



Living Wage Report

Sri Lanka

Estate Sector

Context Provided in the Tea Sector

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By: Manoj Thibbotuwawa, Priyanka Jayawardena, Nisha Arunatilake, and Neluka Gunasekera



Photo Courtesy of Max Havelaar Fairtrade

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Living Wage Estimates

Sri Lanka

Estate Sector

Context Provided in the Tea Plantation Industry

FOREWORD

This report is concerned with the situation of workers in the tea industry of Sri Lanka and what a living wage is for the estate sector in Sri Lanka (defined as plantation areas with more than 20 acres and with at least 10 resident workers). It continues the series of Global Living Wage Coalition (GLWC) reports on living wages that focus on the situation for workers in locations with industries that export to the First World. The purpose of these studies is to: (i) document in a transparent way how much workers need to earn so that they can afford a decent standard of living for themselves and their family; and (ii) act as a catalyst for action throughout the value chain to raise wages towards a living wage.

The fact of the matter is that most of those who help to grow the food and make the other goods we in the First World consume do not earn a living wage. At the same time, most Third World exporters have a limited ability to raise wages to a living wage (which includes Sri Lanka tea estates as pointed out in this report). This, in turn, means that Sri Lanka tea estates are not able to raise wages up to a living wage. Participation of the entire value chain is required if tea workers in Sri Lanka are to receive a living wage. This includes international tea brands, First World supermarkets, and international and national buyers in addition to Sri Lanka tea estates. That it is possible to raise wages for tea workers when the entire value chain takes this goal on board in a serious way is attested to by the success of the Malawi Tea 2020: Toward a Living Wage program that has brought together all tea estates in Malawi, the large international tea brands, important First World supermarkets, major NGOs, government, and certifiers/standard setting organizations.

Important background to this living wage study for the estate sector in Sri Lanka is that living conditions in the estate sector are relatively poor for Sri Lanka. For example, the poverty rate is higher in the estate sector than in parts of Sri Lanka (10.9% compared to 7.6% for rural areas and 6.7% nationally) despite considerable progress in recent years in reducing poverty in the estate sector (with poverty headcount falling from 32% in 2006/07 to 11% in 2012/13). It is, therefore, not surprising that the present study finds that tea estate workers make less than a

living wage despite recent progress. Also, it is worth noting that the gap between current wages and a living wage is partly mitigated on some tea estates by the provision of valuable in kind benefits such as house maintenance and free health clinic. This means that a fair and reasonable value for in kind benefits provided would need to be taken into consideration on an estate by estate basis to get an accurate measure of the gap to the living wage for any particular tea estate.

Estimating a living wage for the estate sector in Sri Lanka using the methodology we developed to measure a living wage (Anker and Anker 2017) required the authors of this report to face and resolve a number of difficult issues because of the unique history of the estate sector in Sri Lanka as well as because of the unusual way that statistics in Sri Lanka are reported by government. The authors of this report should be commended for the scholarship and care with which they undertook this study.

The unique history of the tea estate sector is described in this report. One key feature of this history is the housing situation. Ownership of houses on tea estates has changed over the years, and it is not entirely clear who owns tea estate houses at present. While it is clear that tea estates no longer own the houses on their estates (although tea estates remain responsible for maintenance), it is not clear if the state or tea workers own them. One view is that government owns estate houses, as this seems to be true in a strict legal sense, and therefore that tea workers have free housing. On the other hand, there is a legitimate alternative view that tea workers own their houses in a de facto sense. After all, tea estate workers pass their houses on from generation to generation, and this is a form of ownership even if their houses cannot be freely sold to others. Indeed, at present only around 1 in 7 persons living in a tea estate house is a tea worker. Further supporting the view that tea workers are de facto owners of tea estate houses is that many tea estate workers have made significant improvements to their houses such as putting on an addition (albeit with assistance from Plantation Human Development Trust), and this is typical behavior of home owners. In light of this complex and unclear situation as regards tea estate housing, the authors of this report sensibly decided to use a very conservative estimate of the monthly value of a decent tea estate house (only LKR 4,000 or \$14 excluding utilities).

Another unusual aspect of this study is that it uses estate-specific data to determine the cost of non-food and non-housing needs of families, typical family size, and typical number of workers per family. In contrast, living wage studies for other countries always determine these variables using data for rural areas, or urban areas, or a specific region, province, state or city, so that the living wage estimated is the same for all families in an area and is not industry-specific. The reason why the approach used in this report was even possible is because Sri Lanka is highly

unusual in that the National Statistical Office of Sri Lanka reports data separately for rural areas, urban areas, and estate sector (which includes 4.4% of Sri Lanka's population). Use of estate-specific data meant that the authors of this report could more easily describe the situation faced by tea estate workers with regard to living conditions, living costs, typical family size, and typical number of workers per family. However, this meant that their living wage is industry-specific and not comparable to the situation in the rest of Sri Lanka since the estate sector in Sri Lanka is unusual. As a result, it is likely that reliance on estate sector data means that the living wage estimated in this report is likely to be much lower than a living wage for rural or urban areas of Sri Lanka as well as likely to be significantly lower than is typical for a country at Sri Lanka's upper middle-income level of development.

It is our hope that this report, which does an excellent job of describing and analyzing the complexity of tea estates and the lives of tea estate workers in Sri Lanka, leads to higher wages for tea estate workers while simultaneously ensuring a vibrant and forward-looking tea industry.

Note that since the date of this study, there have been two subsequent CBAs. Therefore, we are also publishing a companion update report that updates the living wage in this study to January 2019, describes the current CBA, and sheds some light on current prevailing wages on tea estates.

Richard Anker and Martha Anker
May 2019

Living Wage Estimates

Sri Lanka

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Context Provided in the Tea Plantation Industry

SECTION I. INTRODUCTION

The importance of living wage has been recognized for centuries. The emphasis on the topic has a rich historical past and continued relevance as it was more recently encapsulated in the UN Sustainable Development Goals (UN, 2016). Despite a long history of interest in the topic, action toward implementation has rarely proven concrete. The definition and measurement of living wage have been hotly debated, and a lack of consensus on these topics contributes to why it has remained such a powerful issue for such an extensive period of time, with little progress to point to as an example of moving payment toward a living wage globally.

However, at the moment, there is a resurgence of interest in living wage. The Global Living Wage Coalition¹ (GLWC) emerged in 2013 to make the rhetoric of understanding and moving toward living wage globally, a reality. The GLWC brings together seven sustainability standards systems, in partnership with the ISEAL Alliance and Richard Anker and Martha Anker. The GLWC pulled together these members and partners under the shared mission to see continuous improvements in workers' wages, in the farms, factories and supply chains participating in their respective certification systems and beyond, and with the long-term goal for workers to be paid a living wage. Each living wage benchmark commissioned by the GLWC is made public to further this aim and to increase the opportunity for collaboration toward payment of a Living Wage.

1. BACKGROUND

This report estimates a living wage for the workers in the estate sector (tea plantation industry) in Sri Lanka in December 2015. The study uses the Anker methodology to estimate the living wage (Anker, 2005; Anker & Anker, 2017). This methodology has been widely used in developing countries to estimate living wages internationally. This methodology has been used to estimate living wages in urban, rural, and non-metropolitan urban settings for the GLWC with 23 living wage estimates published or scheduled for publishing in the next two months,

¹GLWC Members: [Fairtrade International](#), [Goodweave International](#), [Rainforest Alliance \(RA\)](#), [Social Accountability International \(SAI\)](#), [Sustainable Agriculture Network \(SAN\)](#), and [UTZ](#)

spanning geographies in 13 countries. This work is an expansion of earlier work by the Ankers in urban areas for a multi-national corporation spanning ten countries.

The Anker methodology is a normative means of measuring a living wage (Anker, 2005). The methodology estimates the “cost of a basic, but decent, quality lifestyle that is acceptable for the society and times” (Anker, 2011). According to Anker & Anker (2017), this includes the costs of a low cost nutritious diet, basic housing of acceptable quality, adequate clothing and footwear, health and education for the family, cost of other expenses such as transportation, cultural activities, communications, personal care and other unforeseen contingencies. This estimated household cost is then divided by the typical number of wage earners per family, to arrive at the living wage per worker.

The main principles of a living wage include the following:

- transparent
- normatively based
- time and place specific
- internationally comparable
- cost to estimate a living wage is practical and modest
- all relevant forms of remuneration are considered when comparing the prevailing wage to a living wage

The study was carried out by a team of researchers from the Institute of Policy Studies of Sri Lanka. The Ethical Tea Partnership and the Planter’s Association of Sri Lanka facilitated the study, by providing information and allowing access to estates to collect information. Funding for the study was provided through Fairtrade International, with additional support provided by the Ministry of Foreign Affairs of the Netherlands.

2. LIVING WAGE ESTIMATE

Our estimate of net living wage for the estate sector for December 2015 is LKR 19,126 (\$133)² per month and therefore LKR 765 (\$5.33) per workday for workers with 25 workdays per month.³ This is before consideration of mandatory deduction from pay such as workers contribution to Employee Provident Fund (EPF), Kovil Fund for religious activities and union fund. After adding these deductions, the gross living wage value amounts to LKR 21,115 (\$147) per month, which is equivalent to LKR 845 (\$5.89) per work day.

² 1USD = 143.45LKR based on December 2015 average (CBSL, 2015)

³ Calculation of living wage per workday is based on estimate of living cost per month and assumed 25 workdays per month which is the minimum work days offered by the plantation companies (i.e. living wage per workday = living wage per month divided by 25). It is a mandatory requirement for the plantation companies to provide a minimum of 300 work days annually for the workers (Rajadurai, 2015).

The basic wage that the workers on tea estates in Sri Lanka currently (December 2015) receive (LKR 450/work day⁴) does not cover the above gross living wage. There are also other mandatory cash allowances provided to the pluckers and the sundry workers⁵ by the plantation companies. These mandatory allowances include attendance incentive (RS. 140/day), price share supplement (LKR 30/day), and attendance bonus (LKR 850 per annum). Moreover, pluckers receive an 'over kilo payment'⁶ and the sundry workers receive 'special extra rates' (see Appendix Table 1). Workers are entitled to certain in-kind benefits such as housing, childcare and health at no cost.

Since our study has an industry focus, we also estimate prevailing wages in the tea industry that account for in-kind benefits and cash allowances as those benefits reduce the need for cash basic wage of workers. We estimated that the monthly value of common in-kind benefits is LKR 949 (\$7) and the monthly value of mandatory allowances is LKR 4,773.⁷ Given the value of common in-kind benefits and cash allowances the base pay required for our living wage is LKR 13,404 per month (\$93) and the gross base pay required is LKR 15,394 (\$107) for tea pluckers after the adjustment for in-kind benefits and other cash allowances. The value of the basic gross living wage which is equivalent to LKR 616 (\$4.29) per work day creates a wage gap of LKR 166 compared with the basic wage (LKR 450/ work day) that the workers receive from the plantation company. We exclude sundry workers in our analysis, as there are more than 10 different types of sundry workers who work primarily part time and account for less than 25 % of the workforce. However, it is important to point out two facts: (1) the living standard we used to estimate our living wage is very basic and represents minimum levels of decency for the estate sector and (2) some of the in-kind benefits provided by the companies such as child care and health care were excluded from the analysis as these were not mandatory and not included in family expenses calculation.

This report provides detailed explanations on how we arrived at our estimate of the living wage. The basic idea is to ensure all the stakeholders such as worker unions, plantation companies, government bodies and NGOs could understand the basis for the living wage estimate and thereby, to maintain the transparency of the estimation process. We further expect transparency will ensure the accuracy of the estimation and wider acceptance of the estimates. Stakeholders should feel that the living wage estimate is solid and representative of

⁴ Tea estate workers are not entitled for paid public holidays. But, they can earn higher rates (one and half times the basic wage + PSS) if they work on public holidays and Sundays. Also they are entitled to 17 days paid leave per annum.

⁵ Plucking Kangani/supervisor, Sack Worker, Factory Worker, Indoor Worker, Outdoor Worker, Housing Worker, Sundry Kangani/supervisor, Pruning Worker and Spraying Worker

⁶ Gross over kilo payment is LKR 23.40. Net over kilo payment will be LKR 18.40 after deducting for company's EPF (14%) and ETF (3%) contributions and workers EPF contribution of 8%.

