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Years

Contract Farming in Cambodia: Different Models, Policy and Practice

Sum Sreymom and Khiev Pirom



Working Paper Series No. 104

August 2015

A CDRI Publication

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CDRI Working Paper Series No. 104



Cambodia Development Resource Institute

Phnom Penh, August 2015

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ISBN 978-9924-5000-1-8

Citation:

Sum Sreymom and Khiev Pirom. 2015. *Contract Farming in Cambodia: Different Models, Policy and Practice*. CDRI Working Paper Series No. 104. Phnom Penh: CDRI.

CDRI

📍 56, Street 315, Tuol Kork, Phnom Penh, Cambodia

✉ PO Box 622, Phnom Penh, Cambodia

☎ (855-23) 881384/881701/881916/883603

📠 (855-23) 880734

E-mail: cdri@cdri.org.kh

Website: www.cdri.org.kh

Edited by: Susan Watkins

Layout and Cover Design: Meas Raksmeay and Oum Chantha

Printed and Bound in Cambodia by Donbosco printing

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Acronyms

AKR	Ankor Kasekam Roongroeung Co Ltd
CDRI	Cambodia Development Resource Institute
CF	Contract farming
CIRD	Cambodian Institute for Research and Rural Development
FGD	Focus group discussion
IVY	International Volunteer Center of Yamagata
KHR	Cambodian riel
KII	Key informant interview
KPA	Kampot Pepper Association
KPC	Kampot Pepper Cooperative
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEF	Ministry of Economy and Finance
MOI	Ministry of Interior
NGO	Non-governmental organisation
NSDP	National Strategic Development Plan
OAE	Office of Agricultural Extension
PDA	Provincial Department of Agriculture
Sida	Swedish International Development Cooperation Agency
USD	United States dollar

Acknowledgements

The authors would like to express their deep gratitude to the Swedish International Development Cooperation Agency (Sida) for its financial support that made this research study possible.

Profound thanks are due to the following people who assisted, encouraged and motivated the authors to carry out this research, from project conception to completion. The project and this report could not have been completed without their guidance, support and patience.

The authors gratefully acknowledge Mr Nou Keosothea, head of Health Unit, for his feedback on how the analytical framework could be adapted to fit the study. Their gratitude extends to Dr Jan Taylor, research consultant, for her excellent advice on the first draft report, and to Dr Theng Vuthy, head of Agriculture Unit, who reviewed the whole report and gave critical comments. Sincere thanks go to Susan Watkins for editing the report and providing constructive comments and to colleagues for their helpful inputs and feedback at a research workshop to present preliminary findings.

The study benefitted from the participation of many key informants: farmers, contractors, local authorities, NGO staff and government officials. Too numerous to mention individually by name, they willingly spared their time to contribute to the study and made great effort to provide important primary information on contract farming schemes for the research analysis. Special thanks are also due to the focal persons at the study sites whose commitment enabled the researchers to meet targeted farmers.

Finally, the authors would like to acknowledge Mr Lim Ratana and Mr Simen Sunday, CDRI drivers, and other operations staff whose professionalism and cooperation ensured that fieldwork was carried out successfully.

Abstract

Contract farming (CF) is increasingly seen as an effective mechanism to maximise the inclusion of and benefits for small-scale farmers, while giving some control over production to agribusinesses without requiring land ownership. In Cambodia, CF takes many forms and involves food and industrial crops, yet the different CF models and contract types have not been identified. Farmers and contractors have encountered many problems in obtaining reliable benefits from and sustaining CF schemes. The research objectives were to identify and evaluate the various models of CF practiced in Cambodia, explore the supports required for small farmers to maximise benefits from CF, and suggest policy options to improve linkages between small farmers and CF. Snowball sampling was used to identify different CF models and their location, and information was collected from 38 key informant interviews and seven focus group discussions. The findings revealed four modalities of CF in operation: centralised, informal, multipartite and intermediary. Most of the CF schemes are run by support agencies and contractors, with contract documents (formula and format) drawn up by contractors without recourse to the coordination mechanism described in the Sub-decree on Contract Farming. Institutional supports especially for individual contract farmers remain limited. Centralised and multipartite models can provide more benefits if contracts and agreements are well managed and coordinated and there is enough support for farmers. CF practices do exist at community level but, so far, there has been no clear supportive action from government, even though the sub-decree has been signed. The promotion of CF to improve agricultural productivity and rural incomes will not be effective unless the sub-decree is accompanied by policy, strategy and action plans. To ensure that CF schemes work well and to provide more benefits to farmers, government must pay attention to four strategic areas:

- Linking farmer organisations and CF schemes
- Formalising markets
- Improving production inputs and services
- Enforcing the sub-decree by implementing its role as stated in Article 7, Chapter 2, and forming the Coordination Committee for Agricultural Production Contract to (i) develop policy to support CF, (ii) strengthen harmonisation between farmers and contractors, and (iii) intervene in, or reconcile arguments or conflicts between farmers and contractors.

1. Introduction

1.1 Background

Agriculture plays a vital role in Cambodia's economy, accounting for about 28.7 percent of GDP in 2014 (MAFF 2015). Over 90 percent of the poor live in rural areas and rely on agriculture for their primary sources of livelihood. The sector is characterised by small-scale farming: about 40 percent of farmers own less than one hectare of agricultural land (NIS 2011). To improve agricultural productivity and market access for agricultural products, the government has been promoting contract farming (CF) at community level as a means of removing some constraints on agricultural growth and linkages to input and output markets. Key challenges include costly and difficult-to-access production inputs, often due to supply shortages and high prices; unreliable and poor fertiliser quality, leading to reduced yields; high interest rates on credit and debt; and lack of technical assistance. CF also gives small-scale farmers the chance to join an established trading platform rooted in sound institutional frameworks that offer fairer prices and more stable demand (Eaton and Shepherd 2001; Bijman 2008; Cai et al. 2008; CDRI 2013; RGC 2014).

Contract farming can be defined as a system for the production and supply of specific agricultural products in quantities and at quality standards determined by producers and contractors through written agreement or verbal understanding (Eaton and Shepherd 2001; Bijman 2008). However, the advantages of CF can only be achieved if contract arrangements are well managed and are mutually beneficial to both farmers and contractors. Without proper enforcement of contractual obligations there is risk of abuse, allowing parties to "slip out" of a contract or giving one party an unfair advantage over the other (Eaton and Shepherd 2001; Bijman 2008).

1.2 Justification for the study

In Cambodia, both food (rice, vegetables and fruit) and industrial (cassava, maize and rubber) crops are produced under CF. But farmers, especially small-scale farmers, face many challenges and constraints to maximising the benefits from CF. These problems mostly stem from the power imbalance between small-scale producers and contractors. Small-scale farmers are generally disadvantaged by their weak negotiation and bargaining position vis-a-vis a limited number of traders. In contrast, the contractor is normally a powerful company or group of buyers who are able to benefit more from CF than farmers do (Eaton and Shepherd 2001, 10; Cai et al. 2008; Kongchheng 2010; Nou and Heng 2013).

Various forms of CF have been practiced in Cambodia since 1950, mainly through informal arrangements. Some formal CF has been used for production through agricultural cooperatives, but this stopped during the civil war (Couturier, Savun and Ham 2006). Formal CF practices were only recently reintroduced. Subsequently, the Sub-Decree on Contract Farming, which aims to support and encourage contract farmers, was signed by the prime minister on 24 February 2011. The effectiveness of this sub-decree will be seen over the next decade. There is much to be done and improved; specifically there is a need for more research at local level to develop policy and action plans that can promote CF.

Moreover, only a few studies (e.g. Cai et al. 2008; Nou and Heng 2013) have reviewed the different types of contract arrangements in Cambodia, though they mostly focus on rice contract farming and ignore other crops. These studies found that serious managerial issues remain, leading to the poor management and failure of some CF ventures. As a result, many farmers have often "slipped out" of contracts before the end of the contract period.

The findings of different studies emphasise the role of CF in Cambodia, though they do not always concur about the benefits accruing to farmers. Kongchheng (2010, 23), for example, concludes that farmers try to avoid CF but they have little choice because they need credit to finance their maize production. Nou and Heng (2013, 12) state that the rice contract farming scheme of Ankor Kasekam Roongroeng Co Ltd (AKR)¹ is highly inclusive of poor farmers owning from one hectare of land upwards and increasingly open to the poorest farmers owning even smaller parcels of land. In contrast, Cai et al. (2008) point out that CF under AKR is not inclusive of the poorest farmers, who typically have less than one hectare of land and low levels of education. They claim that special attention will be required from the public sector to support this particular group of farmers.

To date, there has been no comprehensive study of CF schemes as a whole, or the different models of CF, in Cambodia. Various CF operations are practiced at community level, and the advantages, opportunities, challenges and constraints vary accordingly. This underscores the need to facilitate deeper understanding of the key issues besetting the CF sector, identify the most pressing problems and seek solutions to these, and promote the models that can bring more benefits to small-scale farmers.

1.3 Aims and objectives

This study aims to inform policy makers, development partners, NGOs and private sector actors in their efforts to help small-scale farmers to derive more benefits from CF. The main objectives are to:

- identify and map the models of CF practiced by small-scale farmers;
- evaluate the different models of CF with a focus on benefits and contract enforcement;
- explore supports needed to maximise the benefits of CF for small-scale farmers; and
- review policies and legal frameworks, and provide policy options to enable CF to be more widely practiced, particularly by small-scale farmers (exploring what and how policies should respond in countering constraints).

1.4 Indicative research questions

This research deals with two main questions: How has CF been adapted to local conditions in Cambodia? What policies are needed to support CF to maximise benefits to small-scale farmers? The subquestions pertaining to these are:

- What models of CF are currently practised by small-scale farmers?
- What are benefits from and the challenges within each model?
- To what extent is the mechanism to enforce CF in Cambodia effective and how can it be improved?

2. Analytical framework

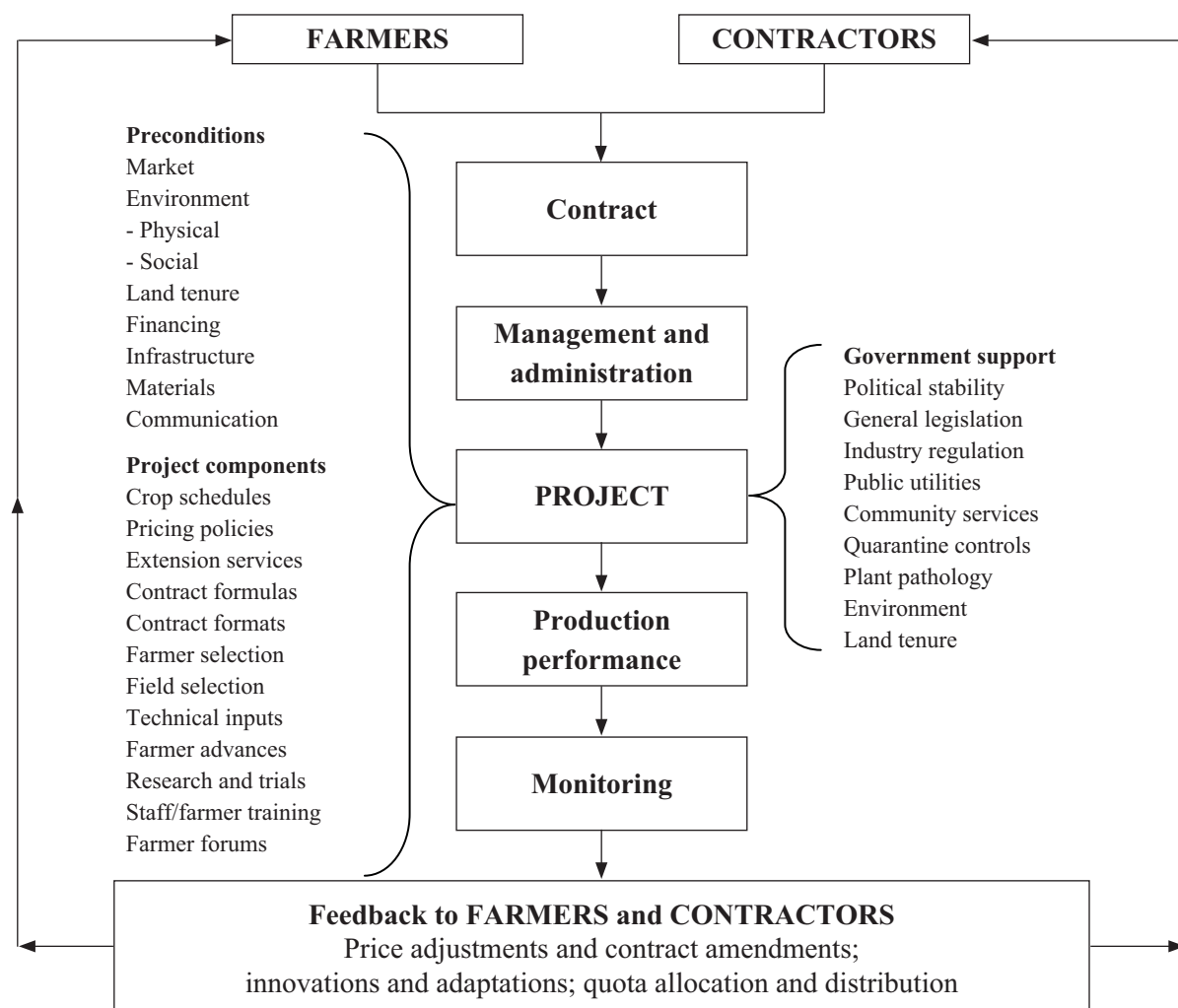
To address the research questions, the study adapted the contract farming framework from Eaton (1998 cited in Eaton and Shepherd 2001) as its analytical framework.

The analytical framework for CF is summarised in Figure 1. To respond to the study objectives and research questions, the study explored three main components: (1) key actors in CF (farmers

¹ Ankor Kasekam Roongroeng Co Ltd, an agribusiness company, has engaged in contract farming for non-certified organic rice since 2001. It works with over 32,000 households (Cai et al. 2008, 1).

and contractors) and their relationships regarding benefits and enforcement, (2) the role of government and supporting agencies involved in supporting and promoting CF, with a focus on benefits and enforcement, and (3) monitoring contract arrangements within the contract period.

