

## Small-holder Coffee Grower and Livelihoods in Timor-Leste : Current Status, Issues and Challenges<sup>1</sup>

### 1. Purpose

This article is based on a field study in May/June 2013 on small-holder coffee farmers in Timor-Leste. The article analyses the role of coffee production in the socio-economic life of the small holder and the potential this crop may offer in the up-liftmen of livelihoods of producers in the country. Some challenges in the transformation of livelihoods of Timorese coffee growers are also described.

### 2. The Small-holder Coffee Gardens

Introduced by the Portuguese, Timor-Leste has vast areas in the hill country under coffee, managed by small holders. Coffee is grown in districts such as Aileu, Ainaro, Er Meira and Bobonaro at an altitude of over 800 meters. A substantial area of available farm land in above districts is already under coffee. In the meantime, new land from scrub to coffee is being converted at a fairly high rate. Coffee is perhaps one of the few crops that is ideally suited both from an environmental and socio-economic perspective in higher altitudes of the country. The latter has a significant importance as cultivation of this crop has already helped the farmer to meet ends needs in a variety of ways.



Coffee Landscape



Coffee Growing under Shade

Coffee is planted mainly under shade trees. As such a well-grown coffee plantation nearly simulates the “forest” condition which is ideal land use for higher elevations intersected by steep terrain with substantial rainfall. The coffee-based farming system provides an effective buffer against soil loss and subsequent erosion and the preservation of soil moisture. The National Director for Industrial Crops and Agribusiness based in Dili in an interview with the author said that there is no Timor-specific data on the impact of coffee on soil erosion control, moisture conservation and contribution to stream-flow in higher altitudes. It is necessary to collect relevant information as it may help convince the government and the donor of the value of coffee in conservation of the environment in steep and hilly areas of the country whilst in the meantime helping the rural economy to flourish.

The June study reveals that nearly one-hundred per cent of farmers in higher altitudes own at least one coffee plot. Their coffee plots are scattered over the land scape. As such a single farmer has access to 3-4 coffee plots in different areas. It is found in the backyard and is also planted in larger scale elsewhere within or nearby other villages and in river banks. The average size of a coffee plot held by a grower is just over 1 ha. The study reveals that farmers’ perceive coffee as a perfect crop for their own benefits. If they find an additional

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piece of land, the first crop they think of planting is coffee, followed by other crops including food crops. Farmers have their own rationale for giving the highest priority to coffee, as discussed later in this paper.

For the above reasons, any enhancement of livelihoods of the small farmer in the hilly areas of the country will have to be centred around coffee industry. As analysed in the paper, the emphasis has to be not only on production but also on processing, marketing and value-chain development. This is important as 60-70 per cent of the cultivable land under the ownership of the small grower is already under coffee.

### 3. Coffee and Livelihoods of Small Farmer



Coffee, its production and culture are closely integrated with the lifestyle of small holder in several ways. First, coffee crop allows the entire family to engage in work such as tending plants, harvesting, transport and processing (Table 1). Very little husbandry work is carried out after the formation of coffee bush. In-depth studies reveal that except for small children, everyone in the family is actively involved in one or several activities of coffee culture such as harvesting of berries, its transport to home, processing and drying. The children especially girls are very active in harvesting berries and sun-drying either fresh berries or

parchment beans. Activities around coffee mesh nicely with household labour profile. The coffee production has helped gainfully employ all members in the household that otherwise have no alternative engagement in a profitable manner where labour opportunities are virtually absent. The introduction of small-scale machines for grinding of berries is a fun-activity for village youth.

