

CHAPTER II

LITERATURE REVIEW

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

2.1. Organic Farming in Cambodia

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

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

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

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

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

2.2. Contract Farming Systems

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

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

2.2.1. Contract Farming Models

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

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

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

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



2.2.2. The Costs and Benefits of Contract Farming

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

- *Costs of contract farming to the farmer*

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

- **An unbalanced partnership**

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

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

- **Agricultural transition**

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

- **Farmer's empowerment and independence**

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

- **Risk to indebtedness**

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

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

- **Social and cultural issues**

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

- *Costs of contract farming to the company*

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

- *Benefits for the contract farmer*

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

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

- *Benefits for the contract farming company*

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

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

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

Source: Adopted from Eaton and Shepherd, 2001

2.2.3. Reason Why Farmers Participate in Contract Farming

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

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

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

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

2.3. Rural Livelihoods in Cambodia

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

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

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

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

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

2.4. Land and Forest Tenure in Cambodia

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

2.4.1. Land Tenure Security in Cambodia

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

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

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

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

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

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

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

2.4.2. Forest Tenure Security in Cambodia

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

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

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

traditionally open access areas⁸ (Ministry of Land Management, Urban Planning and Construction [MLMUPC], 2001). As common property resources, forests provide rural households a means for diversifying their subsistence and income-generating activities, optimizing their labor resources during different seasons, and "insuring" against the risks of agricultural failures. Moreover, people with no land, little money for capital investments, and few alternative livelihood opportunities can still often collect forest products for subsistence.

The land use and ownership status of common property resources are poorly defined legally because there is no clear delineation between State property and public assets (MoE, 2004). Moreover, the State property ownership status of CPRs is not in line with their historical user-dependency by people within villages that are organized at the commune level. For instance, current forest law and forest management practice by the State does not recognize customary tenure⁹ and private ownership of 'forest' (Mekong River Commission [MRC], 2010). As a result, the absence of title registered land within CPR areas makes the tenure status of CPRs very fluid (MoE, 2004). Such land can become concentrated in the hands of people or groups that can afford informal payment or have a capital to seize the forest land. Even when communities did try to expand their farmlands by clearing new forests, their attempts would often be thwarted by businessmen from outside colluding with local and provincial authorities who clear the forest instead (Guttal, 2006).

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

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

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

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

2.5. Summary

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

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