Figure 1: A contract farming framework



Source: adapted from Eaton and Shepherd 2001

3. Research methodology

3.1 Study approach

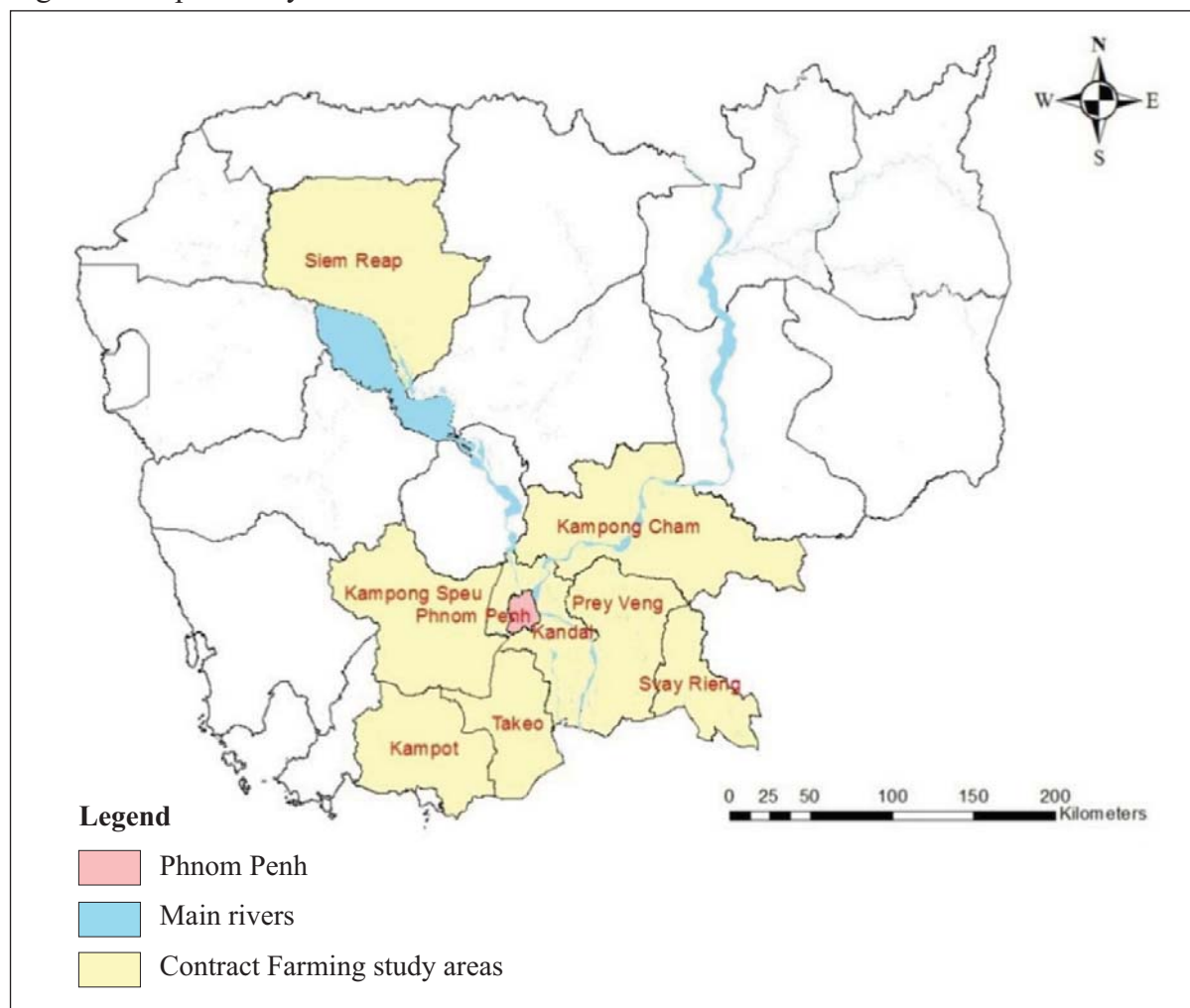
The study used a qualitative approach to gather in-depth information about the characteristics, benefits, challenges and enforcement measures of each contract farming model. It also attempted to determine the factors that promote success or lead to failure and the supports needed by contract farmers, with a focus on policy challenges, opportunities, prospects for sector development and options to overcome constraints.

3.2 Study areas

The study was conducted in nine provinces: Phnom Penh, Kompong Speu, Kandal, Takeo, Kampot, Prey Veng, Svay Rieng, Kompong Cham and Siem Reap (Figure 2). Due to limited information about CF in Cambodia, snowball sampling and purposive sampling were used

to identify CF locations. As an overall starting point, the study began by approaching some supermarkets (as contractors) in Phnom Penh. Through these supermarkets, the study team was able to contact and meet a wide range of stakeholders including NGOs that support contract farmers, contracting firms, local authorities and contract farmers.

Figure 2: Map of study areas



Source: NIS 2008

Rice, vegetables and fruit are grown and livestock raised under contract arrangements in all nine study areas, which between them represent Cambodia's four main agro-ecological regions:

Plains: Phnom Penh, Kandal, Takeo, Prey Veng, Svay Rieng and Kompong Cham

Tonle Sap: Siem Reap

Coastal: Kampot

Plateau and mountains: Kompong Speu

3.3 Participants

Data was collected from local people involved in contract farming, including contract farmers, contractors, supporting agencies and local authorities. Contract farmers are small-scale farmers committed to producing specific commodities to supply contractors, while contractors are committed to purchase from contract farmers all produce grown within specified quantity and

quality. Support agencies, mainly non-governmental organisations (NGOs) and government institutions, particularly the Office of Agricultural Extension (OAE), play important roles in facilitating or coordinating CF arrangements between farmers and contractors. They sometimes provide production inputs and services to farmers. Local authorities are authorised to approve contracts between farmers and contractors and usually support farmers to protect them from exploitation by big agribusinesses.

3.4 Data collection

Primary data was collected from key informant interviews (KIIs) and focus group discussions (FGDs). KIIs gathered information on the establishment of CF and its operation, benefits, challenges, constraints and solutions to problems. Thirty-eight KIIs were conducted with contract farmers, contractors, support agency and local authority representatives. FGDs with contract farmers from producer groups (farmer groups, farmer associations and agricultural cooperatives) centred on key themes including the establishment and operation of CF, coordination within farmer groups and solutions to problems likely to arise during the life of a contract. Seven FGDs were conducted in different provinces and covered different products: rice, pepper, local vegetables, organically grown vegetables, mushrooms and rubber.

Preliminary fieldwork was conducted in Kompong Speu province. The main purpose was to gather information on each CF model and to become more familiar with the situation in the field. This allowed researchers to validate the research instruments before project implementation and to prepare for primary data collection.

Secondary data garnered from a literature review of various research publications was used to map a comprehensive picture of CF and CF models, identify information gaps and refine the research methodology. The literature review focused on definitions, models, advantages and disadvantages of CF, supports required by small-scale farmers, policy opportunities and constraints, and regulatory frameworks for CF in Cambodia.

3.5 Data analysis

Field notes and data were coded and categorised into different themes, including the establishment of CF, benefits, challenges and constraints, factors leading to breach of contract, enforcement mechanisms, areas for improvement, incentives and supports. Researchers systematically identified patterns and connections between themes. The first step was to interpret observed phenomena and connections. These results were compared with data found in the literature to determine whether or not they have a direct connection to each other. Only then were the researchers free to express their opinions and to discuss the findings. Thus the study arrived at the final results.

3.6 Limitations

The study concentrated on small-scale farmers who usually own less than one hectare of land, and mostly touched on local and European vegetables (e.g. lettuce and leafy vegetables), mushrooms, rice, pepper, pigs, chickens and small-scale rubber plantation. Our research might have therefore missed out some models of CF that involve large-scale farmers or products such as cassava, tea, sugar and vegetable oil which require large-scale farms and significant long-term investment.

4. Literature review

4.1 Definition of contract farming

“Contract farming has been defined as an agreement between farmers and processing and/or marketing firms for the production and supply of agricultural products under forward agreements, frequently at predetermined price” (Eaton and Shepherd 2001, 2). Another definition refers to CF as an institutional arrangement between farmers and contractors that is widely adopted in agricultural production and agribusiness; farmers agree to deliver specific commodities in quantities and meet predetermined quality standards while contractors agree to provide production inputs and markets (Bijman 2008).

4.2 Modalities of contract farming and types of contract

Eaton and Shepherd (2001) identified five models of CF.

Centralised: an agribusiness company buys produce from a large number of smallholders (small-scale farmers) with tight control over quality and quantity.

Nucleus estate: an agribusiness company combines CF with direct involvement in plantation production.

Multipartite: farmers sign contracts in a joint venture established between an agribusiness company and a local entity.

Informal: more informal verbal purchase agreements are signed on a seasonal basis, with inputs provided by the company often being restricted to seed and fertiliser.

Intermediary: an agribusiness company may have contracts with intermediaries who then sign contracts with a larger number of farmers.

Overall, the literature categorises contracts into two types: formal written agreements, and informal verbal understandings (Bijman 2008). Glover (1994, 167), for example, divides CF in developing countries into: (i) traditional tropical commodities, such as sugar, tea, rubber and palm oil, which are produced at low cost on large tracts of land, require a large number of growers (farmers) with tight central control, a central processing unit (a contractor), numerous services such as irrigation, harvesting and aerial spraying, and mainly involve international and domestic agribusinesses and sometimes government agencies; and (ii) fruit and vegetables, usually produced on a small-scale by individual farmers and farmer organisations and often with private sector involvement and loose central control.

4.3 Advantages and disadvantages of contract farming

Contract farming is considered an important mechanism for providing significant benefits to both farmers and contractors. However, along with the advantages, CF can have drawbacks for both parties.

4.3.1 Advantages for farmers and contractors

4.3.1.1 Advantages for farmers

Contract farmers do not have to worry about finding reliable markets for their produce because a contractor will purchase everything they grow within the quantity and quality set in the contractual agreement. As well as having access to a wide range of managerial, technical and

extension services, farmers can also use a contract agreement as collateral against credit to buy inputs for the next planting, diversify their production and invest in their farms.

The main advantages for farmers are: (i) provision of inputs and production services; (ii) access to credit; (iii) introduction of appropriate technology; (iv) skill transfer; (v) guaranteed and fixed pricing structures; and (vi) access to reliable/stable markets.

4.3.1.2 Advantages for contractors

Among the many advantages that contractors gain from CF, the first is political acceptability. CF with small-scale farmers is more politically acceptable than plantation production by agribusiness corporations. Contractors are able to shift from own-estate production to become directly involved in supporting and controlling small-scale farmers to grow crops for them under contract for processing and marketing.

The main advantages for contractors are (i) political acceptability; (ii) overcoming land constraints; (iii) reliable supply of products and shared risk; (iv) quality consistency; and (v) farm inputs promotion.

4.3.2 Disadvantages for farmers and contractors

4.3.2.1 Disadvantages for farmers

Joining CF schemes can increase market and production risks for farmers, particularly when growing new crops. Inefficient management or marketing problems can mean that not all contracted production is purchased. Farmers may become indebted due to production problems and excessive loans taken out to join the contracting scheme. Unsuitable technology and crop incompatibility can add to the potential problems contract farmers may face when introducing new crops. The staff of contracting firms may be corrupt, particularly in the allocation of quotas. Contractors are not always reliable or might take advantage of a monopoly position. However, these problems can be curtailed by efficient management practices, notably working closely with farmers and monitoring carefully farm operations and contract procedures (Eaton and Shepherd 2001, 15).

4.3.2.2 Disadvantages for contractors

Despite the appealing advantages, contractors also experience many disadvantages and problems. For example, contract farmers may face land constraints owing to insecure land tenure, which, in turn, could threaten contracting firms' long-term viability. Farmers may sell their produce to other buyers or use inputs supplied by the contractor on credit for other purposes, thereby reducing their yields and contractors' profitability. Poor management and ignoring the farmers' voice can lead to dissatisfaction among contract farmers. And social and cultural constraints can mean that farmers are unable to fulfil contractual obligations, particularly those pertaining to quantity and quality of produce. For example, farming activities such as harvesting should not be scheduled to take place during festivals (Eaton and Shepherd 2001).

4.4 Support required for small-scale farmers

The literature highlights six key conditions that enable small-scale farmers to gain more benefits from CF: a seller's market, supportive state policies, balanced power relations, standard crops, collective action through producer organisations, and support from NGOs.

In contrast, many CF schemes failed because of a number of challenges including inadequate monitoring of compliance with contract terms, abuse of contract arrangements by farmers and/or contractors, weak and insufficient support services, and natural disasters (Eaton and Shepherd 2001; Bijman 2008, 19).

4.5 Existing legal framework and policy

4.5.1 Legal framework

The government has encouraged CF as a means of linking small-scale farmers to markets. The Sub-Decree on Contract Farming, announced in February 2011, comprises five Chapters and 13 Articles (see Annex 1). Importantly, it defines the implementation framework for contract-based agricultural production in Cambodia; Article 2 in Chapter 1 sets out four objectives as follows:

- Strengthening the responsibility and trust between producing and purchasing parties based upon the principles of equality and justice
- Ensuring the accuracy of the prices, purchases, and supply of agricultural crops, both on quantity and quality
- Increase purchasing, processing and exporting of agricultural crops
- Contribute to national economic development and people's poverty reduction pursuance [sic] of the policies of the Royal Government.

The sub-decree also mentions the institutions and coordination mechanisms led by the Ministry of Agriculture, Forestry and Fisheries (MAFF), which is responsible for communication and coordination and providing technical guidance and services. It states that MAFF should monitor and evaluate all functions and report to the government, and collaborate with relevant ministries and institutions. The sub-decree stipulates the establishment of the Coordination Committee for Agricultural Production Contract (CCAPC), made up of 18 components including from MAFF, Ministry of Interior (MOI), Ministry of Commerce (MOC) and Ministry of Economy and Finance (MEF) (Chapter 2, Article 7). The main duties of this committee are to:

- Develop policy and strategic plans that support and promote contract farming
- Facilitate and strengthen harmonisation between contracting parties
- Intervene in, or reconcile arguments or conflicts relating to agricultural production contracts that expert institutions are unable to resolve, or help settle conflict between institutions.

