure that they will not default on the contract. Since farmers do not have farmers association, they are left with no choice but to work individually, making it difficult to negotiate with the company. Were a farmers' cooperative to be established, it would serve as a valuable intermediary for the farmers to negotiate and bargain with the company as a collective force.

### **7.1.3. Participation and Non-participation in Contract Farming**

Higher prices, good rice seeds, and access to market are the main reasons for farmers to participate in AKR contract farming. They want to join the company when they see other farmers' successes in planting the company's rice and earning a higher income. Access to credit and extension services are not as important reason for farmers to participate in contract farming, since they rely on credit from Micro Finance Institutions (MFIs) and extension services from the Center for Education and Development for Agriculture in Cambodia (CEDAC).

From the interviews with non-contract farmers, their reasons not to participate in contract farming are the high requirements of the company and the limited amount of land that they own; The majority of non-contract farmers have less than 1 hectare of land and do not have the capability to meet the company's high requirements as farmers who have a small plots of land tend to have insufficient land for planting AKR's rice varieties. For non-contract farmers, often their land is only enough to

produce rice for their own consumption. Yet, even though they are excluded from contract farming, they feel that nothing has changed in terms of their relationships with the contract farmers, and the marginalization of non-contract farmers does not appear to be happening in these villages. Moreover, it is found that contract farming has not promoted land transfer from small farmers to larger farmers and land conflict is rare in these villages because farmers that need more land are in general encroaching into the forests (although there is conflict over forest land).

#### **7.1.4. The Impact on Land Tenure Security**

Contract farming does not increase land tenure security for farmers because the company does not require farmers to provide land certificate. From the interviews, almost 80 percent of contract farmer do not have land certificate and they feel insecure with their land. On the other hand, non-contract farmers who do not have land certificates think that it was not necessary to have land certificate; they feel secure with their land tenure because they think all of the villagers do not have land certificates and as they were born and live in the same village for a long time, they know and trust each other.

Land titling or land registration is important for farmers to prove that they are the owner of the land. Under contract farming arrangements, the government should promote land titles for farmers in order to strengthen their confidence to invest in the agricultural sector and increase their access to the formal financial institution. If farmers have land titles, they can use it as collateral to get loans from the banks or MFIs. As a result, it will reduce farmer's dependency on the company to borrow credit, and therefore potentially strengthen their bargaining position.

### **7.1.5. Deforestation**

Deforestation has been widespread in this commune due to the expansion of land under contracted cultivation. The majority of contract farmers clear forest land to plant company rice. Most farmers do not have land certificate for their cleared forest land and land conflict is reported to be high because of overlapping and unclear demarcations. Forest Law does not recognize private ownership on forest land because all forest in Cambodia is belongs to the State. But the contract farmers in this village occupied cleared land as their forest land without formal land certificate. The informal forest land private ownership by contract farmer is forcing other villagers who do not have forest land to meet needs from forest resources farther away.

### **7.1.6. The Impact of Contract Farming on Community**

The AKR contract farming is not only increasing the gap of social economy between contract farmer and non contract farmer, but also increasing the inequality opportunity to access forest land. Under contract farming scheme, contract farmers gain more advantage and get better livelihood than non contract farmer. The difference of social economy status also hindered non contract farmer to participate in contract farming because they do not have enough agricultural land and productive assets to accomplish AKR requirements.

Land tenure security as a result of contract farming is not improving, but deforestation and land use transfer from state land to informal private forest land ownership increase significantly. This is happen because contract farmer encroach forest land to plant company rice seed due to high requirement. Forest land should be a common property resource which is all villagers has the same opportunity to access forest land. However, since contract farmer claimed that cleared forest land belongs to them, other villagers and non-contract farmer have difficulty to access forest

resources and they should go farther away to meet their necessities from forest. As a result, it will impact on their livelihood.