⁷ We include housing as a common in-kind benefit and PSS (LKR 30/day), AI (LKR 140/day), over kilo payment (LKR 18.40/kg) and attendance bonus (LKR 850/annum) as mandatory allowances in our calculation. We adjusted the AI by the fraction 10/12 and over kilo payment by $\frac{3}{4}$ to account for the rainy seasons and any other restriction that might arise. 18 kg average tea plucking in Sri Lanka often drops to 14kg to 12kg during the dry season and in wet weather. We have used average 3kg over kilos per day even though good pluckers pluck 6-8 over kilos on average (Rajadurai, 2015).

the cost of a basic but decent life of estate sector workers regardless of whether they are better off with the current payments or not. This will also encourage dialogue between stakeholders in order to make the industry more productive for the economy, profitable for the plantation companies and beneficial for the workers.

Considerable thought and effort were put into estimating our living wage for the estate sector in recognition of the importance of wages to workers and plantation companies. This effort included visits to various representative tea estates; visits to different types of houses in tea estates; visits to markets and shops where workers in estate sector shop for food and discussions with key informants in the area. We also used statistics, papers and reports from various researchers, NGOs, government and international organizations. We benefited from the recent household surveys conducted by the Department of Census and Statistics of Sri Lanka (e.g. HIES, 2012/13; LFS, 2006; etc.). It is worth mentioning the full cooperation that we received from the Ethical Tea Partnership Sri Lanka and Planters Association of Sri Lanka especially to gain access to field level information from workers and other stakeholders.

3. CONTEXT

3.1 Development of Tea Plantations in the Country

Traditionally, tea has been a major export commodity in Sri Lanka. Although the importance of tea has reduced over the years, it still contributes significantly to the economy. In 2014, 0.9% of the Gross Domestic Product (GDP) of the country and 14.6% of the value of total exports was from tea (CBSL, 2015). Tea is mainly grown in large tea estates situated in the mountainous terrain in the middle of Sri Lanka.

Tea plantations in the country are largely situated in the estate sector of the country. The estate sector came into being under the British colonial rulers, who established self-contained plantations to grow export crops such as tea, rubber and coconuts. The Department of Census and Statistics defines the estate sector to be plantation areas with more than 20 acres and with at least 10 resident workers. About 4.4% of the Sri Lankan population, of 20 million, lives in the estate sector (DCS, 2012). The majority of the estate population, even today, are descendants of families brought from South India to work in the plantations in the middle of the 19th to the early 20th century.

Given this uncommon beginning of the estate sector population, residents of the estate sector are different from the villagers who live around the estates in several ways. Given their South Indian origins, most of those in the estate sector speak Tamil and are Hindu. In contrast those in the surrounding villages are mainly Sinhala Buddhists. Partly for this reason, the estate sector population did not benefit as much from the developments in education as the rest of the country. As explained in (UNDP, 2012) as a result the health and education indicators of the estate sector population lagged behind those of their rural counterparts (Table 1). In 1970s the

estates were nationalized and their management was taken over by the government. In 1978 the Social Development Divisions (SDD) was established to manage the welfare facilities of estate populations. With these developments, attempts were taken to upgrade the health and education facilities in the estates.

Table 1: Health and education indicators in different sectors

Indicators		Urban	Rural	Estate	Sri Lanka
Health	Stunted (%)	13.8	16.2	40.2	17.3
	Underweight (%)	16.5	21.2	30.1	21.1
	Low birth weight children (less than 2.5 kg) (%)	12.8	16.4	31.0	16.6
	Child mortality rate (per 1000)	19	23	33	21
Education	Primary school enrolment rate (%)	95.9	95.3	93.1	95.3
	Junior secondary school enrolment rate (%)	92.3	93.3	83.5	92.6
	Upper secondary school enrolment rate (%)	86.2	81.4	53.8	80.6
	Collegiate school enrolment rate (%)	45.8	39.7	12.8	39.4
	Adult literacy rate (%)	94.6	91.8	74.3	91.4

Sources: UNDP, 2012; DCS, (2006/07).

In 1992, plantations were re-privatized and divided into 23 Regional Plantation Companies (RPC). The management of the welfare activities of the plantations was handed over to the Plantation Housing and Social Welfare Trust (PHSWT), which was established as a private company. The operational expenditures of the PHSWT were covered by a levy imposed on the RPCs and donations from outside. Unlike the SDD, the PHSWT did not have the authority to directly operate in plantations; instead they had to work with the RPCs to operationalize their plans. PHSWT was renamed as Plantation Human Development Trust (PHDT) in 2002. The main function of the PHDT was to coordinate the welfare activities of the plantations and to monitor progress. Although with this effort, the health and education indicators of those in the estate sector have improved, they remain worse than those in other sectors. Given their isolated location, providing services for the estate sector is a challenge. Although many plantations now have primary hospitals and schools, at least for the primary grades, staff absenteeism in these establishments is high.

3.2 Recent Improvements in Estate Household Welfare

In the initial periods, housing, sanitation, education and health of estate sector workers and their families were the responsibility of the plantation companies, and these worker communities had little integration into the rest of the country. These worker families were housed in what are called 'line rooms'.⁸ As the name suggests, line rooms are basically a line of rooms. Each line room either got ventilation from the front (double barrack lines – where

⁸ 55% of estate people are still living in line rooms based on the HIES 2012/13 data.

rooms were situated side to side as well as back to back) or from the front and back (single barrack lines – where rooms were situated side to side). Each line room had a little kitchenette, a small living area and one large bedroom, which was shared by the whole family. Line rooms are generally small. Based on the HIES 2012/13 data, 47% and 82% of the line rooms have a floor area of less than 250 square feet and 500 square feet respectively. In the initial period, families had a shared source of water sanitation facilities. But, with support from first the SDD and the PHSWT and then PHDT, families were allowed to make additions to their 'rooms', given access to running water, and given land to build their own sanitation facilities. In some estates workers were given loans and building materials to purchase small pieces of land to build houses. Currently, 60% of line room households have drinking water within their premises. 67% of toilets are exclusive for the households (either within or outside premises) and 24% of households have toilets within their premises (DCS, 2012/13).

The poverty in the estate sector has been high, relative to the rest of the country. But the difference between the income poverty headcount has reduced over the years. For example, the income poverty headcount in the estate sector was 32% in 2006-2007 compared to the income poverty headcount of 15.7% in the rural sector in the same year. By 2009-2010, this rate dropped to 11.4% in the estate sector compared to 9.4% in the rural sector. The income poverty headcount rate was 10.9% in the estate sector in the 2012-2013 period, which is still high compared to the national poverty rate (of 6.7%) and the rural sector poverty rate (of 7.6%) (DCS, 2012/13).

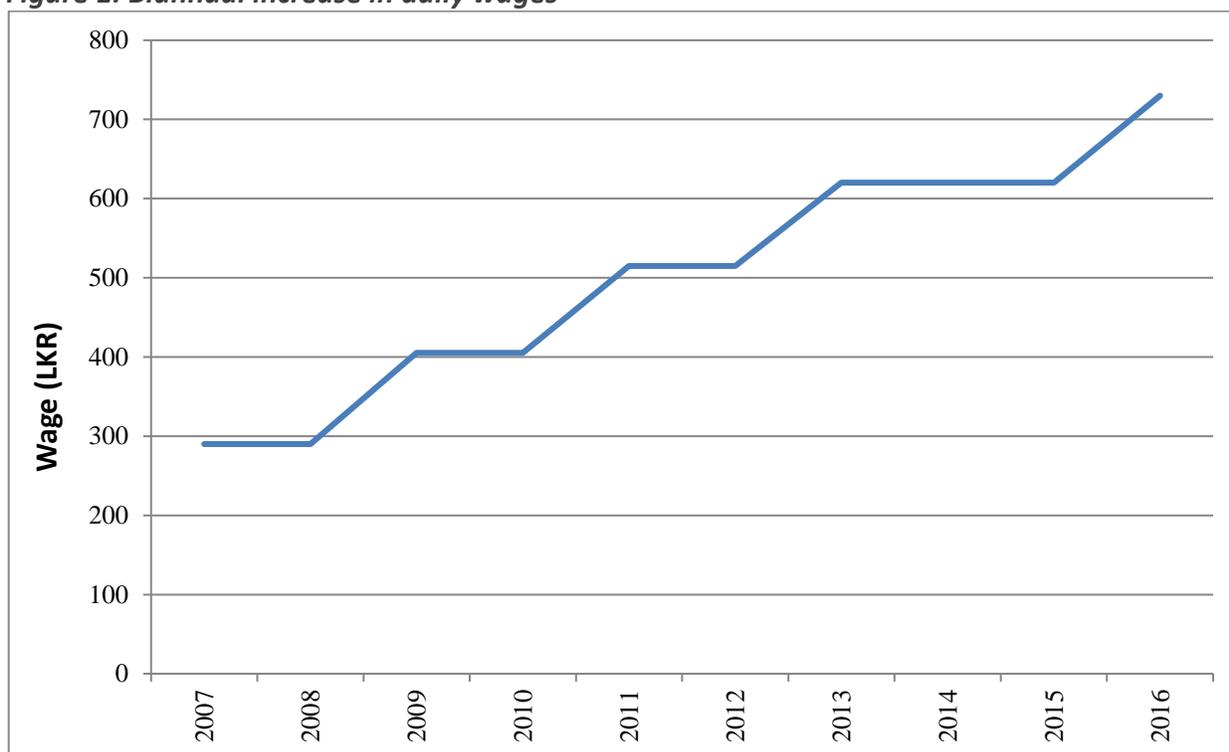
The reduction in poverty is also reflected in improved education and health outcomes. Secondary school completion, measured by the share of 17 and 18 year olds who graduated from senior secondary school, saw a significant increase. Health indicators also improved in recent years. The rate of infant mortality fell from 13 to 8 children per thousand births, and the rate of under-nutrition decreased from 30% to 25% (Newhouse, Suarez Becerra, & Doan, 2016). Multidimensional welfare index reported by UNDP (2012) indicates a decline in multidimensional poverty from 21.1% to 11.4% between 2006 and 2009. Durable asset ownership in the estate sector also increased considerably, particularly in landline and mobile telephones, refrigerators, and televisions, signaling better living conditions. Traditional houses in the estate sector have been upgraded from time to time through different housing upgrading programs.⁹ Based on the HIES 2012/13 data, the proportion of single houses in the estate housing stock increased almost threefold, from 10% in 1996/97 to 29% in 2012/13. These improvements were ably supported by the various projects and programs of PHDT, plantation companies, and local and international non-governmental organizations (NGOs).

⁹ House upgrading has mainly occurred as reroofing and improvement in kitchens, such as establishing more efficient stoves with chimneys for better ventilation.

3.3 Wage Setting in the Plantation Sector

The wages for the tea plantation sector are determined through a collective bargaining process, which takes place once every two years. This process is applicable only for the workers in the RPC controlled estates that include about 93% of the total workforce in the plantation sector.¹⁰ As explained in (Krishnaswamy & P., 2013; Glickman, 1997) bargaining takes place between the Employer’s Federation of Ceylon (EFC) (of which the 22 private tea plantation companies are members) and the three main labour unions (for example, the last collective agreement was signed by the Ceylon Workers' Congress (CWC), the Lanka Jathika Estate Workers' Union (LJEWU) and the Joint Plantation Trade Union Centre (JPTUC)). There were biennial wage increments parallel to the collective agreements until the last collective agreement was signed in April 2013 between the EFC and three labour unions (Figure 1). The negotiations pertaining to the renewal of the collective agreement commenced in 2015. However, the negotiations became deadlocked for some time.

Figure 1: Biannual increase in daily wages



Note: Daily wage includes basic wage, PSS and AI. This figure overstates wage improvements in terms of purchasing power as over the 2007-2014 period there was around 65% inflation.
Source: (Rajadurai, 2015).

Under the April 2013 agreement, workers received a wage of LKR620 per day. This consists of a fixed daily basic wage (LKR 450) and the following incentives: a price share supplement (LKR

¹⁰ In 2012, worker populations in RPC estates were 180,168 compared to 13,244 in state owned JEDB and SLSPC estates.