Table 1 : Labour Use in Small-holder Coffee Industry

Activity	Who Involves	
	Dominant Role	Assistance
Jungle clearing for coffee planting	Male	Women
Land preparation	Male	Women and youth
Raising seedlings	Female	Men
Field planting	Women / men	Youth
Plantation care	Women	
Harvesting	Women	Men, girls and boys
Transport berries	Men	Boys, women
Making parchment coffee	Youth (male/female)	Men
Sun-drying	Elderly men/women	Girls/boys. Sometimes, people with disability
Marketing	Men	Women

Second, coffee contributes to household cash generation in 2 main ways. First, the sale of coffee either as fresh berries or as parchment beans is perhaps the only cash income source for the household. In fact, coffee sale provides a steady cash income for everyone who has

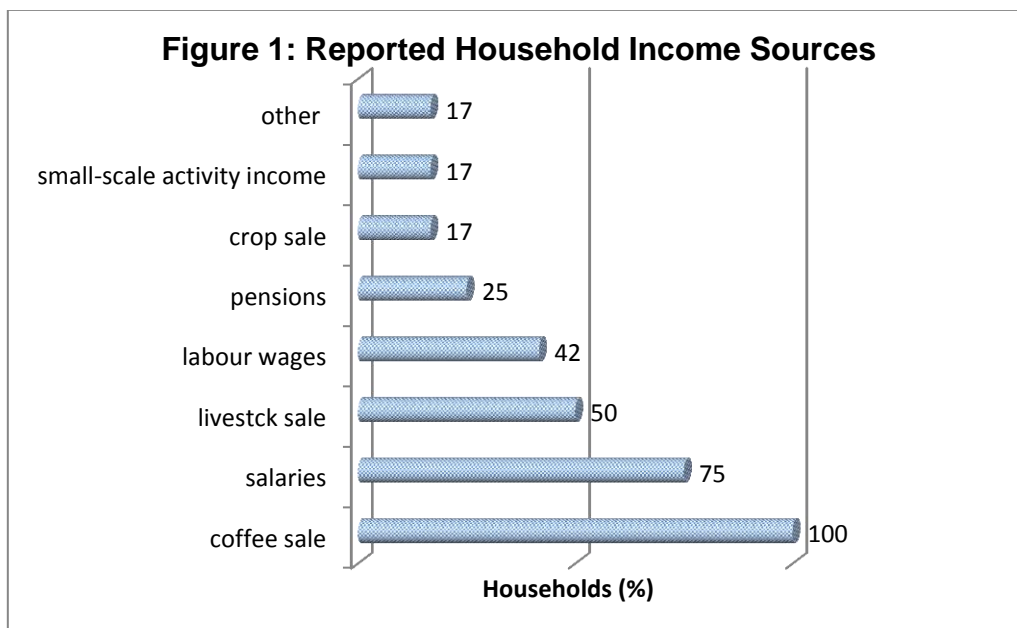
some mature bushes. Figure 1 shows that all households in the study have reported income from coffee sale. Average coffee income per household as estimated in the study is \$ 497. This represents 14 per cent of total household income (Table 2). The majority (92 per cent) in the sample has reported coffee income. However, the low and fluctuating price received for their coffee is a significant concern shared by all households.



Children in Coffee Plucking

Woman Walking to Pluck Coffee

Second, household labour engagement in coffee harvesting provides income by way of wages. The study conducted in June 2013 in Er Meira district has revealed that 16 out of 100 households work outside of their family coffee land (providing hired labour) mainly to generate an additional income. The wage rate for harvesting is \$ 4 per day. The coffee wages represent 2 per cent of household income.



Harvesting is the main form of family labour utilization during the months of May to August. In fact, most family members can only be contacted in the evening after return home from their land during the coffee harvesting months.

In-depth studies reveal that coffee income helps families in three main ways. First, it helps overcome their day-to-day financial requirements. Purchase food and other essential items such as soap, oil, sugar for home consumption, stationery and school items for children, repayment of debts, house renovation and even to build a house, sickness, travel and

emergency-cash source. Second, coffee income is the main cash source to support social activities such as church work, festivals and funerals. Finally, coffee income is also invested to purchase income-generating assets such as pigs and other farm animals.