The sub-decree defines the obligations of contract farmers and contractors (Chapter 3, Article 8), and the formalities and implementation of an agricultural production contract (Chapter 4, Articles 10 and 11).

Obligations of farmers

- Comply with the terms and conditions set out in the agreement
- Produce required commodities based on seasonal conditions and within required time frame
- Supply on time a minimum quantity of products with specified grade/quality
- Accept payment in line with the product value as set out in the agreement.

Obligations of contractors

- Comply with the terms and conditions set out in the agreement
- Specify quantity and quality of products, delivery date and place of delivery, and acceptance procedures

- Provide producers with agricultural inputs such as propagation materials, seeds, aquatic species and animal breeds, credit advances, technical services and other supports as agreed to achieve desired results
- Buy agricultural products in specified quantities and quality at agreed prices
- Pay producers for commodities within the time frame and in accordance with the terms and conditions specified in the contract.

Formalities and implementation of the agricultural production contract

- Contracts shall be put in writing and facilitated by the coordination mechanism—the CCAPC
- Contracts shall be covered by provisions of the Civil Code, laws and existing regulations
- Conflict between producers and contractors relating to contract implementation shall be settled in compliance with the terms and conditions as set out in the agreement
- Where conflict cannot be resolved, the disputing parties shall comply with the ruling of the CCAPC.

The literature review revealed that different countries have developed different definitions and concepts of CF, and chosen to regulate it in very different ways. There are two main legal frameworks governing CF: international law and guidance from international organisations, and domestic legal framework that may be applicable to CF operation. Legal framework for CF may take a range of forms in a given country, particularly civil codes, agrarian/rural codes, general contract legislation, specific CF legislation, product-specific acts, and soft law and guidelines (Pultrone 2012, 269-276). By way of example, Pultrone (2012, 273-4) describes Spain's legal framework for CF.

In 2000, Spain enacted legislation which defines the principles that regulate contractual relations between agricultural producers, buyers and processors. The objective of the law is to regulate commercial transactions, to promote the stability of markets and to improve transparency of transactions and market competition. The law establishes sample of contracts for the marketing of agricultural products, which are agreed by the Ministry of Agriculture and Fisheries. They serve as models for sales contracts to be concluded between producer and buyers.

The Cambodian government is on the right track in promoting CF. The framework set out in the Sub-Decree on Contract Farming is similar to that suggested by Pultrone (2012, 289):

Governments should promote fair contract farming through clear and complete legal frameworks, and training on basics concepts of contract law and good contractual practices. Government should facilitate farmer's access market information and foster a dialogue between the parties. Finally, they could have a role in ensuring the availability of quality control and certification and transparency mechanisms and make available dispute settlement mechanisms to provide a quick, accessible and efficient means of resolution to contractual disputes.

The sub-decree is well constructed. It articulates clear objectives, key terms, obligations of farmers and contractors, responsibilities of the coordination committee and mandated institutions in leading and implementing the sub-decree and promoting CF. However, although the sub-decree was signed in 2011, policy, strategic framework and action plans for promoting CF (to be developed by the CCAPC) are still not available for implementation. This raises a question about the implementation of Article 7 of Chapter 2: If the CCAPC was established,

how effectively would the 18 components from various ministries and institutions work together to promote CF? The recommendation at this stage is that, to facilitate coordination and harmonisation and to carry out its duties as stipulated in Article 7 of Chapter 2, the CCAPC should initially be formed with just a few most relevant components.

4.5.2 Policy

Despite the lag in developing policy and action plans since the promulgation of the sub-decree, CF plays a central role in supporting some policies under the Promotion of Agricultural Sector set out in the National Strategic Development Plan (NSDP) 2014-18. For example, the Policy Document on the Promotion of Paddy Production and Export of Milled Rice, better known as the Rice Paper, states that improving the framework for CF is a prerequisite to improved market access for agricultural products (rice) (RGC 2014, 96 para 3.50). The Agriculture Strategic Development Plan 2009-13, to achieve Policy Goal-2 of market access for agricultural products, focuses on CF to bridge agricultural supply and demand by linking small-scale farmers directly to local markets and chains and to connect buyers and sellers of local food.

In practice, technical support provided through two projects under Programme 2 of the NSDP Update 2009-13—Encouragement of Market Access of Agricultural Products—meant that 3960 farmers received training on feed processing and formulation, agricultural product quality and safety, and contract farming between 2009 and 2012 (RGC 2014, 27 para 2.74). This shows the significance of CF as a potential mechanism to improve agricultural productivity, market access and rural incomes in Cambodia. The signing of the Sub-Decree on Contract Farming demonstrates the government’s willingness to promote CF countrywide. However, to put CF to work effectively, immediate attention needs to be paid to developing and implementing specific policy, strategy and action plans.

5. Key findings and discussion

A contractor can be a company or a sponsor. “Multinational corporations, smaller private companies, parastatals, individual entrepreneurs and, in some cases, farmer cooperatives can act as sponsors and financial investors for contract farming activities. In nearly all instances, the contractors are also responsible for the management of the venture” (Eaton and Shepherd 2001, 46).

5.1 Institutional arrangements for contract farming

“Contract farming can be structured in a variety of ways depending on the crop, the objectives and resources of the contractor, and the experience of the farmers” (Eaton and Shepherd 2001, 46). Field observations and information from key informant interviews suggest that though there are some differences, many characteristics of CF practices in the study areas are similar to four of the five CF models identified and categorised by Eaton and Shepherd (2001), namely informal, centralised, multipartite and intermediary. This study found no evidence to suggest that the fifth—the nucleus estate model—has been practiced by small-scale farmers in the study areas.

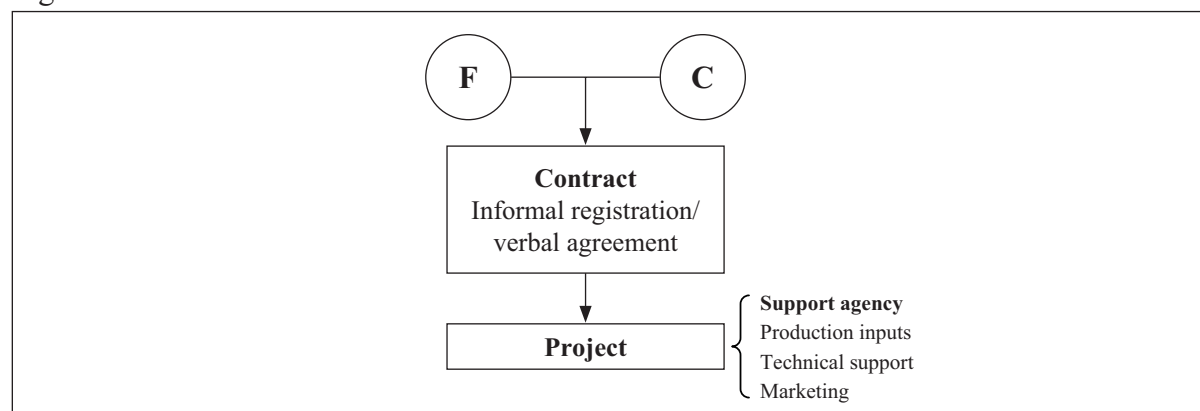
There are two main reasons why the nucleus estate model might not have been adopted in the study areas. First, contractors may not want to own and manage an estate plantation: some contractors prefer to reduce risks associated with crop and livestock farming, while others do not have enough capital to engage directly in own-production (e.g. focusing on land and labour). Second, as Eaton and Shepherd (2001) demonstrate, the nucleus estate model is most appropriate with plantation and tree crops such as sugar cane, oil palm and rubber, where

technical transfer through demonstration and a fairly large estate to provide enough through put to supply a central processing plant are required. However, it must be kept in mind that this study mostly focuses on the production of local and European vegetables, mushrooms, rice, pepper, pigs, chickens and small-scale rubber plantation, activities within the scope of small-scale farmers owning plots of less than one hectare.

5.1.1 The informal model

Common in all study sites, the informal model illustrated in Figure 3 involves individual entrepreneurs (living inside or outside the village) or small companies as contractors. They normally make simple, informal production contracts with individual farmers on a seasonal basis, particularly for short-term crops such as vegetables and fruits. Majority of pig and poultry farmers, on the other hand, give preference to intermediaries able to offer higher prices. Contractors in the study areas rarely engage a group of farmers.

Figure 3: The informal model



Note: F: farmer; C: contractor

Source: Adapted from Eaton and Shepherd 2001

Typically, contracts take the form of an informal registration or a verbal agreement. A contractor in this model usually works as a processor, a retailer or a wholesaler. Crops usually require only grading, sorting and packaging or a minimal amount of processing. For example, after harvesting vegetables, a contract farmer needs to wash them in clean water, sort them for quality, pack and deliver them, though contractors generally collect produce direct from farms. Payment is made either on delivery or within a certain time frame, say, two or three days after delivery. The normal value is generally the market price of the product.

In the informal model, credit is the only significant benefit to attract and retain small farmers. Contractors have limited funds to finance inputs and therefore provide no or few inputs to farmers. Technical advice from contractors is limited to grading and quality control matters, and financial investment by contractors (individual entrepreneurs) is usually minimal. After purchasing crops from farmers, contractors grade the produce and then pack it for resale to wholesalers, supermarkets and other retailers. Supermarkets frequently purchase fresh produce from individual entrepreneurs and occasionally directly from farmers. These findings are consistent with the studies of Eaton and Shepherd (2001) and Bijman (2008). Box 1 presents a case study of informal CF operation.

To sum up, the informal model of CF involves registration or verbal agreement between individual farmers and individual contractors. This model is widely practiced at community level because of its straight forward coordination and management. Farmers, however, often

Box 1: A case study of the informal model: Local vegetable production in Kandal province

Most farmers in Sa'Ang district, Kandal province, have individual verbal agreements to produce seasonal vegetables (e.g. cucumbers, tomatoes, string beans and eggplants) for a contractor (an individual entrepreneur) who purchases and collects vegetables directly from contract farmers. Farmers and the contractor usually communicate by telephone, and the contractor visits the farms. The contractor collects produce from farmers' houses in the morning and gives them an open invoice. After collecting all the vegetable quotas, the contractor loads the produce onto a truck or remorque to supply retailers and wholesalers at Neak Meas market.

A seasonal glut of vegetables can expose the contractor to risk. When this happens, retailers and wholesalers stop buying fresh produce for several days at a time and the contractor has to sell produce to end-consumers at local markets (e.g. in Takhmao) otherwise the vegetables will spoil. The contractor may have to take unsold produce home and throw away vegetables that have gone bad.

There is no monitoring process and no pre-set product prices. Payment is usually made one day after delivery, and the longest it takes is three days. The price that farmers receive is below the normal market price of about KHR200 (USD0.05) per kg for all types of produce.* The farmers and the contractor agree this price.

Contract farmers do gain some benefits from contract farming. They are able to borrow money (without interest) from the contractor to buy production inputs, and do not have to repay any of the loan until they have been paid for producing and supplying the required products. The amount of money involved is not much, about USD20-25. This type of contract can reduce the complexity of transporting produce from farm to market. Moreover, the contract builds trust between farmers and the contractor: farmers believe that the contractor will purchase all crops grown.

Benefits aside, farmers still face some significant problems related mainly to an "open book" approach to pricing and difficulties in accessing reliable production inputs (seed, pesticide) and extension services. Prices are not fixed at point of contract; instead, the contractor issues open invoices and payments to farmers are based on market prices. Quality seed is costly and in short supply. Market preferences favour varieties imported from Vietnam and Thailand, yet few shops sell those seeds. Sometimes the seeds that farmers are familiar with are not available and the only choice is to risk trying a new brand. But experience of the low quality of new or unknown brand-name seeds means that they are reluctant to grow unfamiliar brands. The labelling of most pesticide products is in foreign languages—Vietnamese or Thai. Farmers therefore rely on verbal directions from other farmers or shopkeepers who do not necessarily have enough knowledge about pesticide application. Improper pesticide use can threaten human health and the environment and damage crops. Extension services are still very limited. Although many farmers in this study area are individual contract farmers, there are no agencies to provide appropriate technical support.

In sum, straightforward coordination and management mean that the informal CF model is convenient for both farmers and contractors. Even so, farmers miss many benefits that they should gain from CF; those are fixed prices, improved production inputs, extension services, new skills and appropriate technologies, and reliable markets.

Note: *For example, the contractor sells green beans for KHR4000 (USD1) per kg and then pays contract farmers KHR3800 (USD0.95) per kg, leaving the contractor with KHR200 per kg profit. (KHR4000 equals USD1.)

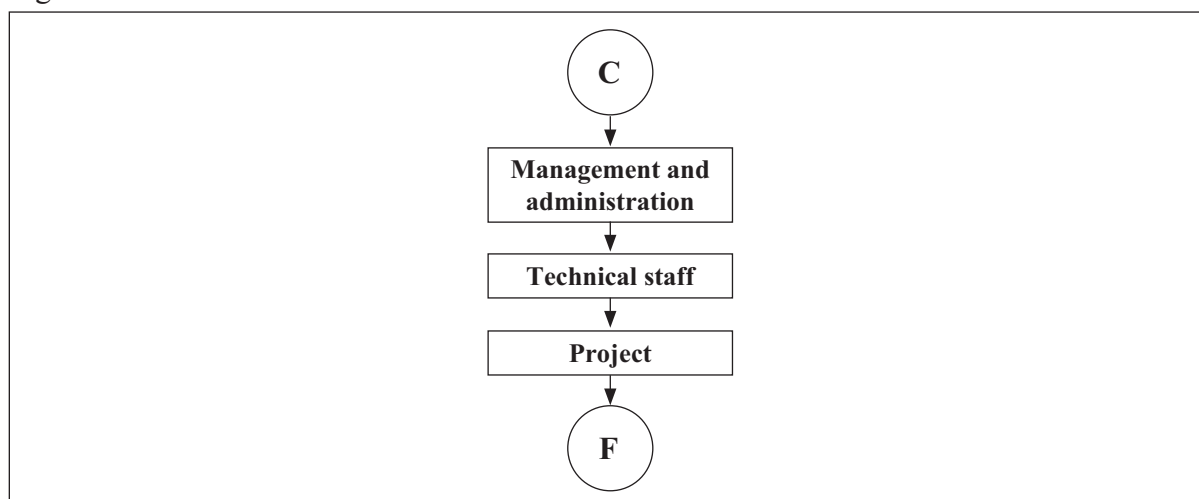
Source: Fieldwork (observations, focus group discussion and key informant interviews), August 2013

face market risks due to price variations caused by changes in supply and demand. Joining an informal CF scheme does not automatically maximise benefits for farmers because stable prices, production inputs, extension services, skill and technology transfer, and reliable markets are rarely in place. This finding is paralleled in other studies. Kongchheng (2010, 24), for instance, concluded that informal CF schemes cannot play a leading role in promoting agricultural and economic development because they cannot help to improve the production and marketing system or the capacity of the farming sector.