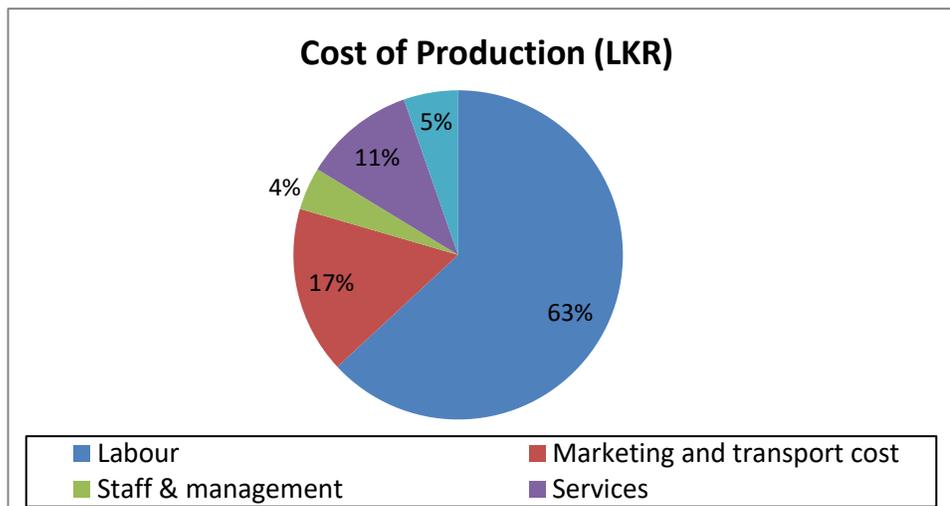
30/day), and an attendance allowance (LKR 140/day).¹¹ The workers also receive yearly bonuses, and some in-kind benefits such as child care facilities on the estate, tea, and transport facilities to hospitals in an emergency.

3.4 Issues in the Plantation Sector

Despite the recent improvements in welfare and wages in the plantation sector, the sector is suffering from several problems that affect the future viability of the industry. These include low productivity and international competitiveness. There have been several reasons behind productivity problems of RPCs such as, adverse weather conditions and, low land and labour productivity. One reason for the low land productivity is the low investments on replanting maintained by the RPCs. According to Dishanka and Ikemeto (2013), low labour productivity, high labour cost, and probable low labour participation in tea estate sector in the future due to out-migration has been contributing towards the low investments (Dishanka & Ikemoto, 2013).

Based on 2014/15 Cost of Production (COP) data by the Department of Census Statistics of Sri Lanka, the COP on average is LKR 458 per kilo of tea. Currently, the labour cost (wages and benefits) is 63% of the cost of production (COP) of a kilo of tea, marketing and transport cost is 17%, staff and management (supervisory staff, monthly paid salaries, allowances etc., and directors, visiting charges) is 4%, services (up-keep of bungalows, roads, interest, bank charges and commission, insurance, depreciation of fixed assets, stationery, auditors' fees, rent, acreage fees, and local taxes) is 11% and miscellaneous makes up 5% of the total cost of production (Figure 2).

Figure 2: Cost of production



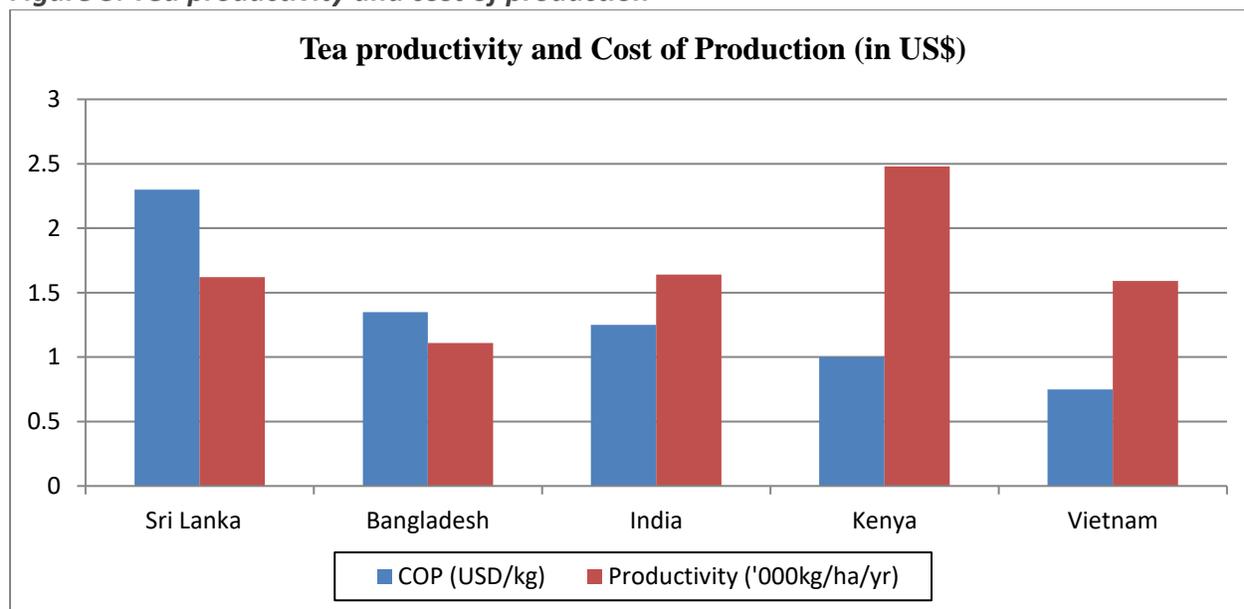
Source: http://www.statistics.gov.lk/agriculture/COP/COP_Tea.html.

Note: COP does not include the cost of land or long-term investment in tea bushes.

¹¹ In addition, in accordance with the labour laws in the country, companies provide social security worth \LKR 81 per day for each worker (Employers Provident Fund – 12% of the wage; Employers Trust Fund – 3% of the basic wage and gratuity payments).

International comparison indicates that the cost of production is highest in Sri Lanka relative to other competing tea producers such as India, Kenya, Bangladesh and Vietnam. COP value of 2.3 USD/kg in Sri Lanka is about three times higher than that of Vietnam (0.75 USD/kg). Moreover, the average productivity of 1620 kg/ha/year in Sri Lanka is lower than that of Kenya (2480 kg/ha/year) and India (1640 kg/ha/year) respectively in 2012 (Figure 3).

Figure 3: Tea productivity and cost of production



Source: Tea Research Institute (2012).¹²

Sri Lanka still fetches a premium price for its tea and the auction price of Sri Lankan tea has continuously been higher than other countries (Table 2). However, it is noted that the price gaps between Sri Lankan tea and the tea from other countries may be deteriorating based on two years of recent data in 2014 and 2015. According to the statistics, Colombo auction price of Sri Lankan tea has declined substantially by 16% from 3.56 US\$/kg in 2014 to 2.99 US\$/kg in 2015. Meanwhile, the auction price in Mombasa (Kenya) has increased by 34% from 2.03 US\$/kg to 2.73 US\$/kg from 2014 to 2015. Auction price in Bangladesh has increased by 10% during the same period. Increasing COP and declining auction price (cost price squeeze) for Sri Lankan tea in recent times¹³ indicate that it is necessary to consider international competitiveness and viability of Sri Lankan Tea exports when considering overall improvements of the tea industry in Sri Lanka, inclusive of living wage improvements.

¹² http://www.tri.lk/userfiles/file/225_E&E/02%2025%20E&E%2027Jul2012%20Paper%20%20Shyamalie.pdf

¹³ Colombo tea auction prices have dropped by 7% from 2012 to 2016 (<http://www.indexmundi.com/commodities/?commodity=tea&months=60¤cy=lkr>).

Table 2: Comparison of tea auction prices from 2014-2015

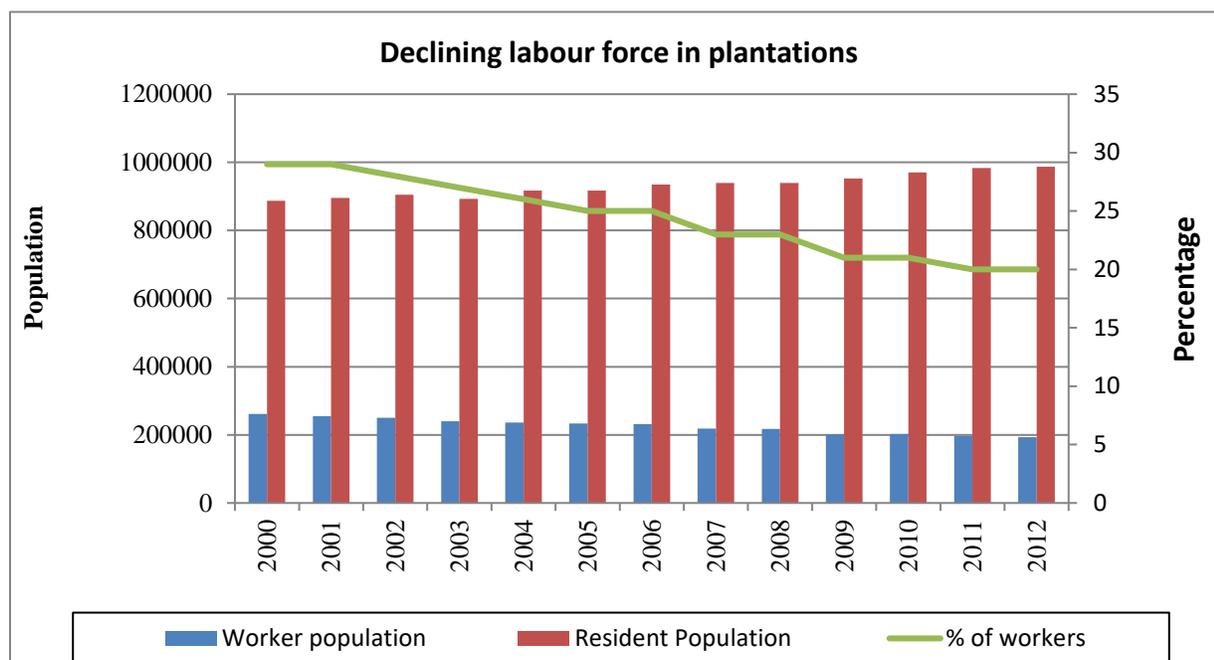
Auction Centers	Price (US\$/kg)		Change (%)
	2014	2015	
Kolkata (India)	2.64	2.47	-6.44
Cochin (India)	1.66	1.55	-6.63
Chittagong (Bangladesh)	2.19	2.41	10.05
Mombasa (Kenya)	2.03	2.73	34.48
Jakarta (Indonesia)	1.66	1.56	-6.02
Colombo (Sri Lanka)	3.56	2.99	-16.01
Malawi	1.43	1.56	9.09
World	2.56	2.59	1.17

Source: Tea market update, Sri Lanka Tea Board (2016).¹⁴

Labour shortage is another burning issue in the sector. Total worker population has declined drastically from 29% of total estate population in 2000 to 20% in 2012 (Figure 4). Out of a resident plantation population of 987,074 people, only 193,412 persons are registered workers who contribute their labour to the estate, while the others are either dependents or working elsewhere while living in the estates. While a natural increase in population takes place, there is also a decline in the workforce annually. It is evident that the drift of labour away from the plantation sector is probably irrevocable given the relatively more respectable alternative work opportunities in Colombo and elsewhere with more social recognition.

¹⁴ <http://www.pureceylontea.com/index.php/tea-market-updates/category/6-tea-market-update>

Figure 4: Declining labour force in plantations



Source: Ministry of plantation industries¹⁵

4. CONCEPT AND DEFINITION OF A LIVING WAGE

The concept of living wage has been motivated by the initial common premise that people who work for a living should not have to raise a family in poverty (Pollin, 2002). Living wage has a long and distinguished pedigree that traces back to Plato and Aristotle in ancient Greece, in the 13th century, Adam Smith in the 18th century, and Popes since 1890 (Stabile, 2008). Both the ILO Constitution (ILO, 1919)¹⁶ and the United Nations’ Universal Declaration of Human Rights (UN, 1948)) recognizes the need for workers to earn a living wage. According to the ILO Committee of Experts (1992), the ultimate objective of a minimum wage is to ensure that workers get a minimum wage that will provide a satisfactory standard of living to them and their families. In *A Living Wage: American Workers and the Making of a Consumer Society*, Glickman (1997) defines living wage as the wage level that offers workers the ability to support families, to maintain self-respect, and to have both the means and leisure to participate in the civic life of the nation.

There has been a renewed interest in living wages at the beginning of the 21st century. The comprehensive ILO review of living wage methodologies (Anker, 2011) concluded that there is

¹⁵http://www.plantationindustries.gov.lk/web/index.php?option=com_content&view=article&id=58&Itemid=234&lang=en

¹⁶ It is interesting that, whereas the ILO Constitution in 1919 refers to the need for an adequate living wage, major ILO Declarations in 1944 and 2008 refer to the need for a minimum living wage (Anker, 2011).

general agreement that a living wage: (i) is a right according to the international community; (ii) needs to be sufficient to support a basic but decent standard of living for a particular time and place that improves with economic development; (iii) needs to be sufficient to support a family; (iv) needs to be the same as take home pay so that workers have sufficient disposable income available; and (v) needs to be earned in normal working time and not require workers to work overtime (Anker, 2011). Following the above consensus, the Global Living Wage Coalition (GLWC), consisting of 7 standard setting organizations (Fairtrade International, Forest Stewardship Council, GoodWeave International, Rainforest Alliance, Social Accountability International, Sustainable Agriculture Network, and UTZ) in partnership with the ISEAL Alliance, and Richard Anker and Martha Anker, have agreed on a common definition. It defines living wage as the

“Remuneration received for a standard work week by a worker in a particular place sufficient to afford a decent standard of living for the worker and her or his family. Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and other essential needs including provision for unexpected events.”