Youth Grinding Coffee Berries



Fresh Berry Grinder



Sun-drying Parchment Beans

Table 2 : Household Income Sources in 2013

Income Source	Contribution to HH Income (Per cent)	Annual Mean (\$ per HH)
Salaries, wages & allowances	64	2,316
Livestock sale	15	557
Coffee (sale & wage income)	14	497
Small businesses	5	180
Crop sale	*	15
Wages	1	35
Remittances	*	8
Fish sale	*	6

\*Denotes insignificant contribution

Third, coffee helps to sustain small-scale business activities in remote areas of the country. Preparation of parchment bean provides gainful engagement for youth, both males and females. Sun-drying of coffee engages elderly and sometime even disabled persons who are not able to move out easily from the family base. Buying fresh berries and conversion of it to parchment beans is practised both by village traders and entrepreneurs. This is a significant small-scale activity in the villages. About 40 per cent of households (including village small-scale business owners) are engaged in purchasing fresh berries, conversion into parchment beans and selling to traders who visit villages.

#### 4. The Small-Farmer Challenges and Opportunities

Poor households do not have the capacity to purchase a grinding machine to crush berries and convert into parchment beans. Hence, they have no option other than to sell berries which of course give them only a meagre income. This system of marketing does not provide the grower with the opportunity to sell in smaller quantities to generate cash to pay for household expenses as required.

The Monash University study<sup>2</sup> has reported that farmers who sold berries received only 38 per cent of the price. If they convert fresh berries into parchment beans, their income per kg is \$ 2 which is slightly (40 cents per kg) more than the price they receive for fresh berries. Although the net gain from the conversion is not large, the process is important in that if

<sup>2</sup> Contribution of Coffee to Timor-Leste Households (2009), Pilot Study Findings. Department of Econometrics, Monash University, Australia

traders do not come to purchase fresh berries within 12 hours after harvest, fermentation sets in that spoil the beans. The conversion of berries into parchment beans is therefore a useful strategy to store coffee as beans. The farmer is able to sell beans to traders in small quantities or to take the product out to the market by producers themselves whenever they have a need for cash. More often than not, traders are not able to visit remote areas where road network is poor and rains may have washed down access roads. If not due to the process of converting fresh berries to parchment beans, the berries can get rotten and not able to be sold at all.

Coffee marketing is one of the main problems faced by the small holder. The main market sources are the CCT company and other traders who visit coffee growing areas to purchase and transport produce to urban areas to be sold to bigger traders. The third source is village-based traders who purchase mainly a smaller quantity of coffee.

Price of berries fluctuates vastly; in 2012, the price farmers received per kilogram of berries was Dollar cents 40 while it has come down to cents 30 per kg in 2013. Almost all coffee growers in the survey said that the company (CCT) and traders manipulate the price for their own advantage, leaving only a meagre income to the grower. The price growers received for their beans was \$1.25 per kg in 2012 as well as in 2013.

CCT on the other hand, is Fair Trading and Organic Certified which should offer a better price to the grower. As reported in the Monash University study, this is not the case in Timor-Leste that questions the applicability of Fair Trade principle to the small coffee farmer in Timor-Leste.

It is to be highlighted that coffee growers in Timor-Leste do not apply any agro-chemical either in plantation management or in coffee processing at present. This is an important standard that should be maintained by the industry in future. Cost of chemicals that reduces profit margin is only one-side of the story. The farmers who would not be able to market coffee as organic after beginning to use chemicals is a significant issue that should receive the highest attention of everyone involved in this industry. In this regard it is to be noted that coffee farmers in South America and in several countries in Africa are plagued with a huge problem of dealing with chemicals application that has already reduced their profits. The continued use of pesticides has caused farmers to look for new and yet powerful chemicals (this costs more to the farmer) as pests develop resistance to existing chemicals. The farmers in many South American and African countries are no longer able to market their product as organic coffee. The coffee farmers in Timor-Leste therefore are in a preferred position, which should be endured. There is likely to be a very strong demand for organic products and the Timorese farmers should aim to sell their coffee at a premium price in the future market.