Although they can still collect forest products, but they should bear more costs, in terms of time, labor, money and risk. If they get forest land, sometime the forest soil is not good and fertile enough to plant rice seed. The study was conducted in Kampong Speu which has forest and contract farmer can clear forest land to expand their agricultural land. How about other provinces under AKR operation which do not have forest land? How the contract farmers accomplish the company's requirement and how is their livelihood situation? Additional research should be done to understand the AKR contract farming works and its impact on contract farmers' livelihood.

From this study, we learn that directly or indirectly if the AKR contract farming were taken widespread; it will increase disparities among the villagers in the community. The gap between contract farmer and non-contract farmer on economic and productive asset ownership is wider and unequal access to agricultural land and forest land increase sharply. The local government should take actions to improve productivity of farmers in rural areas.

Government can play an important role to increase farmers' livelihood by improving rural areas infrastructure, such as roads to increase good market access for inputs and output for farmers, electricity and irrigation facility to increase farmers agricultural productivity. The government should expand the extension services for farmers to provide good knowledge of farming techniques and improve technical skills, in particular cattle rising, growing vegetables and cash crops, etc to diversify farmer's source of income. For land tenure issues, the local government should control the environment impact due to contract farming expansion, such as deforestation and strengthen law enforcement for farmers who clear the forest.

## **7.2. Context in which Rice Contract Farming be Beneficial for Farmers' Livelihood in Cambodia**

The criteria for success of contract farming in increasing farmers' welfare can be derived from giving consideration to how the contracts themselves work. Some conditions that can measure the success of contract farming are that both parties believe that they are better off through contract farming and that they are satisfied with the contract arrangement. Key factors for successful contract farming to increase farmers' livelihood and bring benefits to the companies and farmers, include:

### **7.2.1. The contract**

**The terms and conditions** of the contract should specify in detail the rights and obligations between companies and farmers, including the penalties for breach of contract by both parties. The contract arrangement should provide enough information about the pricing mechanism, profit sharing, and quality standards requirements. Moreover, the contract should be written transparently and simply to avoid misunderstandings of rights and obligations among contract farmers and companies.

**The requirements** of the contract should balance risk sharing and minimize uncertainty. When there are requirements from company that are difficult for the farmer, it is understood by the farmer that the company does not want to bear a fair share of the contract risk. However, high requirements will reduce the interest of contract farmers to join the company, affecting the company in the long run. In addition, new contract farmers will not join the company if the company sets difficult requirements.

**The penalty** should be appropriate to the contract farmers' economic and social conditions. Too heavy penalties will encourage the farmer to take risks or violate the contract in order to accomplish the requirements and avoid the penalties,



such as using chemical inputs or cutting down forests to expand rice field. Moreover, heavy penalties reduce the farmers' motivation to enter into long-term relationships with the company or to participate in contract farming.

**Enforcement of the contract**, by monitoring the compliance or breach of the contracts should involve both the company and the farmers together, for example through farmer organizations or commune councils that have contract farmer representatives. According to Eaton (2001), farming contracts, whether written or oral, should comply with the minimal legal requirements that apply in a particular country. It is important to take into account prevailing practices and societal attitudes towards contract obligations, because in almost all societies these factors can produce an outcome that differs from the formal letter of law. Moral hazard costs could be reduced through social pressures, incentive structures, or group contracts/ incentives. For instance, encouraging group or co-operative action among farmers can lower enforcement costs and ensure better compliance for the company. Punishing the village head for contract default, as happens at present, is not fair because the villagers feel bad when their village head is punished, despite the fact that they have tried their best to meet the contracts requirements.

**Monitoring** should be done by the company's staff in the field regularly in order to gather information directly from the contract farmers, including the problems that they face, to then inform whether the penalties are fair given the circumstances that year. Monitoring and evaluation from company is important to increase farmers' trust and feel that the company cares for them. As a result, the relationship between the farmer and the company becomes not only a relationship between growers and buyers under the contract scheme, but also a relationship that ensures the shared success of the contract farming for mutual benefit.

### **7.2.2. Role of the government**

The role of the government is to provide an “enabling environment” by creating a legal system and legislation in support of farmers and companies to engage in contract farming. The government can provide credit support, tax benefits and other policy incentives. Moreover, the government can play a central role in determining the distribution of cost and benefits between farmer and company and ensuring that the rights of both parties are protected.