5. HOW A LIVING WAGE IS ESTIMATED

In the methodology for measuring living wages, we followed a set of important principles that include transparency, normative basis, time and place specific, international comparability, universal relevance, practical and modest cost, and consideration of all relevant forms of remuneration (Anker, 2011). These principles not only provide a standard and credibility for the analysis, but also maintain the uniqueness of the Anker methodology from typical living wage methodologies.

- Transparency with assumptions used to estimate living wage is clearly indicated as it is important for stakeholders and others to understand how living wage benchmarks are estimated and what workers and their families would be able to afford if they earned a living wage.
- Living wage is based on normative standards for nutritious diet, healthy housing, adequate health care, and education for children.
- Living wage is time and place specific so that the living wage is seen as realistic for the location for which it is estimated. This means that living wage increases with economic development and rising incomes. This also means that separate living wage benchmarks are necessary for rural and urban areas.
- Wage used to compare current wages paid by establishments to a living wage includes all relevant forms of remuneration including fair and reasonable values for in-kind benefits and cash allowances while excluding overtime.
- Methodology is internationally comparable as living wage benchmarks are based on the same principles everywhere.

- Methodology is universal and relevant for all countries in the world (not just lower income countries).
- Methodology is practical and relatively inexpensive, as it uses a judicious mix of critical analyses of secondary data and rapid assessment methods for collection of primary data.

Figures 1-3 indicate how our living wage for estate sector in Sri Lanka was estimated. We started by estimating cost of a basic living standard that would be considered decent for estate sector reference size family in Sri Lanka. This was done by summing up separate estimates of cost for a low cost nutritious diet, basic decent housing, all other essential needs at a decent level and a small margin above this total cost to ensure the workers won't easily fall into poverty due to unforeseen events such as illnesses and deaths (Figure 5). Before accepting our preliminary estimate of cost for all non-food non-housing items, we make sure that sufficient funds are provided for at least health care and education as these are considered human rights around the world. When the cost items are expressed in per capita terms, these estimates are scaled up to arrive at cost for a typical family. Then, this cost is defrayed over number of full time equivalent workers in the family to get the net living wage (Figure 6). Finally, the pay roll deductions and taxes (if any) are added to arrive at the gross living wage required per month as in Figure 7.

Figure 5: Cost of a basic but decent life for a family



Figure 6: From cost of a basic but decent life for a family to calculation of a net living wage



Figure 7: From net living wage to gross living wage



Source: Anker & Anker (2017).

SECTION II: COST OF A BASIC BUT DECENT LIFE FOR A WORKER AND THEIR FAMILY

6. FOOD COSTS

Food costs for a living wage of Sri Lankan estate sector people was estimated using a low cost model diet for an average person in a family and local food prices from a local market survey.

6.1 General Principles of a Nutritious Low Cost Diet

The following general principals were considered to estimate the model diet, which we used to estimate the food cost for the estate sector living wage calculation.

- Nutritious

The model diet must have a sufficient number of calories as well as acceptable quantities of proteins, fats, carbohydrates, and micronutrients to ensure that estate sector workers and their families get the required amount of nutrition and food quantity to stay healthy.

World Health Organization (WHO/FAO, 2003) has indicated certain levels of different dietary factors that nutritious diets need to have (Table 3).

Table 3: WHO standards of different dietary factors

Dietary factor	Requirement (% of total energy – calories)
Proteins	10 - 15%
Fats	15 - 30%
Carbohydrates	55 - 75%
Fruits and vegetables (including green leafy and cruciferous vegetables and legumes)	400 g per day

Source: WHO/FAO (2003).

Our model diet is consistent with WHO/FAO (2003) recommended standards. In our model diet 12.2% of calories come from proteins; 23.3% of calories come from fats; and 64.5% of calories come from carbohydrates. Also, the model diet contains 264 edible grams of vegetables and fruits and 56 grams of legumes, which helps to provide required micronutrients and vitamins. Although, our vegetable and fruit and legume consumption of 320 grams is less than the WHO/FAO (2003) recommended 400 grams of vegetables and fruits and legumes per day, it fulfills the GLWC requirement of more than 300 edible grams of fruits and vegetables and pulses.

- Consistent with local food preferences and local food availability and costs.

Taking into consideration the local food preferences, our model diet includes considerable amounts of wheat flour, which is widely used in the Estate sector, as well as dried fish and coconut that is used to prepare Sri Lankan dishes.

- Relatively low in cost for a nutritious diet.

To achieve this, our model diet includes less expensive types of cereals (red rice), small fish (Salaya), roots (cassava), fruits (banana) and vegetables (pumpkin), etc. to keep down total food cost while maintaining nutritional standards.

- Consistent with development level of Sri Lanka

Taking into consideration the development level of Sri Lanka, our model diet includes considerable amounts of pulses and dried fish to achieve the required protein levels, rather than expensive animal proteins such as chicken.

6.2 Model Diet

Average calorie requirement for a living wage was determined for a standard family with 2 adults plus 2.5 children. In usual Anker methodology practice, it is assumed that 1 adult has vigorous activity level and 1 other adult has moderate activity level while children in the model family have moderate physical activity level. But, in an estate worker family, both adults have vigorous activity levels. Therefore, in our model diet calculation, both adults were considered as having vigorous activity levels. Based on Schoenfeld equations (FAO/WHO/UNU, 2004) that are widely used to estimate calorie needs based on age, sex, height, and activity level; we estimated that on average 2408 calories are needed per person per day.

To design our model diet we considered the Food-based Dietary Guidelines for Sri Lankans, developed by the Nutrition Division of the Ministry of Health (MOH, 2011). Our model diet contains sufficient number of calories 2408. This is higher than the nutritional anchor (2030 kcal per capita per day) used for the local official poverty line calculation in Sri Lanka, which is far too low for families who earn their living from farm work that requires additional calories.

Our model diet is consistent with local food preferences. Rice is the main staple food in Sri Lanka. Some people eat rice for all three main meals. Rice is a fairly inexpensive cereal that provides around 35% of the total calories in our model diet. Also, wheat flour is a highly consumed food item especially in the Estate sector of Sri Lanka. For instance, the average household monthly consumption of wheat flour in the Estate sector was around 12 kilograms, whereas the average household monthly consumption of wheat flour for Sri Lanka as a whole was reported as 2.2 kilograms.¹⁷ Other selected food items for our model diet are;

¹⁷ DCS, 2015, Household Income and Expenditure Survey (HIES) 2012/13, Department of Census and Statistics, Battaramulla.

- least expensive vegetables per edible gram (radish and pumpkin)
- least expensive green leafy vegetable per edible gram (mukunuwenna)
- most popular and least expensive prepared food (bread)
- least expensive root and tuber (cassava)
- least expensive fruit per edible gram (Ambul banana)
- least expensive pulse item (dhal)
- liquid milk (as it is relatively cheaper and available even though powdered milk use is popular)
- coconut as a separate item (as there is a high consumption of coconut milk with the food prepared at home)
- Unpackaged white sugar (as packaged sugar and brown sugar are relatively expensive)

The quantities and costs of the model diet we used to estimate the living wage of estate sector people is given below in Table 4.

Table 4: Model diet and food cost per person per day

Food items	Edible grams	Cost per kg	Cost	Cost (LKR)	Comments
Rice	234	234	65	15.19	Rice is the staple food in Sri Lanka. It provides 35% of total calories
Wheat flour	72	72	88	6.31	Wheat flour consumption is fairly high in the Estate sector
Bread	57	57	122	6.95	2 servings of bread pw 4 slices per serving (50g per slice)
Cassava	18	22	60	1.31	Cassava is the least expensive root and tuber
Radish	60	67	63	4.20	Least expensive veggies. 180 edible grams was divided equally among 2 vegetables and 1 green leafy vegetable (60g each) [180g = 3 tbsps (45g) per serving and 4 servings pd] ¹ .
Pumpkin	60	86	60	5.14	
Mukunuwanna (green leafy vegetable)	60	98	110	10.82	
Dhal	56	56	115	6.44	Increased to more than 1 serving pd to get low cost protein [3 tbsps (45g) = 1 serving] ¹
Milk	150	150	115	17.25	1 cup for child and 1/4 cup for adult to

Food items	Edible grams	Cost per kg	Cost	Cost (LKR)	Comments
					add to tea. Many people living in estates sell milk from milk animals that they own.
Eggs	6	7	250	1.79	1 whole egg pw
Chicken (whole)	4	6	440	2.77	3-4 meals of meat/fish with small portions pd Used least expensive fish (salaya). As chicken is eaten less frequently and more expensive than fish, our model diet contains more fish and less chicken as animal protein. Serving sizes of fish and chicken are 30g each and dried fish is 15g] ¹
Fish (salaya--sardinella)	43	66	120	7.91	
Sprat (dried)	11	13	450	5.67	
Coconut	75	144	25	3.61	Coconut is included in our model diet as it is used to prepare most curries (vegetables, dhal, etc.)
Banana (Ambul)	84	131	60	7.88	Least expensive fruit [1 banana per serving 2 servings pd] ¹
Coconut oil	14	14	180	2.43	Least expensive oil
Sugar	34	34	85	2.92	8 teaspoons per day
Tea	5	5	400	2.14	2 cups pd for adults (tea leaves 1 tsp (2.5 grams per cup))

Source: The Authors.

Notes: pd indicates per day, pw indicates per week. tsp indicates teaspoon. tbsp indicates tablespoon ¹Based on the Food-based Dietary Guidelines for Sri Lankans.

Purchased quantities were used to estimate cost of our model diet. Inedible percentages of each food are from the United States Department of Agriculture (USDA).¹⁸ Number of calories, proteins and fats were estimated per 100 grams for each food item using MOH (MOH, 2014) and USDA reported values. Specific food items used to represent each food group were the lowest cost food items per edible gram with acceptable quality to reduce food cost. Food prices

¹⁸ <http://ndb.nal.usda.gov/ndb/foods>.

were based on a local market survey of local places where workers typically shop (see next section).

Additional miscellaneous food costs were assumed to increase food cost by 20%. This consists of (i) 5% for miscellaneous foods not listed in our model diet such as salt, spices, and condiments¹⁹; (ii) 12% to allow for some variety (e.g. sometimes larger portion or more expensive fish; more expensive vegetables and fruits etc.); (iii) plus 3% for minimal waste and spoilage. This brought the cost of our model diet to LKR 132.89 per person per day.

6.3 Food Prices

6.3.1 Collection and analysis of food prices

To estimate cost of our model diet, local researchers collected food prices from the places where workers typically shop. In this way, we could estimate the cost of our model diet using prices that workers actually pay. Before visiting the shops, the local research team interviewed the estate managers, welfare officers and workers in order to identify the buying pattern of the workers. Some aspects of the plantation workers shopping behavior are worth noting. Most of the workers have either weekly or monthly buying patterns. Workers usually go to the weekend fair (“Pola”) or the markets in the town to buy foods in bulk quantities for the entire week or the month depending on the availability of electricity and refrigeration for certain perishable food products. Based on the HIES 2012/13 data, 83% of estate households have access to electricity and about 14% of estate households own a refrigerator. The major reasons for such behavior could be low price levels, high availability of certain specialized food items such as fish and high variety of certain food items such as meat, vegetables and fruits in those markets. Some workers use local shops and cooperative stores for their daily requirements. Most importantly these local shops act as a buffer for the workers when they face sudden and unexpected shortages in food supply in their houses.

Therefore, we visited local shops, cooperative stores, weekend fairs and markets at the closest town where the people usually go for marketing. During all three estate field tours, we collected the prices from the local shops and cooperative shops in the respective area. Moreover, we collected food price data from Yatiyanthota market, Dickoya market and Talawakele market where the workers in the estates we visited usually go for their shopping. We purposely collected food prices from Yatiyanthota Sunday fair where a vast number of vendors sell food and non-food items. All these strategies were used to ensure the food price data that we collected reflects the usual buying pattern of workers. Based on the workers’ perception and our field experience in price data collection, packed/bottled/canned food items have similar price levels regardless of the market. However, the prices of non-packaged food, vegetables, meat and fish vary with the market.