The Timorese farmer is on a winning wicket as there is an effective indigenous mechanism they can resort to in resolving their farming problems. The local mechanism called *Kableyan* comprises of a villager appointed by the committee to enforce implementation of a code of conduct suitable to rural areas. The *Kableyan* has the responsibility to help people to adopt practices that are useful to the rural community as well as to discourage the use of adverse practices and materials by local people. This institution is helpful in advising farmers on the use of beneficial farming practices including soil and moisture conservation. The same institution has the power to discourage any random farmer using agro-chemicals on their land which is significantly useful to preserve the organic nature of Timorese coffee.

Apart from coffee marketing, there are few issues that need attention to help coffee farmer in Timor-Leste.

First, the component that is virtually missing out from Timor coffee growers is the lack of group activities. By purchasing machinery to convert berries into parchment beans, small holder groups can enhance their income. Group activity can also offer them assistance in marketing such as bulk sale to one source. A fund that can be established within the group can be used to provide ready cash to small grower who needs cash for their berries on a daily basis. It can also help by way of extension and introduction of better varieties and cultural activities by providing persuasion and education to the small grower.

Steep lands in the study area are planted with annual crops such as cassava that increases the risk of soil erosion and moisture loss from the land. The ideal use of hilly and steep land is for coffee planting that stimulates the “forest type” environment, leading to soil and moisture conservation where the coffee income can be considered a bonus. A strong group is an effective mechanism to train, convince, persuade and provide other support to small farmer to convert land use on steep areas from annual crops to coffee. Finally, group activity is also very important in value-chain development which is a must to ensure a higher price to the grower. It is to be highlighted that there is no value-chain development in the districts of Timor-Leste after the conversion of berries into beans.



This Land Shouldn't be under Cassava !



Manual Transport of Fresh Berries

Apart from one group facilitated by a donor, the majority small holders in the study area have no groups among them. The promotion of group activity among small holder is an important task as outlined above in order to improve livelihood of the small coffee grower.

Second, there is no value-chain development associated with the coffee industry in the study area. Whatever is produced is taken out to urban areas in the form of dry beans. Small-scale enterprises focussing on value addition to coffee before it is marketed is important that will add significant returns to labour in rural areas where opportunities to gainfully utilise labour are slim.

Third, coffee yield is comparatively low due to a combination of factors such as low-yielding tree stocks, poor agronomic practices including pruning and other practices such as plant density. Currently, the yield of fresh berries is at the level of 2-3 tons per hectare. The potential is to increase up to 4-5 tons per hectare. According to the National Director for Industrial Crops and Agribusiness, higher coffee yield can be achieved through the adoption of improved planting materials, pruning, replacement of trees after 35 years, better agronomic practices, etc. among other practices.

Fourth, although organic coffee is expected to provide a premium price to the grower, the situation in Timor-Leste is different. The study referred to earlier has revealed that the price paid to the grower by CCT company which is organic certified is the same as other traders who are not operating under the umbrella of Fair Trade.

Another issue worth addressing is to explore a profitable use for berry cover after extraction of coffee beans. Can this be used in the formulation of animal feed?

Finally, it is to be highlighted that any development project either planned or being implemented in coffee growing areas should include a component to support production, processing, value-chain development and marketing of this commodity. Where possible, project resources should be utilized to convert unused and barren land into coffee landscape, thus conserving soil and moisture which is all the more important to maintain agricultural productivity in rural areas for the benefit of the present and future generations. As discussed in this article, project resources where possible should be utilized to facilitate formation of small farmer groups that provide a chain of benefits to the rural populace. It is also to be highlighted that the *Kableyan*-centred strong indigenous mechanism stimulates the adoption of good practices, appropriate inputs and processes while discouraging adverse practices. The mechanism provides opportunities to enhance benefits to the Timorese coffee grower.