### **7.2.3. Land Tenure Security/ Land Ownership**

Land titles can increase access to credit, since land can then be used as collateral. If land tenure is uncertain, smallholders tend to be more risk averse and are unlikely to avoid significant sunk investments in either new enterprises or land improvement. In order to ensure land security and protect local farmers and agribusinesses from potential conflict over land ownership, land titling processes should occur alongside the spread of contract farming. Farmers who own land certificates will have a better bargain position than farmers who do not possess land title because their access to credit is not only from the company, but also other formal money lending sources.

### **7.2.4. Empowerment**

Small-scale farmers need to develop their negotiating skills to gain higher prices for their commodities. These skills could be improved through trainings from Non Government Organizations (NGOs) or the formation of farmers’ associations. There is need to improve the flow of market information and market trends. Farmer association will ensure that the members are not exploited, are informed about market trends, and have a stronger bargaining position.

### 7.3. Conclusion

The farmers contracted to *Angkor Kasekam Roungreung* (AKR) have experienced an increasing income through their participation in contract farming, and have a better livelihood than non-contract farmer. However, burdensome requirements, heavy penalties, poor extension services, and a lack of information on the contract's terms and conditions reduce the incentive for farmers to commit to long-term participation in contract farming and undermine mutual trust between the company and the farmer.

AKR contract farming does not officially involve government institutions. Instead the contract scheme is based on an agreement between the farmers and the company directly. Most of the details in the contract, however, are set by the company, such as the quality requirements, pricing mechanism, and penalties, and are to the company's advantage. In addition, the absence of farmer organizations means that the farmer has little bargaining power to negotiate with company. As a result, the contract farmers cannot maximize their benefit through contract farming to improve their livelihood.

Overall, the status of contract farming in Cambodia clearly points to the great potential for its expansion in the future. However, for this to be realized and for the benefits to be shared fairly between companies and the farmers themselves, issues about the role of the government, the regulatory framework, contract enforcement, the land tenure system and the formation of small-scale farmer organizations must all be addressed.

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## **APPENDICES**

## APPENDIX A

### QUESTIONNAIRES FOR CONTRACT FARMER

---

**Date of interview:**

**Personal details:**

1. Name:

Family name: -----First name: -----Middle name: -----

2. Age: -----

If age unknown:

- |   |                                |
|---|--------------------------------|
| <input type="checkbox"/> Child                  | <input type="checkbox"/> 40-49 |
| <input type="checkbox"/> Adolescent (14-19 yrs) | <input type="checkbox"/> 50-59 |
| <input type="checkbox"/> 20-29                  | <input type="checkbox"/> 60-69 |
| <input type="checkbox"/> 30-39                  | <input type="checkbox"/> 70+   |

3. Household head: -----

4. Name of Village/ commune: -----

5. Sex:  Female  Male

6. Marital status

7. Ethnic group:

8. Educational attainment:

- Grade school
- High school
- College
- Vocational course
- Postgraduate

**Household and home environment:**

9. How many people live in your home (including yourself) -----

10. Of these people, how many are children less than 18 years old?

11. Do any of these people work in agriculture?

If yes, please state how many are:

- Children (<14 yrs)
- Adolescent (14-19 yrs)
- Adult (>19 yrs)
12. Household income:
13. Land ownership: ----- hectares
14. Distance from plantation/ workplace:
15. Occupation:

## **I. UNDERSTANDING CONTRACT FARMERS**

1. Do you know contract farming?
2. Do you understand the terms and conditions of contract farming?
3. How do you get the information about contract farming?
  - a) Government
  - b) Company
  - c) Mass media (TV, radio)
  - d) Village head
  - e) Villagers
4. What did you do before join with contract farming? -----
5. When did you start your first contract? (date) -----
6. What is your experience under contract farming? (cost and benefit?) -----
7. What do you feel about terms and condition of contract farming?-----
8. Do you know the requirement of contract farming? Yes      No  
If yes, please mention -----
9. Do you have to pay deposit to company in the first time? Yes      No
10. Do you feel more depend on company under contract farming? Yes      No
11. Do you have any other job besides contract farming? Yes      No
12. What is your rice yields capacity (how many kg of rice/ hectare?) -----
13. Why did you become a contract farmer? (price setting, access to market/ input/ credit, risk sharing, etc) -----
14. Are you participating contract farming voluntarily? Yes      No
15. Who did you discuss with when you were deciding to become contract farmers or not?