5.1.2 The centralised model

This model of CF is commonly used in the study areas. Typically, a contractor makes a formal contract in writing² with an individual farmer or a group of farmers³ for the production and supply of agricultural products. Although categorised as formal, such contracts are not always authorised by a local authority. A key feature of this model, as shown in Figure 4, is top-down management with tight control over quality and quantity of products. A top-down structure means that everything is prepared by a contractor and farmers just follow advice and instructions.

Figure 4: The centralised model



Note: F: farmer, C: contractor

Source: Adapted from Eaton and Shepherd 2001

The contractors operating in the study areas were able to purchase agricultural produce from a maximum of 120 small-scale farmers. Farm quotas defining the required type, quality and quantity of products, price and delivery date are allotted at the start of the planting season. This type of CF scheme is generally used for the production of vegetables, fruit, rice, pepper, poultry and pigs. Quality standards require vegetables, fruit, rice and pepper to be grown free of chemicals, and pigs and poultry to be reared following animal husbandry practices stipulated by the contractors.

Monitoring takes the form of farm visits from contractors' technical and marketing staff, though local farmers are usually employed to do this task. The level of contractors' involvement in production varies from the provision of the correct type of seed, the provision of seed according to each farmer's production quota to the provision of technical advice. The scope of contractors' involvement in production is seldom specified, varying according to requirements or financial means at a certain time. This finding confirms observations in the literature (e.g. Eaton and Shepherd 2001; Bijman 2008).

2 The written agreement usually includes the names of both parties and stipulates the quota, e.g. type, quantity and quality of products, price and delivery date.

3 Members of farmer organisations: farmer groups, farmer associations and agricultural cooperatives.

The contractors in this model are usually agribusiness processors, retailers (e.g. supermarkets), wholesalers (e.g. individual intermediary and agribusiness companies) and restaurants (including those within a casino or hotel). In many cases, a contractor is a farmer organisation that purchases, processes⁴ and markets its members' agricultural produce. Farmer organisations often have a support agency—an NGO and/or the Office of Agricultural Extension (OAE)—that helps with both production and marketing.⁵ The support provided includes production inputs (seed, fertiliser and credit), extension advice, packaging materials, collection and transport of produce, and inclusion in new market linkages.

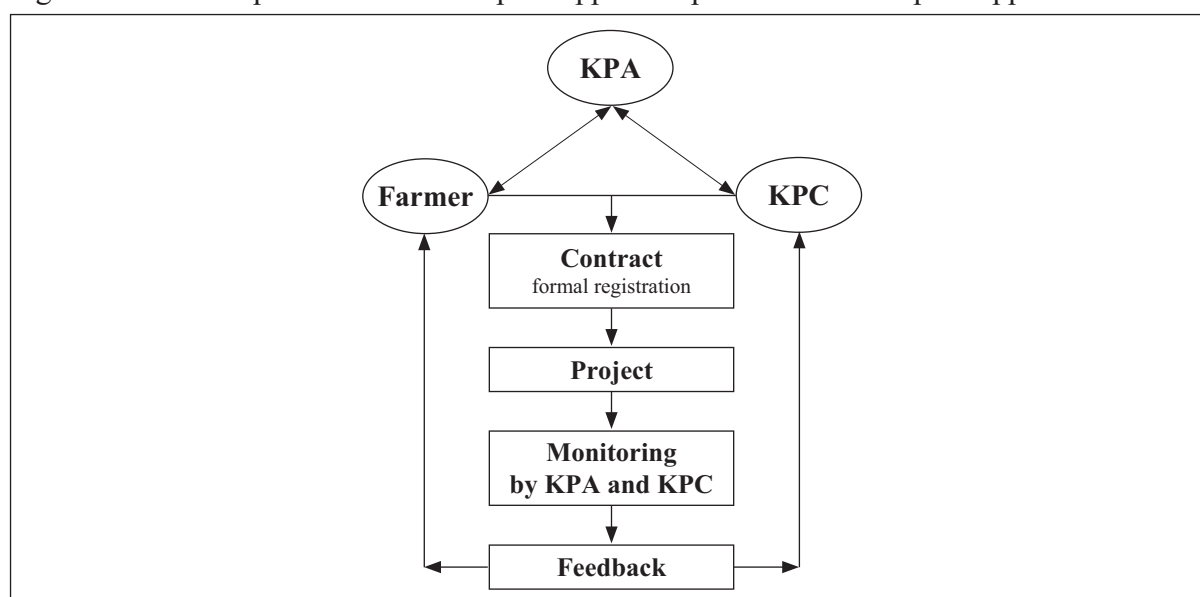
To sum up, although centralised CF schemes engage individual farmers, they mostly involve farmer organisations. Small-scale farmers can gain more benefits from the centralised model than from the informal model.

5.1.3 The multipartite model

The multipartite CF model generally involves joint ventures between farmers, regulatory organisations and private companies, though government (in partnership with the private sector) might sometimes invest in CF (Eaton and Shepherd 2001, 50; Little and Watts 1994).

Some characteristics of the multipartite model were observed in the study areas. Such schemes involve farmers and more than one private company, investor or profit/non-profit organisation (Figure 5), with the OAE serving as a support agency rather than a joint participant with contractors. The multipartite model operating in the study areas engages more than two parties. These parties do not have to join the venture, however. See, for example, the case study of the Kampot Pepper Cooperative (KPC) and Kampot Pepper Association (KPA) in Box 2. This is a departure from the norm in the literature, which states that two or more companies, and sometimes government agencies, participate in a joint venture by contracting farmers to produce and supply agricultural products for them.

Figure 5: The multipartite model: Kampot Pepper Cooperative and Kampot Pepper Association



Source: Adapted from Eaton and Shepherd 2001 based on fieldwork (observations, FGDs and KIIs)

4 Refers to grading, sorting and packaging of fresh vegetables and the provision of cold storage (Eaton and Shepherd 2001).

5 The Office of Agricultural Extension (OAE) comes under the Provincial Department of Agriculture (PDA).

Box 2: A case study of the multipartite model: Kampot pepper

Contracts in pepper farming involve farmers, the Kampot Pepper Cooperative (KPC) and the Kampot Pepper Association (KPA). Although they do not belong to a joint venture, KPA and KPC have the same purpose and work together to promote Kampot pepper in local and international markets.

Farmers are required to register as a KPA member if they want to authenticate the quality of their pepper, and they must grow pepper in the traditional way following the methods (technical advice and standards) stipulated by KPA. To access a reliable market and fixed (pre-set) price, farmers can register as a member of KPC, which at the time of study had 152 members, and make a formal contract with KPC to produce and supply Kampot pepper. After harvesting, simple processing, i.e. sorting and grading, is carried out before delivering pepper to KPC. The fixed price is publicised one year in advance; in 2013, it was set at USD10.25 per kg. KPA charges pepper producers USD0.25 per kg and buyers (collectors working for KPC) USD0.25 per kg for its services (e.g. overseeing production to ensure that farmers follow the methods properly).

This contract arrangement can be categorised as a multipartite model. Producing pepper under contract for KPC means that farmers benefit from a stable market and a guaranteed price. Moreover, membership of KPA authenticates their pepper as the world-renowned Kampot pepper. This validation strengthens their market position against other pepper producers and helps maintain the highest possible price.

The problem is that KPC only buys pepper produced by KPA members. However, the traditional production methods imposed and strictly controlled by KPA mean that farmers cannot use new technology to improve yields.* There was an idea to increase yields by building vertical brick columns able to support eight vines, whereas traditional wood standards can support only two vines. Despite the potentially much higher yields, KPA over-ruled the suggested method. This shows how CF can limit farmers' decision making and choice of production techniques, a finding that is consistent with Cai et al. (2008, 24) and Eaton and Shepherd (2001).

*To safeguard the quality and the authenticity of Kampot pepper, KPA insists on traditional techniques. Pepper crops must meet certain specifications and production is tightly controlled to ensure that traditional methods are respected (www.kampotpepper.biz/information/play.html).

Source: Fieldwork (observations, FGD and KIIs), September 2013

NGOs and the OAE play very important roles in enabling farmers to maximise benefits from CF. They provide credit, technical advice, production inputs and sometimes marketing assistance. Farmers mostly belong to farmer organisations⁶ that were established by a support agency before the contractors came. To create or improve farm-to-market linkages, the support agency contacts agribusinesses or investors interested in contracting the farmer group.

The multipartite model is not commonly practiced in the study sites. However, as Glover (1994, 167) observed,

Many contract farming schemes in less developed countries are multipartite arrangements involving private firms (usually foreign but occasionally local), host country government, and international aid or lending agencies, such as the U.S. Agency for International Development (USAID), the World Bank, or the Commonwealth Development Corporation (CDC).

6 A farmer organisation can be a farmer group, a farmer association or an agricultural cooperative.

Since this study focuses on small-scale farmers who own less than one hectare of land, it may have missed some CF schemes that produce crops requiring large expanses of land, as pointed out earlier in the study limitations. Glover (1994, 167-168) emphasised one type of CF scheme that “produces traditional tropical commodities ... which tend to be produced at lowest cost on large tracts of land”, and gave the following example:

In one variation, a national development bank provides growers with credit to buy fertilizers, seeds and other inputs. At harvest time, the company pays growers the contract price, but takes off a sum that goes to the bank to repay its loan to the grower. In this system, private companies avoid the problems of accessing credit worthiness and prosecuting defaulters. In some cases, government agencies provide inputs or technical assistance.

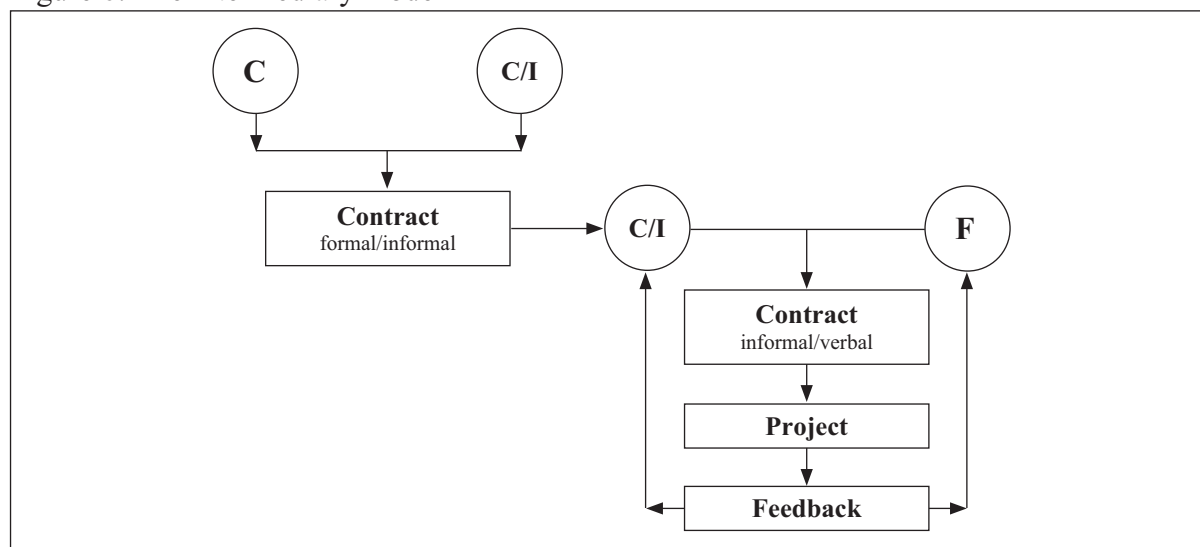
Field observations suggest that farmers welcome any type of CF scheme regardless of the number of actors involved. The benefits that attract farmers are market stability, higher fixed prices, production services and inputs. In practice, farmers prefer simple and convenient procedures. Therefore, good coordination within and between participating firms and agencies and well-managed contract arrangements with farmers are required. Absence of any one of these factors may lead to discontent among farmers and result in contract cancellation and slippage.

5.1.4 The intermediary model

The intermediary model involves at least three parties: farmers, collectors (intermediaries) and the contractor. This model can be a combination of the centralised and the informal model.

It is common in Cambodia, particularly in the study sites, for a contractor not to directly contract with farmers but to engage in a formal or informal contract with intermediaries or collectors to purchase the commodity instead. For their part, collectors informally contract with a number of farmers in order to supply the products to the contractor. Usually the contractor does not want to be involved directly with farmers in production activities (Figure 6). The contractor can be a processor or a major trader (e.g. a supermarket). The commodities that contractors mainly purchase are vegetables, rice, pepper and animal products such as chicken, pork, beef and eggs.

Figure 6: The intermediary model



Note: C: contractor; F: farmer; C/I: collector/intermediary
 Source: Fieldwork (observations, FGDs and KIIs)

Sa'Ang district in Kandal province is unique among the study sites where the intermediary model is commonly practiced. Local farming conditions are particularly suitable for vegetable crops. Majority of farmers grow mostly local vegetables such as string beans, eggplants, salad leaves, cucumbers, tomatoes and bitter melons. Intermediaries buy the produce to supply supermarkets, restaurants and the central market (Neak Meas). The question is whether farmers in this area could benefit more from a formal CF scheme than the current informal CF arrangements with intermediaries/collectors. Sa'Ang is known for its abundant production of large volumes of fresh vegetables that supply markets in Phnom Penh. This means agribusiness companies, supermarkets and individual entrepreneurs do not need direct formal contracts with growers to secure a guaranteed supply of fresh produce.