¹⁹ According to household income and expenditure survey 2012/13, households at 40th percentile of the estate household expenditure distribution spend approximately 7.9 % of food expenditure for salt, spices and condiments.

Several aspects of how food is sold in the market are worth noting. Vegetables, cassava, dhal, sugar, tea, meat, fish and some fruits like banana are typically sold by per weight price. Certain fruits such as apple, pineapple, etc. are sold by both per weight price and per piece price. Leafy vegetables are sold by bundles and priced per bundle. Eggs and coconuts are priced per egg and per coconut. Coconut oil is typically priced by either per bottle or per liter. This situation required researchers to weigh several pieces and bunches of food items that are not priced per unit weight to determine the cost per kilo. Some of the main aspects that we used in selecting the food items to include in our model diet that reduce the cost of our model diet are as below. We entered these data into an Excel worksheet and the price per edible gram was calculated for each food to determine the lowest price per gram for individual food items in each food group in our model diet. We then calculated the mean of the price per edible gram observed in each shop or market for each selected food item.

Image Set 1: Example markets where food prices were collected



6.3.2 Adjustments of food prices for seasonality

Since we collected food prices in December, it is implicitly assumed that these prices are indicative of prices over the year. We were interested to know how food prices changed over the year and in particular whether December prices (when we conducted our food price survey) tend to be relatively high or relatively low compared to prices in other months. Therefore, we collected monthly average food price data for Nuwaraeliya and Rathnapura Districts (where the 3 representative estates used in the study are located) from January 2012 to December 2015 from the Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI)²⁰ to determine if December prices are reasonably representative of prices throughout the year.

Table 5 compares the prices of food commodities in December with the annual averages (From July to June) for the years 2012-2015. We found no large deviation of December prices from the average annual averages for all the food categories except for radish (about 20%) and for rice, sprat and coconut (about 5%). Based on the average percentage deviation, radish shows the highest deviation with about 20% higher price in December compared to the annual average. This difference for radish is understandable as generally the prices of upcountry vegetables tend to increase towards the end of the year as a result of inclement weather with heavy floods in vegetable growing areas. Prices of rice and coconut are slightly higher in December than average for the year (slightly over 5%). Sprat price is slightly lower in December relative to the annual average. Based on this analysis of seasonality in food prices, we reduced the price level of radish by 20 %, while no adjustments were made to the other observed prices.

Table 5: Comparison of December prices (per kilo unless otherwise specified) with the respective annual average

	2012		2013		2014		2015		Average % Deviation of December prices
	2012 JUL-2013 JUN	2012 DEC	2013 JUL-2014 JUN	2013 DEC	2014 JUL-2015 JUN	2014 DEC	2015 JUL-2016 JUN	2015 DEC	
Rice (raw red)	53.47	56.25	57.53	56.44	77.75	88.36	63.50	67.18	5.69
Cassava (manioc)	47.17	49.50	46.32	45.00	53.17	55.00	53.21	54.25	1.87
Radish	57.02	63.00	51.93	48.00	65.18	84.00	78.54	116.25	19.95
Pumpkin	72.31	70.50	65.23	64.20	78.50	75.00	76.96	84.50	0.32
Dhal	149.56	144.00	157.62	160.00	170.08	172.00	193.14	186.50	-1.13
Egg (one)	13.32	12.63	13.80	14.10	13.81	12.80	14.71	14.60	-2.77
Chicken	392.32	382.82	401.96	390.50	411.99	403.00	450.46	452.50	-1.75

²⁰ <http://www.harti.gov.lk/index.php/en/market-information/monthly-food-commodities-bulletin>.

Fish (salaya)	185.64	164.25	173.95	178.00	177.54	175.00	177.29	182.00	-1.99
Sprat (dried)	529.92	394.25	536.44	571.00	455.24	452.60	546.58	524.38	-5.95
Mukunuwan na/Bund	22.38	23.60	19.99	19.00	24.41	21.86	26.88	30.00	0.41
Coconut (one large)	41.10	43.50	49.84	52.78	53.92	57.16	48.28	49.60	5.12
Banana (Ambul)	64.05	63.63	59.05	60.00	65.37	66.80	76.51	76.75	0.86

Source: Authors calculations based on HARTI price data.

7. HOUSING COSTS

Housing costs in a typical Sri Lankan family consist of three components: (i) rental equivalent value of an owned basic acceptable dwelling; (ii) utility costs that include water, lighting (electricity) and cooking fuel (either electricity, gas or fuel wood) and (iii) routine repairs and maintenance. Therefore, estimated housing cost for the estate workers is LKR 5,003 (\$35) per month based on the LKR 4,000 (\$28) rental equivalent value of housing, and LKR 1,003 (\$7) utility costs.

7.1 Standard for Basic Acceptable Housing

It is a prerequisite to set standards for minimum basic acceptable housing for our family size of 4.5 persons, before trying to determine rent for it. For this purpose, we relied on both national and international standards for acceptable housing. Sri Lanka's per capita income has gradually improved and accordingly the demand for better quality housing facilities too has increased. Hence the quality of the housing has to be upgraded to be in compliance with modern standards and principals accepted locally and globally. National Housing Policy in 2014²¹ states its objectives as to ensure the right to live in an adequate, stable, qualitative, affordable, sustainable, environmentally friendly and secure house with services for creating a high living standard on the timely needs of the people.

According to international principles such as the International Covenant on Economic, Social and Cultural Rights' definition of adequate housing, ILO Recommendation No. 115 Concerning Worker's Housing indication of decent housing, the World Health Organization Principles of healthy housing, and UN-HABITAT definition of slum housing, acceptable housing needs to have a durable structure; sufficient living space; access to safe water; access to a sanitary toilet; adequate lighting; adequate ventilation, and protection from natural or other threats to health, structural hazards, and diseases.

²¹ <http://www.nhda.lk/index.php/en/2016-07-29-10-20-41/2016-07-30-04-37-17#>.

In the absence of proper local housing standards for living space, we used the 1937 United Kingdom standard (that is still being used in the UK) of maximum number of 2 persons per possible sleeping room to avoid being considered overcrowded and 45-60 square meters standard for living space considered reasonable for middle income countries²² (Anker & Anker, 2017). For other housing characteristics, we used information on housing in Sri Lanka to determine reasonable norms. Keeping the above factors in mind, we chose the following housing standard (referred to as 'reference housing standard'):

- cement floor
- cement block walls
- corrugated metal (takaran) sheet roof without leaks
- ceiling at least 2 meters at lowest point
- more than 1 window per room
- piped water for drinking within house, inside premises, or in close proximity to house
- water seal latrine in good condition within house, inside premise, or in close proximity to house
- electricity as source of lighting
- at least 3 rooms (living room, 2 bedrooms)
- separate kitchen with windows or chimney
- at least 50 square meters of floor space
- housing structure is in reasonable condition

The *reference housing standard* selected for the study is very basic and provides only the most important elements that allow for healthy living. A special explanation is needed in why we used corrugated metal sheets for the roofing for our *reference housing standard* despite corrugated metal roofs being categorized as a semi-permanent roofing material in the Household Income and Expenditure Survey. We selected corrugated metal roofs for our *reference housing standard* for the following reasons. First, roofing tiles are considered an expensive roofing material in Sri Lanka. Only 7% of the estate houses have tiled roofs. Even, urban and rural sectors only consist of 30% and 54% houses with tiled roofs. Second, asbestos, which is the next most common to corrugated metal sheets, has been banned from 2018 on health and hygiene grounds. Third, corrugated metal sheet is the most common roofing material in the estate sector.

The latrines chosen for the *reference housing standard* include water seal latrine in good physical and hygienic condition inside the house or in close proximity to house. In the estate sector, latrines are mainly water seal connected to a closed pit/tank and located outside in close proximity to the house for most of the houses. This is considered acceptable, as it

²² This is consistent with median floor space found in Asia, Latin America and Caribbean and former socialist countries in East and Central Europe as well as standard for middle-income households in India.

hygienically separates human excreta from human contact and the workers don't have to walk much to find a toilet.

Data from the 2012/13 Household Income and Expenditure Survey indicate that the *reference housing standard* is better than the housing conditions currently found in Sri Lankan tea estates. For example, 67% of estate houses have corrugated metal roofs and less than 1% of households have roofs with cadjan, palmyra, straw or other non-permanent materials; 85% have permanent floors (cement, tiles, terrazzo or concrete); 95% have permanent walls made up of either brick, cabok, cement block or pressed soil blocks; zinc roof and cement or brick walls; 91% have water sealed toilets connected to a pit or tank; 83% have electricity; and, 46% have safe water; 48% have 2 or more bedrooms and only 24% have floor space more than 500 square feet (46 square meter).²³

Although the estate workers work for estate companies, the Government of Sri Lanka collaborates with the plantation companies in implementing social development programmes for the regional plantation company (RPC) workers. For example, estate housing is primarily provided by the Plantation Human Development Trust (PHDT) which is a tripartite organization formed by the government in association with RPCs and plantation trade unions. The estate housing stock consists mainly of back-to-back lines, single lines and single houses. The 'back-to-back lines' and 'single lines' have a smaller floor area with either no separate bedroom or only one bedroom. Housing upgrading programs have been undertaken in the estate sector, through which traditional houses have been upgraded from time to time. House improvements mainly comprised improvements to kitchens and re-roofing. In addition, the government with the Plantation Human Development Trust (PHDT) and NGOs provide new improved house units for estate sector workers.

Housing in three tea estates was then visited²⁴ with the *reference housing standard* in mind to determine prevailing rents for acceptable housing. We noticed that most of the line houses do not meet our standard with regard to the structural conditions. Most of the houses that we visited had poor ventilation, and lacked adequate living space. The exception to this was the single houses in the estates.

²³ Based on HIES 2012/13 survey conducted by the Department of Census and Statistics of Sri Lanka.

²⁴ Since all the three estates were equally representative of estate housing in Sri Lanka, all three major house types namely single line, double line and single houses were visited by the researchers.

Image Set 2: Sample housing

Line housing



Improved single housing



7.2 Rent for Basic Acceptable Housing

The usual way of estimating housing cost is to collect information on rent for housing that meets the selected minimum standard. With that mind, we visited 20 houses altogether in three estates. Most of the traditional ‘back-to-back lines’ and ‘single lines’ were quite old and had a smaller floor area with either no separate bedroom or only one. However, some renovation in the form of reroofing, painting and even new extensions have been done in most of the traditional houses. However, more than 50% of the visited houses were having less than 250 square feet (23 square meters) of floor area. Since 10-15 (or even more) houses are compounded in a single line building in line houses, there are certain socio-environmental problems such as wastewater drainage, sanitation and privacy. All the houses were equipped with electricity and free pipe born water. Since the housing is provided free, workers have to bear only the costs of utilities that include electricity (for lighting and cooking), gas (for cooking) and maintenance cost. With the exception of a few houses, most of the houses did not meet our reference standard.

People hardly rent estate sector houses in Sri Lanka and the 2012/13 HIES²⁵ reports only 0.5% of houses were rented or leased in the estate sector. Due to the absence of clear rental markets in the estates, no rental houses were found in our field survey. Therefore, it was not possible to use rental cost to estimate housing cost in our analysis. First, we looked at the imputed rental value for a house similar to our standard house in the estate sector using the imputed rental value estimates in 2012/13 HIES. This estimated value of LKR 1,400 appeared considerably too low for an acceptable housing.²⁶ Therefore, instead of using rental costs or HIES imputed rental values, we used the user cost approach. We estimate the cost of building a basic acceptable

²⁵ 71.4% rent free houses, 10.5% constructed/purchased/inherited houses and 17.7% other houses.