- a) Village head
  - b) Previous contract farmers
  - c) Company
  - d) Farmer association
  - e) Others....
16. Do you talk with other contract farmers to agree a proposed price to the company? Yes No
17. Do other people contact the contract farmers to ask about their experience about contract farming? Yes No
18. Do you get access information about terms and condition of contract farming from company? Yes No
19. Do you get the copy of the contract? Yes No
20. What has changed in your life since you started contract farming? (Increasing income, better livelihood?) -----
21. What are the problems do you face under contract farming? -----
22. "Is there anything else that you'd like to add?" -----

## **II. UNDERSTANDING TERMS AND CONDITION OF CONTRACT FARMING**

### **1. Economic Aspect**

- Do you get a good price from the company? Yes No
- Do you have bargaining power in price setting? Yes No
- Is the company setting the price under contract farming? Yes No
- Do you get loan from the company? Yes No
- Do you get loan from MFI or money lenders? Yes No
- How do you pay the loan from the company -----
- Do you get secure access to market for your crops? Yes No
- Have you ever sell your crop to another market, not the company? Yes No
- If yes, why? -----

- Do you get access to credit and input from the company? Yes No  
What kind of inputs do you get? -----

## 2. Agricultural production and management aspect

- Do you get extension service from the company? Yes No
- What kind of extension service do you get?-----
- Do you get transfer of knowledge and technical from the company? Yes No
- Is there any significant improvement in your farming skills? Yes No
- (explain) -----
- Do you have to change your crop pattern under contract farming? Yes No
- Do you feel satisfied with new crop pattern? Yes No
- Is the new crop pattern increasing your income? Yes No
- Do you have to delivered quality output and productivity as required in contract farming? Yes No
- Is there any increasing output quality and productivity? Yes No

## 3. Governance aspect

- Does the company give you enough information about contract farming, like price setting or profit sharing? Yes No
- Do you lost your decision ability and freedom after participating in contract farming? Yes No
- Does the company allow you to make farmers organization? Yes No
- Do you think the company consent with the agreement? Yes No

## 4. Social and cultural aspect

- Do you have a good working condition under contract farming? Yes No
- Do you get better living standards under contract farming? Yes No  
Is it increasing income, secured market, access to credit and input or what?)
- Does company differentiate female and male head household under contract farming? Yes No

- Do you think that contract farming will secure land tenure? Yes No  
Is there any increasing in land tenure or landlessness due to contract farming?  
Yes No
- Do you think that there is any exclusion for small farmers under contract farming? Yes No
- Do you think that contract farming changes cultural and tradition in community? Yes No

#### 5. Environment aspect

- Do you consider that contract farming will dangerous for environment since it use a lot of chemical input, like fertilizers and pesticides? Yes No
- Do you think that contract farming will lead land conversion, change biodiversity and habitat? Yes No
- Do you think that contract farming will increase soil erosion and pollution?  
Yes No
- Do you think that contract farming will threat quantity and quality of fresh water? Yes No
- Do you think that contract farming will increase deforestation? Yes No

#### 6. Development aspect

- Do you think that contract farming available for small farmers? Yes No  
(if yes, please explain) -----
- Do you think that company is fair in financial agreement (profit and price)?  
Yes No
- Do you get flexibility/ autonomy under contract farming? Yes No