Interviews with farmers from different study sites, as well as with some contractors, revealed that farmers in Sa'Ang apply a lot of chemicals to growing crops, particularly vegetables. Since some supermarkets have a policy to promote organically grown produce, they do not want to buy crops that have been sprayed with chemicals. Those farmers therefore forfeit the opportunity to benefit from formal contracts. Instead, even though they receive fewer benefits, they tend to engage in informal contract arrangements where the specifications about the use of agrochemicals are less stringent.

In short, subcontracting through intermediaries results in a disconnect between the agribusiness company (contractor) and contract farmers. This means that (1) farmers receive from the contractor few, if any, advantages such as low-interest or interest-free credit, technical advice, inputs and marketing support; (2) the contractor risks receiving inferior quality products and/or irregular supplies; and (3) farm incomes remain low and barely supplemented by benefits. This finding is consistent with the literature. Bijman (2008, 4), for example, stated "The intermediary model, which can be considered as a combination of the centralized and informal models, is common practice throughout Southeast Asia. As there is no direct link between contractor and farmers, this model has several disadvantages for vertical coordination and for providing proper incentives." As Eaton and Shepherd (2001, 55) pointed out, "This can result in lower income for the farmers, poorer quality standards and irregular production."

Bridging the gap in the intermediary model could offer farmers the opportunity to access reliable markets and stable prices. However, as the study findings suggest, farmers will not act alone. They should therefore be encouraged to form or join farmer organisations, particularly agricultural cooperatives, to grow high-quality and safe food products that agribusinesses (as contractor) seek and to negotiate formal production contracts directly with agribusinesses or indirectly through intermediaries. In this way, contract farmers can benefit from access to stable markets and prices. Working together as a group, farmers can strengthen their bargaining power in negotiating deals with buyers and contractors. Furthermore, farmer groups are more likely to obtain important supports and productivity-improving technologies from NGOs, the OAE and contractors, build trust and commitment in buyer-seller transactions and expand into new product markets. In turn, contractors would have more confidence in contracting farmers participating in farmer organisations that are supported or certified by NGOs and the OAE to grow and supply produce at specified quality standards, quotas and delivery dates.

Formal contracts in the study sites are normally used for speciality or niche agricultural products where production methods, inputs and quality standards are strictly controlled by the contractor. Crops produced under these formal contracts include chemical-free rice, vegetables and fruit, Kampot pepper (grown using traditional methods) and European vegetables (grown from imported seeds).

In the study sites, only four models of CF were commonly practiced. The exception was the multipartite model, which is mostly used for crops such as rubber, tea, sugar and oil palm that require large tracts of land.

5.2 Benefits

Well-managed CF is an effective way to coordinate and promote agricultural production and marketing. However, “the advantages, disadvantages and problems arising from CF will vary according to physical, social and market environments” (Eaton and Shepherd 2001, 10).

5.2.1 Benefits for contract farmers

Higher farm income through access to stable markets is a significant factor underlying farmers’ willingness to join CF schemes. Contractors normally undertake to purchase all produce grown within the quality and quantity parameters specified in the agreement. In addition, farmers can take advantage of export opportunities to expand trade to international markets, an option that would not ordinarily be open to small-scale farmers. Thus CF is a means to promote their products and access new market opportunities. Best practices observed in the study areas have successfully promoted Kampot pepper and named aromatic premium rice varieties. This confirms the finding of Glover (1994, 168), that “Without the quality control and tight coordination offered by contract farming, it is frequently unlikely that smallholders would be able to sell perishable goods overseas through open market sales.”

Fixed prices (stable or pre-set prices) are generally publicised in advance and specified in the agreement. That said, some CF types such as the informal model are not based on fixed prices but are related to market prices at the time of delivery. In these instances, the returns contract farmers receive for their crops are dictated by the whims of market volatility.

Production support is generally in the form of inputs, technologies and extension services. The majority of contract farmers are satisfied with the provision of this kind of support even though it often comes in the form of advance loans.

Access to low-interest or no-interest credit/loans from contractors enables farmers to invest in their land and provides a cushion against shocks. It also reduces farmers’ dependency on high-interest loans from private moneylenders and eases the problem of providing collateral against loans from microfinance institutes.

To summarise, the most significant benefits that farmers gain from CF are access to reliable markets and stable prices: all products grown within specifications are purchased at pre-determined fixed prices. Farmers in the study sites commonly cited the other benefits detailed above as advantages, confirming the findings of previous studies (Eaton and Shepherd 2001; Bijman 2008; Cai et al. 2008; Nou and Heng 2013). However, the benefits of CF can vary depending on the types of CF model and the circumstances under which they operate.

5.2.2 Benefits for contractors

Key informant interviews with contractors revealed that they generally gain more benefits and advantages from contracting farmers to grow crops than from operating their own plantations.

Land and labour can be a huge constraint on production and investment. It is costly to purchase suitable land to operate plantations. Even if firms were able to buy land at an affordable price,

tracts of land big enough to support commercially viable agricultural production are rarely available. Labour is another vital input in agricultural production. Companies need to take into account labour needs and labour costs including recruitment, training and supervision, and perhaps even accommodation and meals for workers. By contrast, CF offers firms access to and a degree of control over production without having to buy land or hire labour.

We have no capacity to produce agricultural products ourselves because we have no land or labour for crop production. If we work with farmers, we just pay them for what they have grown after harvest and transport produce to sell on the market. We reduce risk by not being responsible for agricultural production ourselves. (Contractor, Phnom Penh)

Interviews with contractors revealed that some companies operate own-estate production on reserved lands as a strategy to tide them over major production constraints. A main constraint on supply is low crop production during heavy rains in the wet season and high temperatures in the dry season when contract farmers are unable to produce enough to meet their quotas.

Production reliability and shared risk. Under CF, a contractor sets the important criteria and discusses these with farmers to reach an agreement to which farmers are expected to adhere. Well-managed contract schemes build trust and reliability in terms of production and supply. Even so, commercial agriculture always carries risk. In CF arrangements, farmers take all the production risks while the contractor bears losses associated with price fluctuations, perishable products and reduced or lack of through put for processing. Where production problems are widespread and no fault of farmers, the contractor will often defer repayment of production advances to the following season.

We can obtain more reliable products from our contract farmers than from the open market. For example, one of our shop policies is to sell chemical-free produce. Produce bought on the open market is quite likely to be contaminated with chemical residues. So, through contracting specific farmers to grow crops without chemicals, we can obtain products of reliable quality. (Contractor, Phnom Penh)

The most significant benefits accruing to contractors from CF are regular supply and reliable high quality. Even though sharing production risks is an important benefit, contractors usually do not discuss this aspect with farmers or indicate it in the contract. Interestingly, farmers did not raise this as an issue; they accept responsibility for all production problems.

To sum up, farmers and contractors are willing to participate in CF schemes because they can get significant benefits. But the level of benefits farmers are likely to receive varies depending on the CF model used. Formal contracts associated with centralised and multipartite CF models provide farmers with the most benefits, particularly stable markets and prices.

5.3 Constraints

5.3.1 Constraints for farmers

Along with the benefits of CF, there are also some barriers and constraints that often require compromise from farmers. The main challenges farmers face are adverse weather, over- or undersupply of specified products, poor quality or insufficient production inputs, lack of investment capital, late payment, lack of new technology to overcome pest or insect infestations (for organic and non-organic products), mistrust between farmers and contractors, and imperfect markets.

5.3.1.1 Weather

Weather can be one of the biggest challenges for farmers, affecting yields and product quality. Favourable weather can lead to oversupply whereas unfavourable weather is often the cause of undersupply. Weather-related problems can deter farmers from signing a production contract. Production contracts should therefore consider the risks associated with exceptionally bad weather, which could leave farmers technically in breach of contract.

The peak growing season falls in the dry cooler months of December to February, and the low season stretches from March to November when the weather is hot to very hot and wet. One of the difficulties farmers reported is the loss of crops due to unusually high temperatures caused by climate change: they do not have enough netting or plastic to protect their crops from intense heat.

With regard to farmers' excess produce left over after the contractor's purchase, last season I brought extra, at a cost of around USD100, to feed to my cattle and pigs—just to help farmers cut their losses. The extra money will help them cover the cost of seeds.
(Technical adviser of a private company, Kompong Speu province)

Cool weather might be good for bumper crops but farmers and contractors may not necessarily be able to realise the dividends because of gluts on the market. Farmers' main concern is that contractors will not buy their crops. The dilemma for contractors is that they may lose next year's production if they do not buy what their farmers have produced, but if they do buy their farmers' produce, they may not be able to sell it all. Surplus production can push contractors to cancel their orders, bringing them into breach of contract with farmers.

The word 'production' presents endless problems. There is production over and under requirements. It is hard to estimate. Climate is the most important issue affecting production. At harvest time, market demand is low; when market demand is high, production is low.
(Contract farmer, Kompong Speu province)

5.3.1.2 Affordable and reliable seed

Seed is often expensive, putting small-scale farmers at an immediate disadvantage. Other problems arise from limited access to sufficient quantities of good quality or improved seed varieties. These constraints can cause problems for all farmers but particularly affect smallholders involved in centralised and multipartite production contracts. Most seeds, both local and European, are imported, and the quality (germination rate and yield) is not guaranteed. Some contractors take responsibility for selecting seed types and seed sources and ordering sufficient quantities to supply farmers. Farmers usually pay the contractor for seeds upon receipt of payment for their products, usually within one month of delivery.

In practice, some farmers have been dissatisfied with delays in obtaining contract-specified seed provided by the contractor and with the seed payment procedure, especially when seed fails to germinate properly or grow well. Farmers complained about high cost, poor yields and time wasted. In response, farmers and contractors have agreed that payment for seed will depend on the germination rate and seedling growth. For example, farmers are required to pay for seed that has not done well if seed from the same batch is growing on other farmers' land. In such circumstances, the farmer is thought to be at fault, not the seed. Conversely, a farmer is not required to pay if seed from the same lot fails to grow well on other farmers' land, in which case seed quality is deemed to be at fault.

5.3.1.3 Lack of capital and labour

Farmers and contractors pointed out that small-scale farmers often do not have enough capital or the confidence to access credit to invest in their land, particularly to overcome seasonal production constraints. For instance, they cannot afford to buy materials such as plastic and green net to protect their crops from heavy rain or high temperatures. Furthermore, due to lack of labour resultant of rural-to-urban labour movement within Cambodia and to other countries such as Thailand, South Korea and Malaysia, some farmers have either stopped farming or engage in family subsistence farming and rely on remittances from migrant family members instead.

There was a training course on how to grow vegetables in the dry season, but lack of capital and labour means that we have been unable to apply what we learned. Therefore, we just grow what we can using available resources. (Contract farmer, Kompong Speu province)

Some farmers admitted that they are reluctant to borrow money or obtain credit from moneylenders or microfinance institutions for fear of being unable to earn enough to repay the loan, given that interest rates are high. In such a case, their assets might be confiscated. However, if subsidies were available from contractors, the Provincial Department of Agriculture or other agencies concerned, they might consider investing in their land.

5.3.1.4 Late payment for products

Most small-scale farmers in the study sites preferred to be paid cash-in-hand on delivery of their crops. However, this is not always possible if the contractor has limited resources.

We are just farmers who do not have much money stashed at home. We mostly depend on cash from selling crops to buy seed and fertiliser or to pay for tilling the soil and other cultivation materials. So, we definitely prefer to be paid for our crops cash-on-delivery. (Contract farmer, Kompong Speu province)

The method of payment varies depending on the type of CF scheme. Several different methods were reported in the study areas. In one simple CF scheme (verbal agreement between individual farmers and the contractor), contractors pay cash immediately after they have sold the products at market,⁷ and farmers usually receive cash payments two to three days after delivering their products. In the study areas, this method was used for European vegetables (leaf crops such as romaine lettuce and iceberg lettuce) and local vegetables (cucumber, string beans, lettuce, eggplants and tomatoes). In another type of CF scheme where the contract is agreed between a contractor/firm and a farmer group, farmer association or agricultural cooperative, the contractor/firm issues an invoice⁸ (used with formal contracts when prices are pre-set) for the quantity of crops that each farmer supplies and the cash is transferred two to four weeks after delivery.

For farmers, contracts and agreements can provide a reliable market for their products. Their preferred payment method is cash-in-hand, either on delivery or two to three days afterwards. Some farmers reported that invoicing followed by payment later can be inconvenient, citing an incident of a lost invoice and the contractor refusing to pay up, and another when a contractor was unable to pay on time. These and similar issues can be resolved if there is mutual understanding

⁷ A contractor can be a local collector who collects products from farmers and sells them to wholesalers and retailers at a central or local market (an informal model).

⁸ An invoice includes farmer code number, farmer name, group number, delivery date, list of products, unit, volume, price per unit, subtotal, total, approved by, delivered by and received by.

between contractor and farmers. But if resolution cannot be reached, farmers might be inclined to stop supplying the contractor and cancel their agreement.

5.3.1.5 Pest insect control in organically-produced crops

Farmers engaged in vegetable production contracts admitted that it is hard to overcome pest insect infestations, especially when the terms of the contract prohibit the use of agrochemicals. Technical advisors have taught farmers how to make natural pesticides to protect organically grown crops from insects and other pests. However, farmers reported that some components are not available locally or that the natural formula is not effective.

5.3.1.6 Mistrust

There were reports of mistrust characterising contracts and agreements. Small farmers are heavily dependent on farm revenue for their household income. Payment is therefore one of the most sensitive issues that can either build or destroy farmers' trust in contractors' commitment and ability to pay them on time, or even to pay them at all. Late payment and other payment problems can quickly result in farmers withdrawing from production contracts.