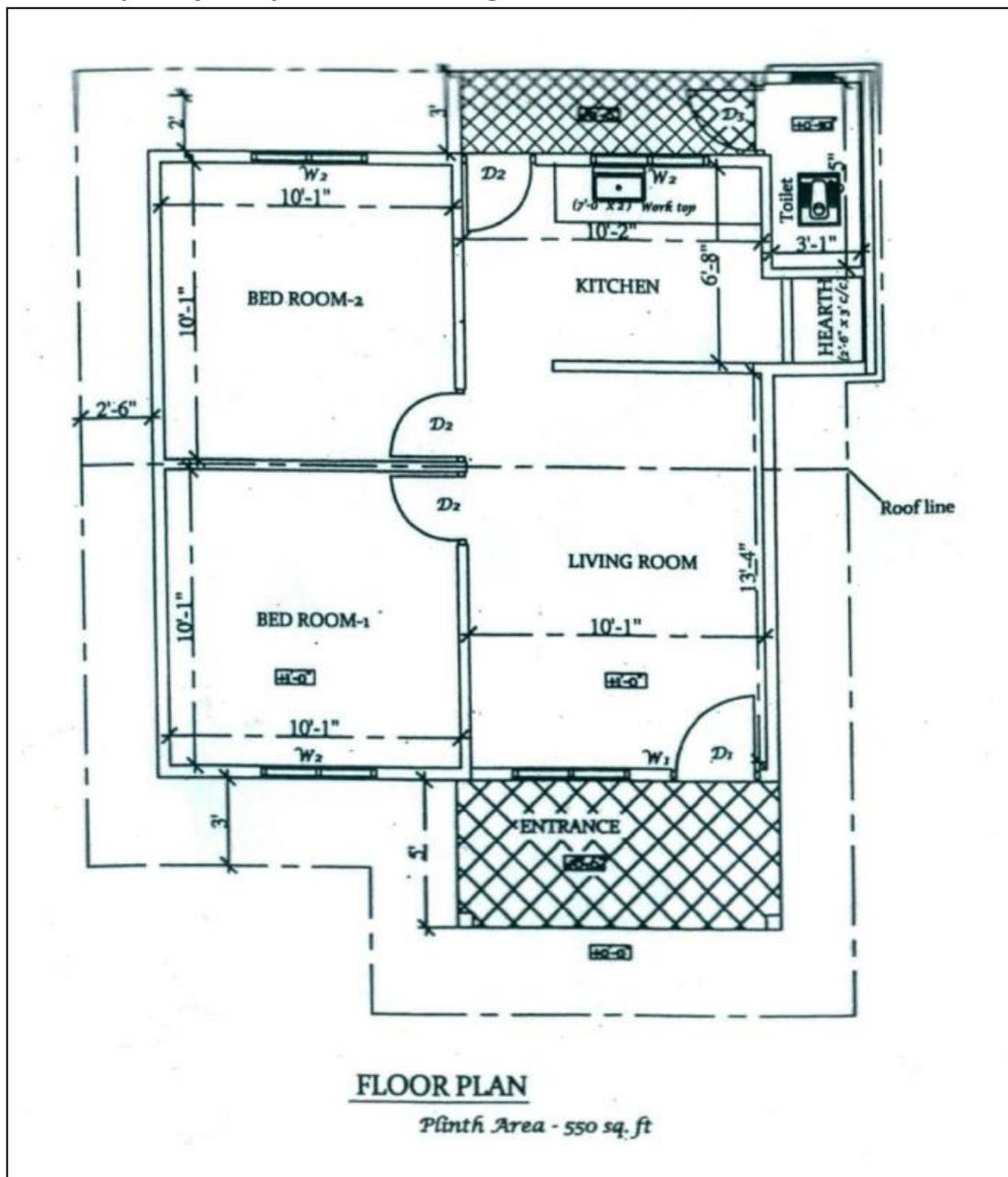
²⁶ Rent is usually captured by reported values of rent or if a household does not report rent (for instance, if a household owns the house it lives in, or if it is provided for free by the employer) – an imputed rent is estimated using existing rent information and dwelling’s characteristics. The credibility of this value is a concern due to the absence of proper statistical methodology.

house and make assumptions on its life expectancy and maintenance costs. PHDT is the main organization that is responsible for providing improved houses for the estate workers. Cost of building a new house with a floor area of 550 square feet and other acceptable standards in tea estates under the full grant program of PHDT is estimated to be LKR 1.2 million in 2015.²⁷ We selected this value as the cost of building a basic acceptable house as the housing standards used by PHDT complied with our reference housing standards (Figure 8).

To estimate an appropriate user cost for the reference house, we made an assumption about life expectancy and maintenance costs for this house. Most commonly used 50 years of life expectancy with 2% for maintenance was assumed in our calculation (Anker and Anker, 2017). Using straight-line depreciation method, the depreciation of the house was spread evenly across the expected life of 50 years with no salvage value. Then we arrive at an approximate monthly depreciation cost of a newly built acceptable dwelling of LKR 2,000. This value is 43% greater than the HIES imputed rent value of LKR 1,400. Since this amount seems reasonable to us, we used it in our living wage calculation. It is expected that this estimate would be greater than the HIES imputed value because of the poor standard of estate sector housing. Also, it is important to mention that the land is given by either the estates or the government and the value of land the house is built on was not considered in this estimation.

²⁷ No adjustment for inflation was done as the value is for year 2015.

Figure 8: Floor plan of new plantation housing



Source: Plantation Human Development (PHDT , 2016).

The estimated monthly cost for maintenance and repairs (LKR 2,000) was made by assuming 2% of construction cost annually, which is a common assumption for this (Anker and Anker, 2017) and not much different from the cost of maintenance and repairs for the estate households in the 50th percentile of the household expenditure distribution (LKR 1,700) according to HIES

2012/13 data. This comparison indicates that our estimate of cost of maintenance and repairs is reasonable to use in our living wage calculation.

In summary, we estimated housing costs (excluding utilities – see below) based on the user cost approach to be LKR 4,000 per month (LKR 2,000 for use/depreciation and LKR 2,000 for maintenance and repairs).

7.3 Utilities and Other Housing Costs

Utility cost for the estate households primarily include electricity, water and gas. Estate dwellers often have to bear the costs of only electricity and gas as workers are allowed to collect firewood freely from the estate and there are water schemes operated by the estates to provide water freely for the workers. Utility costs that include cost of electricity and gas were estimated using information on these costs provided by 20 workers living in estate houses. The total utility cost was estimated as LKR 968 per household, which was marginally lower than the utility costs for the 50th percentile of estate households based on the HIES 2012/13 data (LKR 1,003). Considering the possibility of free water only in certain estates with estate run water schemes and that collection of firewood takes time of family members, we decided to use the HIES value of LKR 1,003 as the cost of utilities.²⁸

8. NON-FOOD AND NON-HOUSING (NFNH) COSTS

The latest available Household Income and Expenditure Survey (HIES) 2012/2013 data was used to estimate Non-Food and Non-Housing (NFNH) costs for a living wage benchmark. Despite Sri Lanka being a middle-income country, the country's estate sector people belong to lower income deciles. The NFNH to food ratio is known to be sensitive to the level (percentile) of income distribution. Country studies have shown that NFNH to food ratio on average falls by around 7% based on the 40th percentile data compared to the median (Anker and Anker, 2017). However, in Sri Lanka data, this difference is just over 1%. Therefore, given the extent of poverty in the estate sector, we considered the household expenditure data of 50th percentile (median) estate sector household is appropriate representation of standard of living for estate sector workers to estimate NFNH for a living wage.

In this study, non-food and non-housing costs were estimated in three steps. First, non-food and non-housing costs were estimated based on HIES 2012/2013 data. Secondly, adjustments were made for some expenditure that we feel is unnecessary for a decent standard of living such as expenditure on tobacco (See the Table 6). Finally, we cross checked expenditure groups such as health care and education with a rapid assessment and necessary adjustments were made to adjust our preliminary HIES estimate to match the ground reality of costs, because education and health care are considered to be human rights around the world.

²⁸ Water and firewood costs were not included as utility costs or in-kind benefits.

Accordingly, all non-food and non-housing costs for a decent living for the representative family of 4.5 persons was estimated at LKR 7,406 per month. This covers clothing and footwear; household furniture, contents and appliances; healthcare; education; transportation; communications; recreation and culture; eating away from home; and miscellaneous goods and services such as insurance, bank services, funerals and personal care. How we arrived at this estimate of non-food and non-housing costs for our living wage is explained below.

First non-food cost of HIES data for estate sector was divided into two components: housing cost which includes rental equivalent value, utility costs (water, lighting, and cooking fuel), and routine repairs and maintenance; and all other non-food and non-housing costs.

According to HIES 2012/13, 62.2% of estate sector household expenditure is for food, 10.6% is for housing, and 27.2% is for all other expenditures for median household of the estate sector household expenditure distribution (see Table 6). Accordingly, the ratio of non-food and non-housing expenditure to food expenditure for estate sector was 0.438.

Then in line with the living wage adjustments as suggested by Anker and Anker (2017), following three adjustments were done for household expenditure data. (i) Expenditure for tobacco was excluded because we do not feel tobacco is necessary for a decent living, (ii) 50% of costs associated with owning and operating a private vehicle was considered unnecessary because we feel that it is reasonable to expect workers to use “public” transportation, bicycle, or walk for a living wage, and (iii) spending for “restaurants” was adjusted as expenditure for meals away from home includes both food cost as well as cost of services and profit in these meals. Taking into consideration that workers typically purchase prepared food from take away food joints rather than eating in restaurants, it was decided that approximately 30% of the cost for meals away from home is for services and profit. With that assumption, we deducted 30% of the cost for meals away from home reported included under the food group and added this to restaurants and hotels cost under NFNH.

Taking these three adjustments into consideration reduced the ratio of non-food and non-housing expenditure to food expenditure from 0.438 to 0.407. We used this ratio of 0.407 to make a preliminary estimate of non-food and non-housing costs (i.e. LKR 7,406) for our living wage.

Thirdly we specifically looked at whether funds reserved for health care and education in the preliminary NFNH estimate are sufficient because these are considered as basic necessities of people for a decent living. Based on rapid assessments of health care and education expenses, funds for health and education costs were increased.

Table 6: Estimating NFNH to food ratio with adjustments using HIES 2012/13 data on household expenditure for 50th percentile of household expenditure distribution

Major expenditure group (change if necessary)	Secondary data		Adjustments	
	Sub-major expenditure group (change as necessary)	50th % of income distribution % of expenditure	Adjustments explanation	% after adjustment
Food				
	Food & non-alcoholic beverage	59.62	None	59.62
	Meals away (if included in food group)	2.57	Put part* of this into restaurants & subtract this part here	1.8
TOTAL FOOD		62.19		61.41
Housing		10.60		10.60
Alcohol & tobacco		6.31		3.72
	Alcohol	3.72		3.72
	Tobacco	2.59	Exclude	0
Restaurants and hotels			(WHEN meals away was in food group) Add part here	0.77
Clothing and footwear		3.26	No adjustment	3.26
Household contents and appliances		2.35	No adjustment	2.35
Health		1.73	No adjustment	1.73
Education		1.91	No adjustment	1.91
Transport		4.32		3.92
	Private vehicle purchases	0.01	Subtract part of this when workers expected to exclusively use public transport	0.003
	Private vehicle operation	0.78		0.39
	Public passenger transport	3.53	No adjustment	3.53
Communication		1.57	No adjustment	1.57

Major expenditure group (change if necessary)	Secondary data		Adjustments	
	Sub-major expenditure group (change as necessary)	50th % of income distribution % of expenditure	Adjustments explanation	% after adjustment
Recreation & culture		0.79	No adjustment	0.79
Miscellaneous goods & services		4.98	No adjustment	4.98
TOTAL NFNH		27.22		25.00
TOTAL		100.00		97.02

Source: Constructed using HIES 2012/13 micro data.

9. ADJUSTMENTS TO NON-FOOD AND NON-HOUSING COSTS

9.1 Health Care Post Check

Sri Lanka has made noteworthy achievement in health outcomes with the universal and decentralized health care system of the country. Over the years, different governments have done several policy interventions with the intention of upgrading the health care service of the country. In this context, Sri Lanka has achieved most of the Millennium Development Goals (MDGs) in terms of health-related indicators. However, health indicators in the estate sector are well below the rest of the country and the estate sector still has a long way to go.

Sri Lanka has a decentralized health system and prevalence of regional/spatial disparities is evident. Poor people and some regions of the country are still not securing the benefits of those efforts. One of the major barriers in achieving this is lack of resources in primary health care units. Lack of health personnel and other facilities (i.e. medical equipment and essential drugs) at the primary health care units discourage people from seeking health care at primary health care services, especially people in rural and estate areas.

In this context, although health care in Sri Lanka is theoretically free, it is not possible to obtain adequate health care by relying solely on government services. Furthermore, the average household monthly expenses for health care was around LKR 1,564 per household according to HIES data which accounts for around 6% of all non-food expenditure (DCS, 2012/13). According to HIES data, households spent 45% of out of pocket (OOP) health expenditure for payment of private doctor fees, etc. For these reasons, sufficient funds for workers to access private health services, was considered for living wage calculation.