### III. MEASUREMENT FARMER'S LIVELIHOOD CHANGE

#### A. Economic Security

##### Fixed Assets Ownership

No	Name of assets	Year of buying	How many	Price	Source of income
1	Motor/ car				
2	Bicycle				
3	Tractor				
4	Land				
5	Rice miller				
6	TV				
7	Pumping machine				
8	Others				

1. What is your source of income before join with contract farming?
  - a) Sale of rice
  - b) Sale of non-rice (maize, corn, vegetables, fish, etc)
  - c) Sale of livestock (cattle, poultry, pigs, buffalo)
  - d) Non-farm activities (hired labour, weaving sales, handicraft sales, remittance)
  - e) Others.....
2. Do you spend a lot of money for fertilizer, pesticides, hired labor (inputs) before join with contract farming? Yes No
3. How much do you spend for agricultural input?
4. What is your source of income after join with contract farming?
  - a) Sale of rice
  - b) Sale of non-rice (maize, corn, vegetables, fish, etc)



- c) Sale of livestock (cattle, poultry, pigs, buffalo)
  - d) Non-farm activities (hired labour, weaving sales, handicraft sales, remittance)
  - e) Sharing profit from contract farming
  - f) Others.....
5. Do you spend a lot of money for fertilizer, pesticides, hired labor (inputs) after join with contract farming? Yes No
  6. How much do you spend for those inputs? -----
  7. What is your strategy to fulfill your daily necessity when your income is not enough?
    - a) Borrow money from neighbours/ relatives
    - b) Sell asset (livestock, land, jewellery, etc)
    - c) Take a loan form micro finance, money lender or bank
  8. Is there any increasing income since participating in contract farming? Yes No, (explain why)-----
  9. Do you think that contract farming increase your livelihood? Yes No (explain why) -----

## **B. Food Security**

1. What is your rice status?
  - a) Surplus                      b) Enough                      c) Shortage
2. Does food insecurity always happen in your family? Yes No
3. What is your rice insufficient month?
  - a) 1-3 months                      b) 3-6 months
  - c) More than 6 months                      d) none
4. What is your strategy to overcome rice shortage?
  - a) Purchase of rice from other sources in the village/ market
  - b) Borrowing from relatives/ other villages with interest or without interest
  - c) Combination 1 and 2
  - d) Barter (exchange rice with other crops/ fish)

5. What are the main causes of rice insufficiency?
  - a) Insufficient agriculture land
  - b) Flooding
  - c) The crops destroyed by rats/ bugs
  - d) Increase in family member
  - e) Contract farming (farmer can not plant other crops)
6. Do you think that rice contract farming will threat your food security?
 

Yes    No

Why (please explain!) -----

### **C. Health Security**

1. Can you access clean and fresh water? Yes    No
2. Do you have enough sanitation facility with healthy standard in your house?
 

Yes    No
3. Do you have difficulty to access health care? Yes    No
4. Can you afford the medical expenses and medicine? Yes    No
5. Do you usually go to hospital when you get ill? Yes    No
6. How far the hospital from your house?
7. Did you use pesticides and fertilizers on your rice farming before? Yes    No
8. Have you seen any health benefit from contract farming? Yes    No
9. Do you have health insurance from the company? Yes    No
10. Is the contract farming increasing your health status? Yes    No
 

If yes, why-----
11. What is the main significant change in health security (nutritious food, increasing money to get access to health care) after becomes a contract farmer? -----

### **D. Education Security**

1. How many people in your family who get primary education? -----
2. Can you access education, in term of education facility and can you afford it?
 

Yes    No
3. What is the last education among your family member? -----

4. Is the contract farming increase your education level in your family? (example from high school to university) Yes No

**E. Empowerment**

1. Do you have farmer organization in community? Yes No  
 2. Do you think that farmer organization is important? Yes No  
 3. Is farmer organization can be used to bargain with company? Yes No  
 4. Do you get any support from NGOs on contract farming? Yes No