Farmers reported an incident involving payment problems where they believed the contractor transferred money on time but that its staff delayed paying farmers for four to six weeks and even used that money for their own purposes. Although the problem occurred repeatedly, it was not addressed. Contractors are not penalised for late payment and there is no clear mechanism for resolving disputes between farmers and contractors. The only action farmers have recourse to is to complain. If the problem continues, they will seek new opportunities with other companies that perform well, are reliable and need more growers. This emphasises the need for regular monitoring of CF arrangements by independent agents appointed by the contractor. Also essential is a mechanism that enables farmers, buyers and contractors to identify problems and find timely solutions together.

5.3.1.7 Market imperfection

Imperfect competition is a market situation where individual buyers or sellers can influence the market price, and there is a lack of reliable product information. This study identified monopoly pricing of rice, local vegetables and pigs. Contract farmers involved in informal and intermediary CF schemes do not benefit from fixed prices and are therefore particularly vulnerable to seasonal fluctuations in both demand and prices. This can discourage them from making productivity-improving investments in their land or from participating in CF.

Monopolistic risks also occur within centralised and multipartite CF schemes, especially for vegetable and fruit producers during times of excess production when contractors often cancel orders particularly for European vegetables. European vegetable seeds are not available locally; contractors import seed from Thailand, Vietnam and Germany. These specialist vegetables are normally reserved to supply international hotels, tourist-frequented restaurants and casinos. Since most local consumers are not familiar with European vegetables, farmers cannot sell surplus produce on local markets. They have little choice but to consume it themselves or use it as cattle and pig feed.

Kongchheng (2010, 23) highlighted the monopoly of a single crop in maize CF. Because Thailand is the biggest market for Cambodian maize, Thai processing factories do not need

formal contracts with farmers to obtain a guaranteed supply. Despite having a reliable market, narrow market accessibility is a constraint restricting maize farmers from reducing market risks associated with changes in demand and price volatility.

Under imperfect market conditions, some of the contract packages provided by contractors do not offer real advantages to farmers; rather, they are designed to entice farmers to grow and supply certain products. As a result, production contracts can place limits on farmers' choice of production technology and ability to exploit other market opportunities. As Kongchheng (2010, 23) concludes:

The present CF practice is predominantly based on trust and verbal agreement [the informal model]. Farmers can get benefits in terms of input support but guaranteed market and price are not available. In fact, farmers try to avoid the contract but they have no choice because they need credit to finance their maize production. In this regard, middlemen [contractors] are the main source of loans for them. Widening and deepening CF practice beyond the input support is an essential foundation to enhance CF performance.

5.3.2 Constraints for contractors

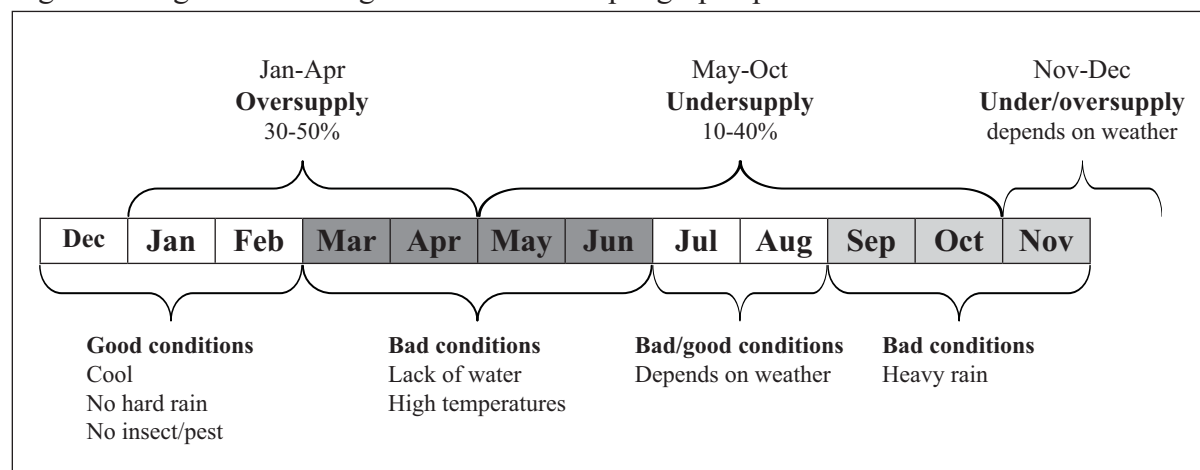
The main constraints reported by contractors and their technical staff were under- or oversupply of products, poor market diversification and a lack of consultation with farmers.

5.3.2.1 Undersupply and oversupply of products

The biggest challenge facing contractors is securing the minimum quantity of products and managing vast excess production. The problem of under/oversupply occurs almost every year. The main factors affecting production are linked to weather conditions, capital investments by farmers and labour availability.

Take, for example, the vegetable planting calendar for Kompong Speu province (Figure 7). Crops do not grow well in the wet season—usually September to November—because they are easily damaged by heavy rain. In the dry season, from the end of April to June, crops fail due to intense heat and lack of moisture. Agricultural production in these two periods, especially of leafy vegetables, is usually low and crops generally fail to meet the agreed quality and quantity of allocated production quotas.

Figure 7: Vegetable farming calendar for Kompong Speu province



Source: Fieldwork (observations, FGDs and KIIs), August and September 2013

In contrast, the cooler months from the end of November to the end of February provide good growing conditions, and crop yields are high. In fact, farmers are often able to produce more than the allocated production quotas.

When conditions are good for growing crops, it is easy for farmers but hard for us because we have to try to buy all produce grown. If we don't make an effort to buy excess production, farmers get upset and complain. Usually we are able to buy only 10 to 20 percent extra. Although we have a contractual agreement about the product quota, both sides make compromises to ease the issue. (Contractor, Phnom Penh)

Companies generally take steps to reduce uncertainty associated with erratic supply. They commonly have production contracts with many individual farmers, groups of farmers or intermediaries. Depending on the product or contractor (entrepreneur, supermarket, agribusiness firm, casino, restaurant), some companies procure produce from open markets or from growers in neighbouring countries. These contracts can be formal or informal and involve different CF models. A study by Glover (1994, 167) confirmed that food processing companies use a combination of firms, contract growers and open market purchases to secure consistent supply lines.

A new finding of this study is that small companies in the same business, such as supermarkets selling vegetables, fruit and rice, can play an important role in risk sharing to help each other manage fluctuations in supply. For example, a contractor from Phnom Penh explained that in response to undersupply of vegetables, his company buys produce from open markets. Sometimes, he negotiates with other companies to share their supplies, promising that his firm will return the favour should they ever have a similar problem.

In times of undersupply from farmers, we run out of produce to supply our customers, mainly ordinary consumers and restaurants. Rather than disappoint them and risk losing their custom, we negotiate with other companies in the same business and ask them to sell us produce that we need to supply our clients. We assure them that we would be willing to help them in return if they were to face the same problem. Other companies often help us in this way. (Supermarket manager, Phnom Penh)

5.3.2.2 Lack of market diversification

To ease undersupply constraints, especially to compensate for poor growing conditions during the rainy and hot seasons, contractors work with large numbers of small-scale farmers to produce crops. This strategy helps farmers as well. Smaller production quotas are more acceptable for farmers who might otherwise be unable or unwilling to commit to producing more. However, this strategy can run into problems when supply returns to normal and all farmers can grow their crops, are willing to supply crops in the quantities demanded and can plant the amount of seeds provided.

Oversupply is a big problem for both farmers and contractors. When growing conditions are good, contractors need to diversify their markets or limit production by providing farmers with smaller amounts of seed. If a contractor is able to diversify its markets, limiting seed will be its last choice. Limited seed allocation is a disadvantage for farmers because they lose good opportunity to seek other markets for excess production and earn more profit. This can push some farmers to withdraw from CF.

I used to supply large amounts of produce at high prices, but now I grow very small amounts. I might harvest about 20 kg of cucumbers and string beans but he [a collector for a cooperative] would purchase only 5 kg to 15 kg. This is because there are many farmers growing crops for the cooperative. To share benefits, the cooperative buys from all farmers but in small amounts, and the price is the same as that on the open market. Selling on open markets is more convenient than selling to him because the cooperative selects only high quality produce and returns the rest. At Kontoy Voy market, all products are purchased, whether high or low quality, and paid for in cash immediately. (Small-scale farmer, Svay Rieng province)

Exploring more markets for contract farmers' produce is a priority for contractors if they are to retain farmers in their formal supply chains. Even if market demand is highly elastic, good contractors should be able to provide insights into what products the market wants, enabling their contract farmers to take advantage of market opportunities and increase their income. However, contractors would need to schedule the production quotas for each farmer. Contractors must also address key issues arising from poor management and lack of consultation with farmers to build farmers' trust and incentivise them to invest in improving agricultural productivity.

5.3.2.3 Lack of consultation may lead to farmer discontent

Various circumstances can create ill will and leave farmers feeling dissatisfied with contract arrangements. Delayed payment, mid-season price drop, and managers' rude behaviour are some common causes of dispute. If these and similar issues are not settled promptly, farmers may well slip out of production contracts altogether.

Working with farmers can be difficult if we do not know how to facilitate a compromise or persuade them to agree to a resolution [due to lack of mediation skills]. We cannot blame them or insist that they follow our instructions too much, otherwise they will stop cooperating with us and this would lead to the contract being cancelled. (Technical advisor, Kompong Speu province)

Both farmers and contractors affirmed that some farmers sell some of their produce "on the side", known as extra-contractual marketing. But this involves just small amounts of produce and is usually the result of over-production. It does not affect the supply of products to the contractor.

5.4 Factors leading to breach of contract

In the words of Pultrone (2012, 263), "The advantages that can come from sound contractual practices can be fostered by an adequate legal framework that supports the parties in the correct implementation of contract terms", and "Complete contracts can guide the parties to a correct execution of their duties, provide clarity and prevent misunderstanding" (2012, 279). In the study areas, however, a number of different CF arrangements have used various contract formats that are incomplete and informal. In other words, they have a weak legal framework, meaning that they are open to abuse. The formats include simple registrations and verbal agreements. There is no formal contract format specific to CF, or that can form the basis of a document that can be used for farmers and contractors as a whole in Cambodia. Many contract formats that have so far been used for CF have been drafted by contractors, and farmers have a role just to check whether they understand the terms and specifications in the contract and whether they agree or disagree. Very few contract formats have been drafted by groups of farmers, facilitated by an NGO as support agency. According to the interviews and literature, and as shown in the following sections, both parties have at different times, and for different reasons, breached CF agreements.

5.4.1 Farmers' side

Breach of contract among farmers includes extra-contractual marketing, though usually of excess production, and undersupply because they have not been able to produce adequate quality and quantity to meet the contractor's demand. But these circumstances are strongly related to weather conditions. Farmers might also withdraw from the contract because problems have emerged and no suitable solutions have been found in time.

Poor management by the contractor resulting in late payment or payment problems, rudeness to farmers, mid-season price drops and quota cuts are the main factors that can lead to farmer dissatisfaction and, ultimately, farmers preparing to leave the contract agreement.

Seed provision from the contractor can be so complicated; this is mostly related to low rate of germination and payment procedures. Once, I got 200 grams of seed but it did not germinate. Then I bought more to grow again. Then the last time, I bought 200 grams of seed and only about 150 grams germinated. At the end of the month they charged me KHR250,000 [USD62.5]⁹ just for seeds. I found this unacceptable and I argued with them and asked for a solution. They rechecked and found that the bill was only about KHR90,000 [USD22.5]. Even though I am still contractually bound to this agreement, when I come up against this kind of problem, I do not want to continue growing—I just want to withdraw from the group. But the group leader is the person in the village who is helpful when I have problems: if it weren't for him I would stop participating in the project... however, if the same problem happens again and again, I will stop. (Contract farmer, Kompong Speu province)

5.4.2 Contractors' side

There are many examples of CF in the study sites where contractors and farmers do not have a formal production contract. The reason given for this was that agricultural production, particularly of horticultural crops, is risky as it is highly susceptible to weather, pests and diseases. Small-scale farmers unable to overcome these challenges therefore cannot guarantee that they will be able to meet the production quotas set by contractors. So most of the time, farmers are the ones who are fearful of contractual agreements, with most of them volunteering to grow crops and supply as much as they can.

In addition, in some study sites, contract farmers and outsiders involved reported contractor abuses. These entailed contractors seizing opportunities, for example, to lower prices in the middle of the growing season, change the quantity demanded or suspend the contract, especially during the cool season when oversupply can be a problem.¹⁰

5.5 Role and challenges of support agencies in contract farming arrangements

A support agency in this study is defined as any institution assisting or supporting farmers' activities related to CF ventures. Assistance can be technical advice, capital, production inputs, transport or linkages to product markets. These supports may be provided throughout the contract period or at a certain stage in the CF process (e.g. contract arrangement, production or marketing).

⁹ KHR4000=USD1

¹⁰ The period of oversupply for horticultural production normally runs from December to February. This is a time of cooler weather, which provides good conditions for leafy salad crops and European vegetables.

The findings revealed that the farmers who agree contracts with contractors can be individual farmers, a group of farmers or a farmer organisation. Field observations suggest that contract farmer groups tend to be mediated by farmer organisations while contracts with individual farmers were established by each farmer in the villages.

Apart from contractors working as profit organisations and business partners, individual contract farmers generally do not have a support agency to assist them. There were only two types of agencies helping contract farmers in the study areas: public institutions and NGOs. In contrast, contract farmer groups (farmer organisations) are mostly established and supported by a support agency.

5.5.1 Public institutions

Contract farming in the study sites is supported by the Office of Agricultural Extension (OAE) of the Provincial Department of Agriculture (PDA) under the Ministry of Agriculture Fisheries and Forestry (MAFF). In Svay Rieng province, the OAE makes strong efforts to actively support agricultural cooperatives (ACs), more so than other farmers groups and individual farmers, because it is mandated to implement the policy promoting ACs in the community. In carrying out this mandate, the OAE plays an important role in sustaining the function and operation of ACs. Because CF was found to be the most important strategy to maintain their business, the OAE took the opportunity to assist contract farmer groups in gaining access to markets. For example, the OAE invites major clients (big restaurants and casinos) to visit the communities in which ACs are located or the exhibitions where farmer groups showcase their agricultural products. The purpose of these activities is to build clients' trust and confidence and relationships that will lead to purchases, to demonstrate farmers' confidence in their products, and to provide benefits to farmer groups through eliminating price exploitation by intermediaries and strengthening farmers' bargaining power to increase their chances of getting the best possible price from each buyer.