To estimate needed health expenses, we estimated needed out of pocket expenditure incurred in terms of doctor's fees, medicine costs, laboratory tests and any other health and dental

related costs in our rapid assessment after speaking to workers, clinics, pharmacies, doctors and others (see Appendix table 2). Accordingly, based on this rapid assessment data, we estimated that health expenses for a family of around LKR 872 per month (table 7). However, based on HIES 2012/13 data, health care cost in our preliminary unadjusted estimate of non-food and non-housing costs, is LKR 512 per month. Accordingly, we added LKR 360 to the preliminary NFNH estimate for health care (i.e. difference between LKR 872 needed and LKR 512 included in preliminary NFNH for health care) to ensure that sufficient funds are available to workers to cover health expenses for their family.

Table7: Post check calculations of health care and education (LKR)

Cost item	HIES based estimate of costs		Rapid Assessment of costs		Post check adjustment *
	Per head	For reference family	Per head	For a reference family	
Health	114	512	194	872	360
Education	126	566	668	1,670	1,100

Note: * Rounded figures. Detailed calculations for rapid assessment costs are available in appendix table 2 and 3.

9.2 Education Post Check

Sri Lanka is committed to supporting “Education for All” adhering to ethics and standards as proclaimed by provisions in international conventions (DCS, 2012/13). The general education system of the country has 13 years of schooling, organized into four cycles -- primary (Grades 1-5), junior secondary (Grades 6-9), and senior secondary (Grades 10-11) and collegiate (Grades 12-13). Under the compulsory education regulations, all children in the 5-14 age group are expected to complete the primary and junior secondary education cycles.

The public education system remains the predominant education service provider of general education in the country. To improve access to general education, successive governments adopted a variety of demand and supply-side policies, including a countrywide network of government funded schools, free textbooks, scholarships for disadvantaged students, free uniforms, and subsidized transport facilities. Although education is available free of tuition in public schools and complemented by other welfare measures, households spend a considerable amount on education. For example, the median household in the estate sector spends 1.9% of all non-food expenditures on education, whereas the average household spends 5.6% of their non-food expenditure on education (DCS, 2012/13).

In this context, Sri Lanka’s basic education is almost universal, but education participation levels fall at higher levels of education (UNDP, 2012). Opportunities to participate in education at higher education cycles vary across population groups. For instance, the disparity in access to upper secondary and collegiate education was greatest in the estates (UNDP, 2012). People in the estate sector have been living in isolation from the rest of the Sri Lankan society as they

were confined to the estates. Estate sector students get primary education in the estate schools where a majority of schools are primary schools.²⁹ After primary education many of these students stop schooling due to poor access to secondary schools including poor roads, lack of transport facilities and poverty, etc. These students enter into the labour force straight after completing primary education, as there are employment opportunities for the lesser-educated youth in the plantation sector. This vicious cycle keeps this community within the estates, without any upward social mobility.

Despite low secondary school attendance rates in the estate sector, we assumed that children of workers earning a living wage should be able to afford to send their children to school through grade 13. In a rapid assessment, we collected education-related expenditure for school fees, exam fees, stationary, uniforms, school bags, private tuition fees, boarding fees, etc. We spoke to workers and educators.³⁰ Accordingly based on this rapid assessment data, we estimated that school expenses per child is around LKR 668 per month which is equivalent for LKR 1,670 per month for our reference family with 2.5 children (see Appendix table 3). However, based on HIES 2012/13 data, education cost in our preliminary estimate of non-food and non-housing costs was LKR 566 per month. This difference is not surprising as in the estate sector only 47% of families have children in school. In light of above, we added LKR 1,100 to education costs included in the preliminary NFNH estimate (i.e. approximate difference between LKR 1,670 needed and LKR 566 included in preliminary NFNH estimate) to ensure that sufficient funds are available to workers to cover educational expenses for their children through secondary school.

10. PROVISION FOR UNEXPECTED EVENTS TO ENSURE SUSTAINABILITY

Large unforeseen expenses such as illnesses, accidents, funerals, etc., can quickly throw workers living at a basic life style into poverty and debt. It is also typical to include some additional funds to allow for some flexible spending. Therefore, a small margin is added to the cost of a basic quality life to allow for unexpected events. We decided to add a 5% margin to allow for unforeseen emergencies and some unrestricted spending.

²⁹ According to Ministry of Education statistics, as of 2011, 52% of estate sector schools are primary schools

³⁰ 16 worker families, 5 educators were interviewed during rapid assessment survey.

SECTION III: LIVING WAGE FOR WORKERS

11. FAMILY SIZE NEEDING TO BE SUPPORTED BY LIVING WAGE

As the living wage is estimated for a family, we need to arrive at a representative family size to calculate the living wage.

According to the Anker methodology, this family size should be consistent with: (i) number of children estate women typically have (i.e. total fertility) and (ii) average household size. Average household size for different sectors in Sri Lanka are available from several sources such as Household Income and Expenditure Survey (HIES) 2012/13 and Demographic and Health Survey (DHS) 2006/07 (Table 8). There is a slight variation in household sizes among different sectors and between different surveys. Average household size in the estate sector is 4.3 based on the both surveys.

Table 8: Average Household Size in Sri Lanka by location

Location	Household Income and Expenditure Survey (HIES) 2012/13	Demographic and Health Survey (DHS) 2006/07	Average household size excluding single person households
Urban	4.0	4.2	
Rural	3.8	4.0	
Estate	4.3	4.3	4.4*
National	3.9	4.0	

Source: Department of Census and Statistics of Sri Lanka (HIES 12/13 & DHS 06/07).

Note: *Total fertility rate (TFR) of 2.5 for the estate sector implies a family size of 4.5 (2 adults plus 2.5 children). Find below for more details.

Living wage is a family concept based on the definition agreed by the Global Living Wage Coalition (Anker, 2011). It is, therefore, necessary to adjust average family size by excluding single person households (that do not have children) to get an appropriate family size for estimating a living wage for Sri Lanka. Average household size increases to 4.4 in the estate sector when single person households are excluded.

Total fertility rate (TFR)³¹ in Sri Lanka is 2.5 in estate sector, 2.2 in urban sector, 2.3 in rural sector and 2.3 for Sri Lanka as a whole according to 2006/07 DHS. These TFRs imply a family size needing to be supported of around 4.5 persons in estate sector if there was no mortality (i.e. 2 parents + TFR). Sri Lanka has a relatively low under-five mortality rate of 27 per 1000 births according to DHS 2006/07. The data show some differentials by the sectors. The under-five mortality rate for the estate sector (33 deaths per 1,000 births) is almost double that for

³¹ The TFR refers to the average number of live births that a woman would have if she were subject to the current age specific fertility rates (ASFRs) throughout the reproductive ages (15-49 years).

the urban sector (19 per 1,000). Under-five mortality in rural areas (23 per 1,000) is intermediate between the urban and estate sectors. Thus, our estimate of 2.5 children per family based on fertility rates only slightly declines to 2.4 children per family (for an implied family size of 4.4) for the estate sector after adjusting for child mortality.

Taken together, estimates for adjusted total fertility rate (TFR) and average household size indicate that 4.5 persons would be an appropriate and conservative family size for estimating a living wage for the estate sector in Sri Lanka.

12. NUMBER OF FULL-TIME WORKERS IN FAMILY PROVIDING SUPPORT

Number of full-time equivalent workers in family providing support for the family was calculated based on Labour Force Survey (LFS) 2012 data. As of 2012, 8.46 million Sri Lankans were in the labour force, representing 52.6% labour force participation rate for ages 15 and above. The employed labour force in 2012 was 8.1 million, accounting for 50.5% employment-to-population ratio, while the overall unemployment rate was 4.0%.

Labor force participation rates are higher in estate sector (63.3%) than in other regions mainly because many women work in estates. For instance, estate sector female labour force participation rate is 50.6%, whereas at national level female labour force participation (33%) is well below half of the male labour force participation (75%).

Estate sector specific data was used to estimate the number of full-time workers per reference family. As suggested by Anker and Anker (2017), ages 25-59 was considered for above referred calculation as ages 25-59 are prime working ages which excludes younger persons who may be in school and/or not yet joined the labor force and older persons who are retired.

The number of full-time workers per couple expected to provide support for the family was estimated based on three different statistics: (i) labor force participation rate (LFPR), (ii) unemployment rate (U), and (iii) part-time employment rate (PT) that is assumed to be less than 35 hours per week which is the definition used by Department Census and Statistics of Sri Lanka to define underemployment.

Based on LFS 2012, labor force participation rate in estate sector of Sri Lanka for ages 25-59 was 80%. Unemployment is not common in estate sector. It was only 1.3% for estate persons ages 25-59 according to the 2012 labor force survey. For the same age group, part-time employment rate was around 7.9%.

Using the figures noted above, we estimated that there are .76 average proportion of full-time workers per adult age 25-59 in the estate sector (i.e. $0.80 \text{ labor force participation rate} \times (1.0 - 0.013 \text{ unemployment rate}) \times 1 - 0.079/2 \text{ full-time work hours}$). This in turn implies 1.76 full-time

equivalent workers per couple for estate sector based on the assumption that one worker in the family has full-time work year around on an estate.

13. TAKE HOME PAY – ACCOUNTING FOR MANDATORY DEDUCTIONS AND TAXES

Up to this point, we have discussed how we arrived at estimating living wage net take home pay per worker. However, it is necessary to take into consideration the mandatory payroll deductions that affect take home pay in order to ensure that the workers get enough funds to afford a decent standard of living. There are three mandatory deductions from the payroll of tea pluckers in Sri Lanka.

- Contribution to Employment Provident Fund (EPF): 8% of the gross salary is deducted from the workers as a contribution to the EPF. An additional 14% contribution comes from the plantation companies. Employment Trust Fund (ETF) contribution from the companies is 3%.
- Contribution to the Union Fund: Even though the amount of contribution varies, workers have to contribute roughly about LKR 150 monthly on average for the union fund.
- Contribution to the Kovil Fund: Approximately LKR 150 has to be paid to the Kovil Fund for the religious activities conducted by the Kovils.

No adjustments have been made for income tax as the estimated living wage is well below the minimum wage payment that is subject to income tax (LKR 500,000 per annum in 2016). The total amount of mandatory deductions from pay for a worker to receive a net living wage of LKR 19,125 is LKR 1,989.

SECTION IV: ESTIMATING GAPS BETWEEN LIVING WAGE AND PREVAILING WAGES

14. PREVAILING WAGES ON TEA ESTATES

Are estate workers paid adequately? This can only be determined by comparing the calculated living wage to the prevailing wages in the estates. Prevailing wages for the Sri Lankan estate sector workers are straightforward and fixed for all workers, irrespective of age, experience, and gender. The following section describes the different components of the prevailing wages for the estate workers.

14.1 Basic Wage, Cash Allowances and Bonuses, and Overtime Pay

Estate sector workers (tea pluckers and sundry workers) are entitled to a basic salary of LKR 450 per day. This is the mandatory basic payment for a worker. Other than the basic salary, they are entitled to two mandatory cash allowances based on their attendance. Accordingly, only workers who have 75% attendance on work offered days get the following monthly incentive payments: a) LKR 140 per day per worker 'attendance incentive'; and. b) LKR 30 per day per worker 'price share supplement. These incentive payments are in essence mandatory, because tea estates guarantee at least 300 days of work per year for permanent workers. In addition to the above incentive payments, workers get an annual attendance bonus based on their attendance. This is offered at two different levels. If a worker has an attendance record of 75% to 84%, he/she is entitled to an annual attendance bonus of LKR 750 per year. If a worker has an attendance record of 85% or more, he/she is entitled to LKR 850 per year annual attendance bonus (which is LKR 71 per month on a prorated basis). In the estates, we visited, most workers get this annual attendance bonus of LKR 850.

Based on the type of the worker, other payments to estate sector workers are of two types; 'over-kilo' payment and overtime payment. Tea pluckers work for a daily target of 18 kg of raw leaves, which is called as 'norm'. If one can pluck more than this 'norm', he/she is entitled to a payment of LKR 20 for each additional kilogram of raw leaf.³² Sundry workers receive an overtime payment for working beyond the mandatory 8 hours. Estates make overtime payment under three main rates. Working beyond 8 hours on a normal day, a worker gets 1.25 times the basic hourly wage; working in the night a worker gets 1.5 times the basic hourly wage; and, working on a Sunday the worker gets 2 times the basic hourly wage. In estimating prevailing wages for comparison to a living wage, we did not include overtime payments because according to the agreed living wage definition, a living wage must be earned during normal working hours. However, when estimating prevailing wages we counted payment for three over kilo per tea plucker per day for 9 months, since we understand that workers are able to earn

³² 8% of this goes as the employee contribution to EPF so that workers take home LKR 18.40 per kilo (also, employer contributes 14% and 3% for EPF and ETF equivalent to LKR 3.40 per over kilo).

this during normal working hours. Overall we estimate that the prevailing wage of tea pluckers is LKR 16,971 per month including the value of in-kind benefits.