**IV. MEASUREMENT LAND TENURE CHANGE**

1. How long have you been living in this village? ..... years  
 2. Do you have land less than 1 hectare? Yes No  
 3. How did you get most of your land?  
     a) 1980s distribution/*Krom Samaki*  
     b) Given by relatives/friends  
     c) Bought  
     d) Cleared land/occupied free  
     e) Given by authorities  
     f) Other (specify) .....
4. In the case of 3.3, from whom did you buy the land?  
     a) Relative/friend (in the same village/area)  
     b) Urban people (outsider)  
     c) Other (specify) .....
5. Do you have any ownership papers for your land? Yes No  
 6. Do you feel secure with your land tenure? Yes No  
     (explain) -----
7. Do you sell your land for contract farming? Yes No  
 8. Have you sold any land since 2000s? Yes No → (if No, go to question 12)  
 9. Why did you sell your land? (main cause)  
     a) Repaid heavy debts  
     b) Did new business (non-farm work)  
     c) Did not have enough labour to farm

- d)** Paid for medical treatment/accident
- e)** Bought food
- f)** Paid for son/daughter's marriage
- g)** Sold land to gain profit
- h)** Others (specify) .....

10. Whom did you sell your land to?

- a)** Relative/friend (in the same village/area)
- b)** Urban people (outsider)
- c)** Other (specify) .....

11. Are you involved in any kind of land dispute now? Yes No

12. Have there been changes in landlessness and land transfers due to contract farming? Yes No, (explain) -----

13. Is the phenomenon of domination of large landlords rising in your area?

Yes No

14. Does the company require you to provide land title to be a contract farmer?

Yes No

15. Do you think that contract farming will promote land tenure security? Yes No  
(explain why) -----

## APPENDIX B

### QUESTIONNAIRES FOR NON-CONTRACT FARMER

---

**Date of interview:**

**Personal details:**

1. Name:

Family name: ----- First name: ----- Middle  
name: -----

2. Age: -----

If age unknown:

- |   |                                |
|---|--------------------------------|
| <input type="checkbox"/> Child                  | <input type="checkbox"/> 40-49 |
| <input type="checkbox"/> Adolescent (14-19 yrs) | <input type="checkbox"/> 50-59 |
| <input type="checkbox"/> 20-29                  | <input type="checkbox"/> 60-69 |
| <input type="checkbox"/> 30-39                  | <input type="checkbox"/> 70+   |

3. Household head: -----

4. Name of Village/ commune: -----

5. Sex:  Female  Male

6. Marital status

7. Ethnic group:

8. Educational attainment:

- Grade school
- High school
- College
- Vocational course
- Postgraduate

**Household and home environment:**

9. How many people live in your home (including yourself) -----

10. Of these people, how many are children less than 18 years old?

11. Do any of these people work in agriculture?

If yes, please state how many are:

- Children (<14 yrs)
  - Adolescent (14-19 yrs)
  - Adult (>19 yrs)
12. Household income:
13. Land ownership: ----- hectares
14. Distance from plantation/ workplace:
15. Occupation:

## **I. UNDERSTANDING FARMER'S PARTICIPATION IN CONTRACT FARMING**

1. What is your primary job now?
  - a) farmer
  - b) fishing
  - c) hired labour
  - d) moto-taxi driver
  - e) others....
2. If farmer, how do you do with farming -----
3. Do you know about contract farming? Yes No
4. Where do you get information about contract farming?
  - a) government
  - b) company
  - c) mass media (TV, radio)
  - d) Village head
  - e) others.....
5. What do you think about contract farming? -----
6. Do you think that contract farming will increase your living standards?
 

Yes No
7. Why you do not participate in contract farming? -----
8. Is it your own decision? Yes No
9. What don't you like about contract farming? -----
10. Do you find difficulty to join with contract farming? Why? Yes No

explain why) -----

11. Do you feel excluded from the community since you are not a contract farmer? Yes No

12. Do you think that contract farming will increase land conflict in community? Yes No

(explain why) -----

## II. MEASUREMENT LAND TENURE CHANGE

1. How long have you been living in this village? ..... years

2. Do you have land less than 1 hectare? Yes No

3. How did you get most of your land?

a) 1980s distribution/*Krom Samaki*

b) Given by relatives/friends

c) Bought

d) Cleared land/occupied free

e) Given by authorities

f) Other (specify) .....