5.5.2 Non-governmental organisations

NGOs, working as a part of their development mandate and mission, have an important role in improving rural livelihoods by promoting agricultural production and market access. Promoting CF through providing technical support, credit, production inputs (capital, production materials, seeds, fertiliser), capacity building and market access (networking, facilitation, technical follow-up) could be a successful strategy for sustainable agricultural productivity growth and linking individual farmers and groups of farmers to more markets (Eaton and Shepherd 2001; Bijman 2008; Cai et al. 2008).

Fieldwork observations and interviews suggest that the most successful CF schemes in the study sites have a supporting agency behind them. For example, Svay Rieng Agro-products Cooperative (SAC) has a Japanese NGO, the International Volunteer Center of Yamagata (IVY), as a supporting agency providing capital, inputs and technical skills to enhance market access; for instance, it contacted a local casino near the Cambodia-Vietnam border to purchase organic vegetables. As a pilot project, AGRISUD Cambodia (in Siem Reap province) has helped 10 individual farmers produce crops to supply a restaurant and a hotel. The Peri Urban Agriculture Center (PUAC), located in Kompong Speu, has Aide au Développement Gembloux (ADG) and the Cambodian Institute for Research and Rural Development (CIRD) as supporting agencies providing agricultural materials, inputs and technical training to produce organic vegetables. The Cambodian Center for Study and Development in Agriculture (CEDAC) has gathered smallholders into farmer groups to produce organic rice and to register as ACs: Trapeang Sro Ngae cooperative in Takeo is one such example.

From a contractor's perspective, small-scale farmers are often constrained in what they can produce, and CF will be more successful and sustainable if there is strong support from the government and NGOs to help farmers overcome constraints and challenges to agricultural production. This implies that contractors may prefer to agree contracts with groups of farmers who have supporting agencies to assist them.

The study also found that NGOs, particularly those focussing on organic production, are likely to influence smallholder farming. Close observations showed that many NGOs make efforts to encourage farmers to use available resources to improve productivity. For example, farmers are motivated to use organic fertiliser made from animal manure or compost. As a result, some farmer groups embrace organic farming as a core activity in addition to CF.

Farmers have found it hard to pursue organic farming methods, but support agencies' provision of production supports such as important inputs and capital to invest in cultivation has enabled them to pursue chemical-free management practices. However, organic crop production is susceptible to pest damage and insect infestation, often resulting in lower-than-expected yield for farmers who do not have solutions or technology to manage these problems and who then have to face the issue of undersupply with the contractor. This implies that while organic farming methods can help farmers produce chemical-free foods and reduce production costs though not buying chemical pesticides, the risks confronting organic farmers when crop conditions are difficult often result in unreliable supplies for contractors.

5.6 Existing legal framework and policies

Four CF models are operating in the study sites. The centralised and multipartite models are likely to be more formal than informal and intermediary models. In practice, the first two models usually perform better and require agreement between farmers and contractors through formal registration or written contract, which are sometimes approved by a local authority (commune or village chief) or facilitated by an NGO (farm-support agency). For individual contract farmers, the contract documents (formula and format) are usually drawn up by the contractor and farmers just follow.

In contrast, the contract documents for a group of farmers are usually drafted by the group's management team, facilitated by its NGO as support agency and justified by the contractor. This shows that small farmers organised into groups and supported by NGOs have greater bargaining power than if they were producing for a contractor as individual contract farmers. To register formally, individual farmers or group members are required to fill in a form and submit it to the contractor. The form details the farmer's biographical information accompanied with a photograph, the products the farmer promises to supply the contractor and is signed with the farmer's thumbprint. Generally, important contract specifications such as quantity and quality of products, price and payment method are not included; these are usually stated in an order paper announced at the beginning of every farming season.

Even though the centralised and multipartite models follow formal guidelines or written specifications, both contract parties prefer to use informal ways to solve problems rather than resort to contract law. Trust and mutual understanding is the preferable choice when dealing with problems such as under- and oversupply. On the other hand, informal and intermediary models mostly involve verbal agreement between individual farmers and a contractor. Trust and mutual understanding, especially on price setting, are the most important characteristics that

all parties require; farmers have to believe that the contractor will collect all of their products and sell them at the highest possible price and not cheat or exploit them, otherwise it would be impossible for them to engage in CF.

According to interviews with PDA officials, no promotion policy or action plan relating to CF has been implemented at grassroots level. One currently prioritised policy relates to the promotion of ACs in local communities. Yet there is no policy, strategic plan or action plan in respect of CF.

Farmers reported that PDA officials try to assist them, mostly with the registration of farmer groups as ACs. Sometimes the PDA only provides services for ACs' activities, for example, helping them to prepare their accounts or organise annual assemblies.

To sum up, CF is practiced in Cambodia at community level. To date there has been no intervention from government even though the sub-decree has been signed. Instead of formal rules or policy, farmers try to find their own way to obtain benefits and sustain CF through trust and mutual understanding. However, the promotion of CF to improve agricultural productivity and rural incomes will not be effective unless the sub-decree is accompanied by policy, strategy and a prioritised action plan.

6. Conclusion

A variety of contract farming models are operating in the study sites. The study identified four types commonly practised by small-scale farmers: centralised, informal, multipartite and intermediary models. There was no evidence to suggest that the nucleus estate model, a fifth model categorised in the literature, has been applied in the study areas. This could be because contractors do not want to own or manage an estate plantation. Some contractors prefer not to shoulder the risks associated with crop and livestock production and others do not have enough capital to run their own estates.

Centralised and multipartite models tend to be more formal due to their higher performance. These contract agreements are usually made through formal registration or written contracts, which are sometimes approved by local authorities or facilitated by NGOs. However, as described in Article 7 of the Sub-Decree on Contract Farming, all forms of CF agreements are normally made without facilitation from a coordination mechanism.

Nevertheless, despite the disadvantages—unreliable markets and volatile prices—of informal contracts, small-scale farmers mostly dare not sign a formal contract with a contractor because they are afraid that they might not be able to supply produce in the quantity and quality stipulated in the agreement due to the many production challenges and risks that remain largely unaddressed.

In practice, regardless of CF model and contract type, there is no established mechanism in the study areas to resolve disputes or promote CF by harmonising the rules governing contractual practices. Even though formal contracts demand a certain level of performance and all parties have to follow the guidelines and specifications indicated in written contracts or contract announcements, parties are likely to opt for informal ways of resolving problems arising under or relating to the contract. These informal practices are mostly rooted in trust and mutual understanding.

Despite lack of quantitative data or low tangibility of issues to determine the best CF model, the centralised and multipartite models are found to provide more benefits and advantages for small-scale farmers as long as CF arrangements are well managed and coordinated and there is enough support for farmers. In contrast, informal and intermediary models are unable to provide adequate support or significant benefits such as access to reliable markets and fixed pricing structures. The study findings indicate that formal contract practices (i.e. centralised and multipartite models) should be promoted among small farmers. This suggestion is paralleled by the government initiative to promote CF through formal mechanisms such as the Sub-Decree on Contract Farming, appointing authorised institutions and establishing the Coordination Committee for Agricultural Production Contract to support farmers engaged in CF schemes.

Besides the benefits that can be derived from CF, many constraints and challenges confront small-scale farmers and contractors. Main constraints on cultivation include weather resilience, low quality of inputs and difficulty in accessing these (e.g. improved seeds), lack of capital investment, delay in payments after delivery of products, lack of new technologies to control insect pest infestations organically, and market imperfections. For contractors, the major problems associated with CF arrangements include under- and oversupply of products in respect of agreed quotas, lack of consultation that can lead to farmer discontent, and lack of market diversification.

Sharing production risks is one of the most significant benefits for contractors, though this is not usually communicated to farmers or explicitly indicated in the contract. Still, this aspect does not seem to deter farmers: they nearly always take full responsibility for agricultural production and any problems encountered.

Farmers engaged in informal production contracts are mostly experienced and often face risk from fluctuating prices. Though free market principles encourage competition in Cambodia's markets, small farmers cannot compete with markets in neighbouring countries in terms of prices. This is because almost all important production inputs such as seeds, fertilisers, pesticides, production materials and agricultural machinery are imported from Thailand and Vietnam at high cost. High-cost production means high prices in a market economy. With the high cost of imported inputs, it is difficult to impossible for Cambodian farmers to compete with neighbouring markets, where similar inputs are available at lower cost. Cambodian farmers lose any bargaining edge to negotiate higher prices in the face of such competition. Addressing this problem requires very strong support from the Cambodian government.

As long as market imperfections remain pervasive, small farmers will not be able to truly realise the benefits CF can provide: instead, the potential benefits are just the bait that will attract farmers to enter into a contract with a contractor to grow or raise and deliver specified products for a fixed term. Moreover, CF tends to limit farmers' control and flexibility in deciding on production technology and production mixes, thereby curtailing their ability to seize new market opportunities.

Lastly, in the study areas, there is no clear mechanism to ensure that implementation of the sub-decree takes place nor action plans to support both producers and contractors. Specific regulations are needed to implement the sub-decree.

7. Recommendations

Several ideas were put forward and suggestions made by farmers, contractors and supporting agencies, as well as those drawn from this research and analysis, to overcome the constraints and challenges faced by contract farmers and contractors.

There should be a specific policy to support contract farmers and build their confidence to overcome production constraints and contractual challenges that can discourage farmers from participating in contract farming or compel them to withdraw from contract schemes.

To ensure that CF arrangements are well managed and to provide more benefits to farmers, government interventions should focus on four strategic areas: (i) linking farmer organisations and CF schemes, (ii) formalising markets, (iii) enforcing the Sub-Decree on Contract Farming by implementing its role as stated in Article 7, Chapter 2, and (iv) improving access to production inputs and extension services.

Linking farmer organisations and contract farming schemes

Many successful farmer organisations engage in CF schemes that eventually often become a core activity in sustaining their operational effectiveness. So far, there is a sub-decree and strong policy direction from government mandating the Office of Agricultural Extension of MAFF to support rural agricultural cooperatives. Supports include the provision of registration services, facilitation of annual assemblies, training on basic accounting, start-up capital for new businesses and office premises for administrative activities. Yet there is only one stand-alone sub-decree to support CF. Agricultural cooperatives play an important role in organising small farmers to grow rice, vegetables and fruit and raise livestock, and CF is the mechanism that brings buyers to purchase those products. Policy initiatives and action plans should therefore be expanded to cover these two schemes together and implement them simultaneously.

Formalising markets

In addressing market imperfections and lack of market diversification, the government has a crucial role to attract and build partnerships with agricultural investors and agribusinesses such as food processing and export companies by enabling them to engage in CF with small farmers. Such companies could contribute hugely to agricultural development because they have enough capital to provide small farmers with needed inputs and services especially access to reliable markets and therefore stable and higher prices.

Enforcing the sub-decree

The Coordination Committee for Agricultural Production Contract (CCAPC) should be established as soon as possible with a few most relevant components. This would help to ease coordination and harmonisation in the initial stages and enable the CCAPC to carry out its duties effectively, especially in implementing the three roles stated in Article 7 of Chapter 2 of the sub-decree: to develop policy to support CF, to facilitate and strengthen harmonisation between farmers and contractors, and to intervene in, or reconcile arguments or conflicts between farmers and contractors.

To promote the stability of markets and to improve transparency of transactions and market competition, as well as to protect both parties, the CCAPC should develop templates for formal CF contracts to suit the particular needs of small farmers. Since agricultural

production poses many risks. The sample contracts should include conditions that reduce the risks confronting farmers to acceptable levels. For example, contractors can share the risks of production failure due to low germination rates, poor weather, flood or storm damage (for fruit and vegetable crops), and flood or drought damage (for rice). Sharing risks with contractors can positively affect farmers' investment decisions and incentivise them to supply contractors, and build mutually beneficial relationships and trust between parties. These contract documents should be written in Khmer in a manner that can be readily understood by local farmers and local authorities.

Improving production inputs and services

Some agricultural inputs, particularly seeds, fertilisers and pesticides, are difficult to access, of low quality, expensive and labelled in foreign languages. Again, government has a critical role to play in helping small farmers overcome these barriers. Importantly, government needs to give more attention to agricultural research and development in order to increase the quantity and quality of inputs used in farming, as well as to build capacity for agricultural extension services. Besides improving accessibility, it is important to ensure that the prices of agricultural inputs supplied to rural areas are affordable for small farmers and that those inputs are suitable for local conditions (e.g. soil, weather and markets).

Production improvements can also be achieved by (i) building research capacity through advanced training programmes in Cambodia and abroad and providing appropriate incentives; (ii) updating and equipping facilities in existing agricultural research institutions; and (iii) providing budget for scientific research and experimental development.

To address the problem of undersupply, the quantity and quality of appropriate extension services should be increased. Intensive training should focus on the safe and effective use of chemical fertilisers and pesticides to enable farmers to increase production and supply contractors with high quality, safe, healthy products in response to market demand. Further, the number of qualified technical advisers who are hired to train and advise farmers on how to overcome production problems should be increased. This would help farmers improve agricultural productivity and build confidence and trust, as well as encourage them to invest in their farming activities.

8. Suggestions for further research

This study did not find enough evidence to determine which contract farming model small farmers prefer or which model is the best and most suitable for small farmers with respect to maximising benefits and farm incomes. A quantitative research approach would complement this qualitative study and provide the missing information. Synthesis of qualitative and quantitative research evidence would enable the selection of the most appropriate contract farming models and identify potential problems and particular needs of small farmers. Analysis would feed into the policy process and contribute to shaping policy options across a number of target areas. Further research should integrate gender analysis, with a focus on women's economic empowerment, the roles of women in creating and sustaining contract farming schemes, and the supports women need to generate more income from contract farming.

Bibliography

- Benezech, Jérôme. 2007. *Kampot Pepper: An Exceptional Product–The Revival of an Industry*. Published by Farm LINK. Accessed 15 Dec 2014, www.farmlink-cambodia.com/docs/Kampot%20Pepper.pdf.
- Bijman, J. 2008. *Contract Farming in Developing Countries*. Wageningen, Netherlands: Wageningen University and Research Centre.
- Cai, Junning, Luyna Ung, Sununtar Setboonsarng and Ping Sun Leung. 2008. “Rice Contract Farming in Cambodia: Empowering Farmers to Move Beyond the Contract Toward Independence.” ADBI Discussion Paper 109. Tokyo: ADBI.
- CDRI, Cambodia Development Resource Institute. 2013. “Removing Constraints to Cambodia’s Agricultural Development.” Cambodia Outlook Brief No. 2. Phnom Penh: CDRI and ANZ Royal.
- CIRD, Cambodian Institute for Research and Rural Development. Accessed Dec 2014, www.cird.org.kh/what-we-do.html.
- Couturier, Julie, Savun Sam Ol and Ham Phalla. 2006. *Inventory of Farmer Organisations in Cambodia*. Phnom Penh: MAFF and Ministry of Foreign Affairs of France.
- Glover, David. 1994. “Contract Farming and Commercialization of Agriculture in Developing Countries.” In *Agricultural Commercialization, Economic Development and Nutrition*, edited by Joachim von Braun and Eileen Kennedy, 166-175. Baltimore, MD: Johns Hopkins University Press.
- Eaton, Charles, and Andrew W. Shepherd. 2001. *Contract Farming: Partnerships for Growth*. Rome: Food and Agriculture Organization.
- IVY, International Volunteer Center of Yamagata. “Assistance to Cambodia.” Accessed Dec 2014, www.ivyivy.org/en/act/cambodia/.
- Kongchheng, Poch. 2010. *Transboundary Production in Agriculture: A Case Study of Maize Contract Farming in Cambodia*. Mekong Institute Research Working Paper Series. Khon Kaen, Thailand: Mekong Institute.
- Kumar, K. 1987. *Conducting Focus Group Interviews in Developing Countries*. AID Program Design and Evaluation Methodology Report No. 8. Washington, DC. US Agency for International Development.
- Little, P.D, and M.J. Watts, eds. 1994. *Living under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa*. Maddison, WI: University of Wisconsin Press.
- MAFF, Ministry of Agriculture Forestry and Fisheries. 2011. *Policy Document on Promotion of Paddy Rice Production and Export of Milled Rice*. Phnom Penh: MAFF.
- MAFF. 2013. *Annual Report for Agriculture Forestry and Fisheries 2012-2013*. Phnom Penh: MAFF.
- MAFF. 2015. *Annual Report for Agriculture Forestry and Fisheries 2014-2015*. Phnom Penh: MAFF.

- MOE and UNDP, Ministry of Environment and United Nations Development Programme. 2011. *Climate Change and Agriculture*. Phnom Penh: MOE and UNDP Cambodia.
- NIS, National Institute of Statistics. 2008. *Cambodian Census*. Phnom Penh: NIS
- NIS. 2011. *Cambodia Socio-Economic Survey*. Phnom Penh: NIS Nou Keosothea and Heng Molyaneth. 2013. “Emerging Contract Farming: A Case of High Quality Rice in Cambodia.” Unpublished report. Phnom Penh: CDRI.
- Prowse, Martin. 2007. “Making Contract Farming work with Cooperatives.” ODI Opinion 87. London: ODI.
- Pultrone, Caterina. 2012. “An Overview of Contract Farming: Legal Issues and Challenges.” Contribution to the Acts of the UNIDROIT Colloquium on “Promoting Investment in Agricultural Production: Private Law Aspects” held in Rome, Italy, 8-10 Nov 2011. Rome: Food and Agriculture Organization of the United Nations.
- RGC, Royal Government of Cambodia. 2010. *National Strategic Development Plan 2009-2013*.
- RGC. 2011. *Mid-Term Review 2011 on National Strategic Development Plan Update 2009-2013*.
- RGC. 2014. *National Strategic Development Plan 2014-2018*.
- Svay Rieng Agro-Products Cooperative information. Accessed 9 Dec 2014, www.jica.go.jp/cambodia/english/office/topics/120220.html.
- Theng Vuthy and Khiev Pirom. 2014. “Cambodia’s Fertiliser Industry: Trends, Challenges and Opportunities.” *Annual Development Review 2013-14*, 81-94. Phnom Penh: CDRI.
- Theng Vuthy, Keo Socheat, Nou Keosothea, Sum Sreymom and Khiev Pirom. 2014. *Impact of Farmer Organisation on Food Security: The Case of Rural Cambodia*. Working Paper Series No. 95. Phnom Penh: CDRI.
- World Bank. 2005. *Cambodia Rural Sector Strategy Note: Towards a Strategy for Rural Growth and Poverty Reduction*. Washington, DC: World Bank.
- World Bank. 2009. *Poverty Profile and Trends in Cambodia: Findings from the 2007 CSES*. Phnom Penh: World Bank.

Appendix 1

**Kingdom of Cambodia
Nation Religion King**

**Royal Government of Cambodia
Sub-decree No: ...36.....**

**Sub-Decree
on
Contract Farming**

The Royal Government

- Having seen the Constitution of the Kingdom of Cambodia
- Having seen the Royal Decree No. NS/RKT/0908/1055 dated 25 September, 2008 on the Appointment of the Royal Government of Cambodia
- Having seen the Royal Kram No. 02/NS/94 dated 20 July, 1994 promulgated the Law on the Organization and Functioning of the Council of Ministers
- Having seen the Royal Kram No. NS/RKM/0196/13 dated 24 January, 1996 promulgated the Law on the Establishment of the Ministry of Agriculture, Forestry and Fisheries
- Having seen the Royal Kram No. NS/RKM/0802/006 dated 15 February, 2008 promulgated the Law on Bio-safety
- Having seen the Royal Kram No. NS/RKM/0508/015 dated 13 Mar, 2008 promulgated the Law on the Management of Crop Species and the Rights of Crop Breeders
- Having seen the Sub-decree No. 17 ANKr/BK dated 07 April, 2000 on the Organization and Functioning of the Ministry of Agriculture, Forestry and Fisheries
- Having seen the Sub-No. 105 ANKr/BK/ dated 22 August, 2005 on Additional Roles to the Ministry of Agriculture, Forestry and Fisheries and the Establishment of the Internal Audit Department, the Planning and Statistics Department, the Internal Cooperation Department, and Information and Documentation Centre subordinated to the Ministry of Agriculture, Forestry and Fisheries
- Having seen the Sub-decree No. 188 ANKr/BK/ dated 14 November, 2008 on the Restructuring of General Departments of the Ministry to become General Secretariat, promoting Forest Administration and Fisheries Administration to the level of General Department, promoting the Department of Agronomy and Agricultural Land Improvement to become the General Department of Agriculture, and the Restructuring of the General Department of Rubber Plantation to become General Department of Rubber under the supervision of the Ministry of Agriculture, Forestry and Fisheries
- Pursuing to the Approval of the Council of Ministers' Meeting on the 11th of February, 2011

DECIDES

**Chapter I
General Provisions**

Article 1

This Sub-decree has the objective to define the implementation framework of Contract-based Agricultural Production in the Kingdom of Cambodia.

Article 2

This Sub-decree has its objective as the following:

- Strengthening the responsibility and trust between producing and purchasing parties base upon the principles of equality and justice.
- Ensuring the accuracy of the prices, purchases, and supply of agricultural crops, both on quantity and quality
- Increase purchasing, processing and exporting of agricultural crops
- Contribute to national economic development and people's poverty reduction pursuant of the policies of the Royal Government

Article 3

This Sub-decree has its scope that applies on all types of Agricultural Production Business under the Contract-based Agricultural Production.

Article 4

Key terminologies used in this Sub-decree are defined as follows:

“Contract-based Agricultural Production” refers to an Agricultural Production that ensures the prices, quantity and quality of the products includes various agreed conditions prior to the production.

“Agricultural Production Contract” refers to an Agreement on Agricultural Production Business made by two parties or more which is legal binding and shall specifically inscribe in advance all necessary conditions.

“Agricultural Production Business” refers to any production business, sales and buying of Agricultural products:

- Cultivation of all kinds of crops
- Sericulture, arboriculture, aquaculture, animal husbandry, etc.
- Production of crop seeds, livestock breeds, aquatic animal species, and vegetation species
- Agricultural produce processing
- Contract-based Agricultural Production purchase to supply the markets, for processing factories, or for export

“Producing Party” refers to physical or legal person who has occupation in agricultural production.

“Purchasing Party” refers to physical or legal person who legally conducts purchasing business of agricultural products in compliance with the existing legal procedures.

“Agriculture Communities” refers to Agricultural Development Communities, Union of Agricultural Development Communities, and Pre-Agricultural Development Communities.

Chapter 2

Institutions and Coordination Mechanism

Article 5

The Ministry of Agriculture, Forestry and Fisheries shall be the Lead Institution in communicating, coordinating, and providing expertise services in order to facilitate the Contract-based Agricultural Production Development. Ministry of Agriculture, Forestry and

Fisheries shall monitor and evaluate all of these functions and reports to the Royal Government.

Article 6

The Ministry of Agriculture, Forestry and Fisheries shall collaborate with relevant Ministries and Institutions and implement the role as inscribing below:

- Bridging the relationships between investors and farmers, producers and processors in the framework of Contract-based Agricultural Production
- Strengthening, promoting and encouraging the formation of the associations, agricultural communities, or agricultural organizations which are the bases for the development of the contact-based agricultural production
- Enhance the standard, classification, and quality of agricultural products to conform with the markets demands and international norms
- Involve in addressing conflicts and other problems pertaining to the implementation of the Contract-based Agricultural Production on the basis of the existing laws
- Facilitate the access of legitimate right on land in accordance with the existing law(s) for producing parties, farmers in conducting agri-business and agro-industry
- Facilitate the access to the technical supports, crop seeds, aquatic animal species, vegetation species, good animal breeds, means of production, fertilizers, high quality of pesticides
- Enhance the intensive production and agricultural diversification and competitiveness in response to the domestic market demands and exports
- Facilitate agri-business, agro-industry, and exportation
- Strengthen and expand the capacity in sanitary and phytosanitary inspection

Article 7

A mechanism shall be established which is called Coordination Committee for Agricultural Production Contract (CCAPC).

The organizing and functioning of this Committee shall be defined by the decision of the Royal Government.

The compositions of this committee are as follows:

1. Minister of the Ministry of Agriculture, Forestry and Fisheries
2. Secretary of State of the Ministry of Interior
3. Secretary of State of the Council of Ministers
4. Secretary of the Ministry of Economy and Finance
5. Secretary of State of the Ministry of Commerce
6. Secretary of State of the Ministry of Environment
7. Secretary of State of the Ministry of Land Management, Urbanization and Construction
8. Secretary of State of the Ministry of Water Resources and Meteorology
9. Secretary of State of the Ministry of Rural Development
10. Secretary of State of the Ministry of Justice
11. Secretary of State of the Ministry of Public Works and Transports

12. Secretary of State of the Ministry of Mines, Industry and Energy
13. Secretary General of the Council for the Development of Cambodia
14. Secretary General of the Council for Agricultural and Rural Rehabilitation
15. Governor of The Board of Governors of the Capital – Provinces
16. Director General of the Rural Development Bank
17. President of the Cambodia Chamber of Commerce
18. Representative of the Professional Chamber and Micro Enterprise

The Committee shall have the duties as follow:

- To develop policy, strategic plan aim at the promotion of the Contract-based Agricultural Production
- To facilitate and strengthen the harmonization between parties to the Agricultural Production Contract
- To intervene or reconcile argument or conflict that might be occurred from the implementation of the Agricultural Production Contract that expertise institution is unable to settle or conflict which required settlement of the inter-institutions.

This committee shall include Department of Agro-Industry of the Ministry of Agriculture, Forestry and Fisheries as its assistant.

Chapter 3

The Obligations of Producers and Purchasers

Article 8

The producing party shall have rights and obligation:

- To comply with the agricultural production conditions as inscribed in the agreement
- To proceed production activities based on seasonal and required timeframe
- To supply on time appropriate products in terms of grade, quality, and quantity and due timeline
- To accept the payments of product value as set in agreement

Article 9

The purchasing party shall have rights and obligation:

- To comply with Agricultural Production Conditions as inscribed the agreement
- To determine the commodity items such as quantity, quality, place and the date of delivery and acceptance of the commodities
- To provide agricultural material such as vegetation species, crop seeds, aquatic animal species, animal breeds, and provide credit advance, technical services, and other means or supports to producing party as agreed in order to ensure the process and achieve good results
- To pay the agricultural products by specific unit-based products and the quality as the agreed prices
- To pay the commodities to producing party as specifying under the conditions and at specific timeframe as agreed upon

Chapter 4

The formality and the implementation of the Agricultural Production Contract

Article 10

The Agricultural Production Contract shall be in writing under the facilitation of the coordination mechanism as inscribed in article 7 of this Sub-decree.

The Agricultural Production Contract shall be covered by provisions of the Civil Code, laws and existing regulations

Article 11

When there shall be any conflict relating to the implementation of the Agricultural Production Contract, the producing party and purchasing party shall be settled in advance the conflict in compliance with conditions as inscribed in the agreement contract.

In case that the conflict cannot be solved, the conflicting parties shall comply with the mechanism as inscribed in article 7 of this Sub-decree.

Chapter 5

Final Provisions

Article 12

Any provisions contradicting to this Sub-decree shall be null and void.

Article 13

The Minister in charge of the Office of the Council of Ministers, Minister of Economy and Finance, Minister of Agriculture, Forestry and Fisheries, Minister of Commerce, Minister of Interior, Ministers, Secretaries of State of the relevant Ministries and Institutions shall be responsible to implement this Sub-decree from the date of signing.

Phnom Penh, the 24th of February, 2011

Prime Minister

Samdech Akka Moha Sena Padei Techo Hun Sen

Receiving Places:

- *Ministry of the Royal Palace*
- *General Secretariat of the Constitutional Council*
- *General Secretariat of the Senate*
- *General Secretariat of the National Assembly*
- *General Secretariat of the Royal Government*
- *Cabinet of Samdech Prime Minister*
- *Cabinets of Deputy Prime Ministers*
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