4. In the case of 3.3, from whom did you buy the land?

a) Relative/friend (in the same village/area)

b) Urban people (outsider)

c) Other (specify) .....

5. Do you have any ownership papers for your land? Yes No

6. Do you feel secure with your land title? Yes No

(explain) -----

7. Did you rent any agricultural land to others this year? Yes No

8. Do you sell your land for contract farming? Yes No

9. Have you sold any land since 2000s? Yes No → (if No, go to question 12)

10. Why did you sell your land? (main cause)

a) Repaid heavy debts

b) Did new business (non-farm work)

c) Did not have enough labour to farm

d) Paid for medical treatment/accident

- e) Bought food
  - f) Paid for son/daughter's marriage
  - g) Sold land to gain profit
  - h) Others (specify) .....
11. Whom did you sell your land to?
- a) Relative/friend (in the same village/area)
  - b) Urban people (outsider)
  - c) Other (specify) .....
12. Are you involved in any kind of land dispute now? Yes No
13. Have there been changes in landlessness and land transfers due to contract farming? Yes No  
(explain) -----
14. Is the phenomenon of domination of large landlords rising in your area?  
Yes No
15. Does the company require you to provide land title to be a contract farmer?  
Yes No
16. Do you think that contract farming will promote land tenure security? Yes No  
(explain why) -----



## APPENDIX C

### QUESTIONS GUIDELINES FOR FOCUS GROUP DISCUSSION (FGD)

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#### **I. Understanding the Contract Farming**

1. How is the process to be a contract farmer in company?
2. Whom you discuss with before decide to participate in contract farming?
3. Do other people contact you to ask about their experience about contract farming?
4. How is the price setting mechanism? Do the company asking your idea about price? Do you discuss with other contract farmers to agree a proposed price to the company?
5. Are you satisfied with the price or you just followed the price decision from the company?
6. Do you have a power to bargain the price with the company?
7. What is the buying mechanism from farmers to company?  
(Directly from the farmers, middlemen, or farmer organization)
8. Is there any farmer organization in your community? What are their role in price setting, profit sharing and determine the standards?
9. How farmers association (farmers committee) establish?
10. Do you think that farmer association is important for contract farmers?
11. How is the organic rice standard mechanism? Does the company set the standards? What happen if your rice is not reaching the standard requirement from the company?

#### **II. Measuring the positive and negative impact of contract farming to community**

1. What is the economic impact of contract farming (increasing income, reduce cost of production) and please explain? Do farmers gain more profit from contract farming? Why?
2. What are the cost/ disadvantage of contract farming?

3. What is the impact of physical capital of contract farming? Does the company improve the infrastructure in the community? What kind of new infrastructure (road, school, hospital, irrigation, etc)
4. What is the impact of contract farming on human resources in the community? What kind new capacity of human resource? (New knowledge of farming, technical change, transfer knowledge, training, managerial skills, etc)
5. What is the social impact from contract farming? Do the villagers have a good relation between farmers? Does the contract farming increase the social activity among the villagers?
6. What is the impact of contract farming on natural/ environment? Is it the using of chemical input which can be reduces the fertility of the soil, increase water usage and lead to deforestation?
7. What is the impact of contract farming on land security? Is it increasing landlessness and land dispute?
8. What is the impact of contract farming on food security?

## **BIOGRAPHY**

Betti Rosita Sari was born in Central Java, Indonesia. She holds a Bachelor Degree in Economics and Development Studies, Gadjah Mada University in 2004. She used to work as a researcher and joined in Research Center for Regional Resources, Indonesia Institute of Sciences (PSDR-LIPI) in Jakarta from 2005 up to present. Her area of study was social and economic issues in South East Asia, especially Cambodia. She spent one year to study Khmer language and culture in Royal University of Phnom Penh in 2007. As contract farming is new in Cambodia, she would like to investigate how contract farming works and its impacts on farmers' livelihood and land tenure.