In addition, there are worker entitlements for leave including 17 days per annum paid leave and 14 days per year approved paid leave for indoor medical treatments. Moreover, women workers in those estates are entitled to 84 days paid leave for 1st and 2nd child and 42 days paid leave for 3rd and 4th child as maternity benefits.

14.2 In-kind Benefits as Partial Payment of Living Wage

Estates provide various types of in-kind benefits to workers other than the cash payments. Housing, childcare and health services are the major components of this package.

Housing: Workers are provided with housing within the estate, where the worker and his/her family can stay. These houses are transferred from generation to generation, and some families continue to live in estate housing when no one in the household is working for the estate. Ownership of estate housing is not entirely clear in part because estate houses are passed on to younger generations and workers were often responsible for considerable improvements and in part because some estate houses are owned by RPC.

Houses are generally termed as '*line*' houses, because they were initially built as side to side lines of rooms. Estate management provides piped water for all line houses. Not all houses have piped water inside their houses. Some line houses have a tap outside their premises and others share common taps in close proximity to their houses. However, most of the families have improved access to piped water on their own, by installing taps inside their houses. In addition to the above the estate management provides basic resources for repairing and maintaining the line houses. However, major costs of maintenance and improvements of the houses are borne by the workers.

Since housing is provided freely on the estates, it is appropriate to include this as an in-kind benefit. However, it is not fair for the workers to use the estimated user cost of a standard reference house since estate houses are not generally up to the level of our standard reference decent house. In addition as discussed above, it is often unclear how many estate houses are owned by the estate. Therefore, we decided to use the imputed rent value based on HIES data which is lower than the estimated user cost because of lower housing quality. The total value of this in-kind benefit including the maintenance cost of estates amounted to LKR 949 (\$7) per month.

Child care: Most estates provide crèches to take care of the workers' children while they are at work. Many estate crèches are well run: they have a child-friendly environment comprised with a building, equipment and a play area. Crèches provide day care facilities, preschool education, early childhood development, and a nutritious mid-day meal for the children. Crèches take care of children until they go to school and sometimes even after that. In order to provide these

facilities, estates usually employ a trained child development officer (CDO) and a caretaker for each crèche. Their salaries are borne by the estate management. Based on the estimates of the plantation companies we spoke to, the cost for the in-kind benefit of childcare provision was LKR 17.69 per worker per day, which was equivalent to LKR 530 per worker per month. All the workers do not use crèche facilities and it is not a common practice to use childcare facilities by worker households. Therefore, childcare cost was not included in family expenses calculation and excluded from in-kind benefits as well.

Health care: Workers and their families are provided with the health facilities jointly by the estate and the government. Estate child development officers and plantation family welfare supervisors along with the state midwives and medical practitioners provide medical and welfare services. Drugs and transport for medical needs are provided completely free by the estate or government, and in the event the estate is unable to cope with a medical situation, patients are transported by the estate to the closest government hospital completely free of charge. Pregnant mothers are provided with maternity benefits. Moreover, all immunizations and medical checkups for pre-natal, post-natal and children are done in situ on the estate by qualified state medical staff. Based on the estimates of the plantation companies we spoke to, the cost for the in-kind benefit of health care provision was LKR 18.46 per worker per day, which was equivalent to LKR 554 per worker per month. But since all Sri Lankans are eligible for free government health care, we did not consider this in-kind benefit.

Other than the above, estates provide basic welfare facilities during major life events. Especially when there is a funeral, the worker receives a cash allowance for the coffin, transport facilities, and four workers for his/her support. However, since this is not a recurrent benefit for the workers, we did not consider this for our calculations for in-kind benefits. Estates also provide tea free of charge for workers for their own daily consumption. This was excluded in calculations, because this is not of major value to workers or a major expense for tea estates.

15. LIVING WAGE IN CONTEXT AND COMPARED TO OTHER WAGES

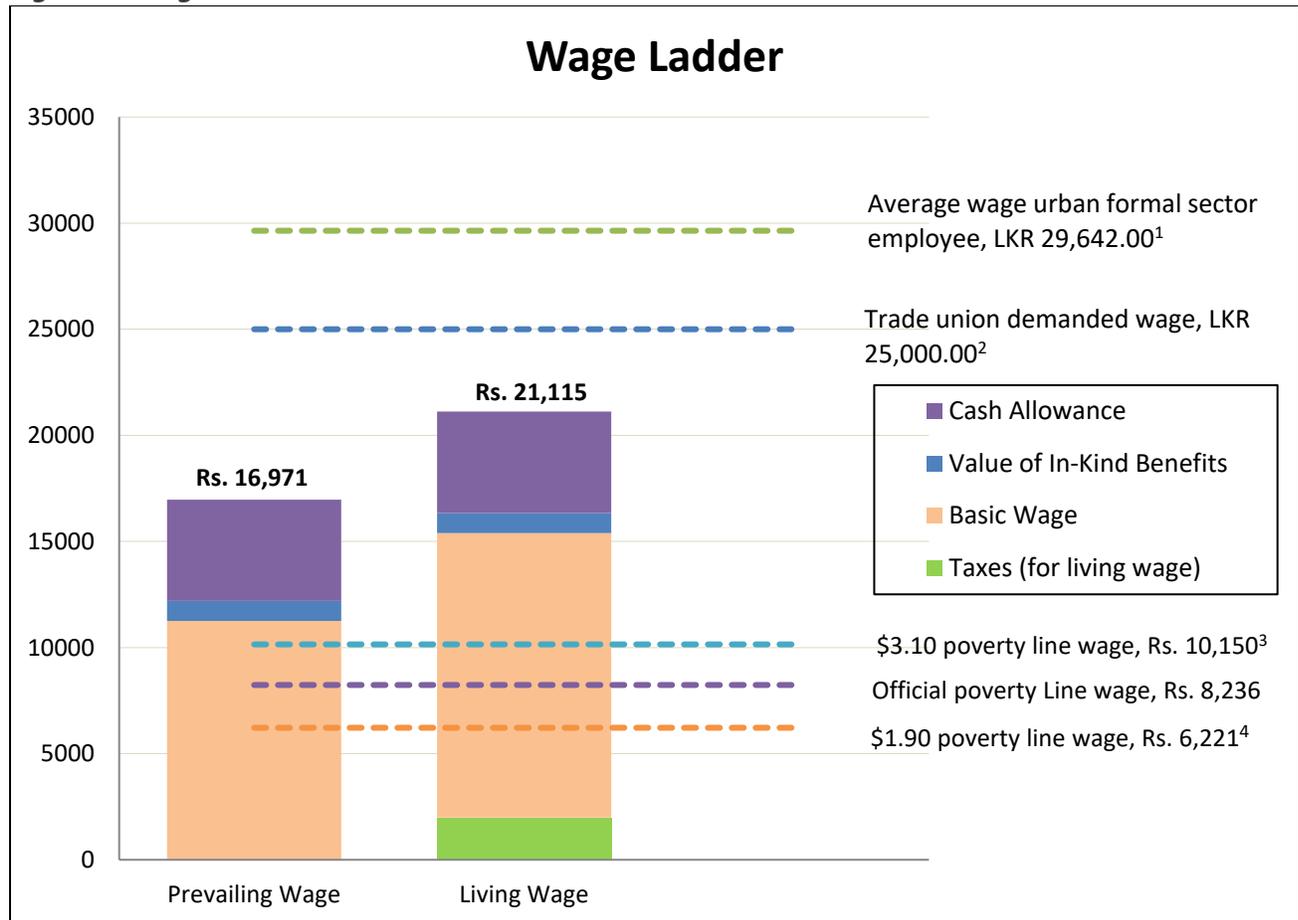
15.1 Wage Ladder

It is important to compare the living wage with other important benchmarks. In this section, we make a comparison of the estimated living wage with the average wage of urban formal sector employees, trade union estimated living wage, World Bank poverty line wages, official poverty line wage for Sri Lanka, and Asia Floor Wage.

As figure 9 depicts, the estimated living wage is considerably higher than most of the currently available benchmarks of wages and poverty line wages. The gross living wage (LKR 21,115) is more than twice the official poverty line wage for Sri Lanka (LKR 8,236). The World Bank's \$1.90 per day extreme poverty line wage (LKR 6,170) and \$3.1 per day poverty line wage (LKR 10,067) are also substantially lower than our estimated living wage. World Bank \$1.9 per day extreme

poverty line wage is less than a third of our estimated living wage while \$3.1 per day poverty line wage is also almost half of our estimated living wage. However, our estimated living wage is considerably lower than both the wage demanded by the trade union (LKR 25,000) and the average wage for urban formal sector employees (LKR 29,642). Our living wage is around half of the Asia Floor Wage (LKR 48,608).

Figure 9: Wage Ladder



Sources: ¹ Department of Census and Statistics, 2014. Labour Force Survey, Colombo: Department of Census and Statistics. ² Extracted from interviews with estate management. ³ PPP conversion factor: The World Bank, 2016. Data. [Online] Available at: <http://data.worldbank.org/indicator/PA.NUS.PRVT.PP> [Accessed 10 March 2016] ⁴Department of Census and Statistics, 2012/13. Household Income and Expenditure Survey, Colombo: Department of Census and Statistics. ⁴ Department of Census and Statistics, 2012/13. Household Income and Expenditure Survey, Colombo: Department of Census and Statistics.

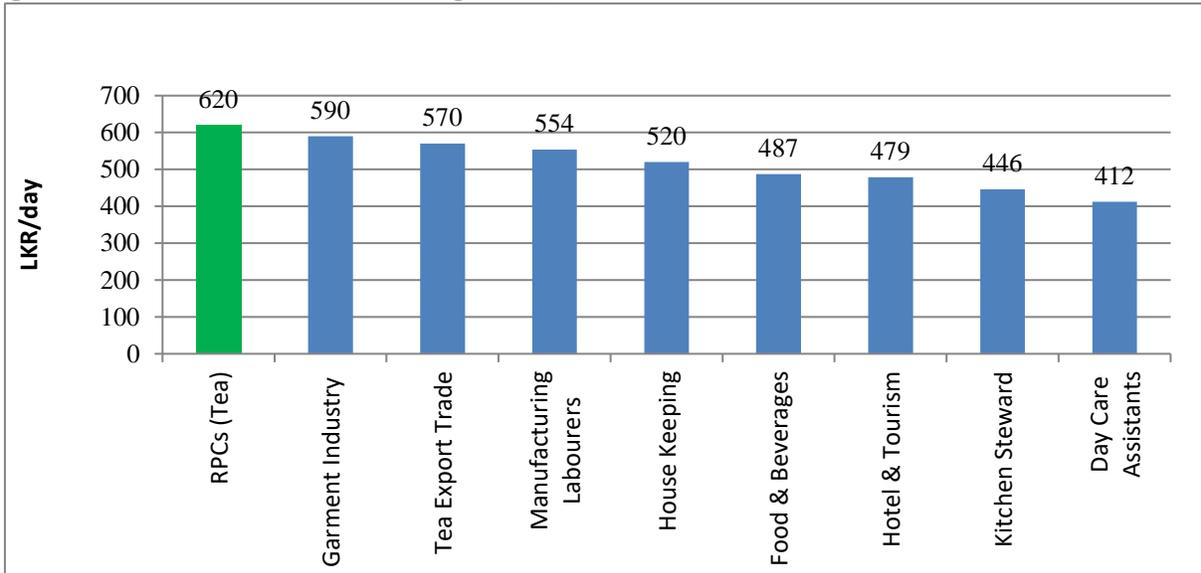
Sources: Note: Asia Floor Wage (LKR 48,608) is not shown in above figure because of scaling problems (<http://asia.floorwage.org/what>).

15.2 Recent Wage Trends

This section looks at plantation sector wage trends. We also compare the plantation sector wage trends with that of wage trends of daily laborers in other sectors and industries. Figure 10 shows the nominal daily wages of different industries (that includes overtime pay but not value

of in-kind benefits). Tea plantation sector workers are paid better than daily laborers in other key industries of the country. The daily wage (LKR 620) of tea workers is better than that in some of the most important sectors in the economy such as the garment sector (LKR 590), hotel and tourism sector (LKR 479), food & beverages sector (LKR 487), and manufacturing sector (LKR 554).

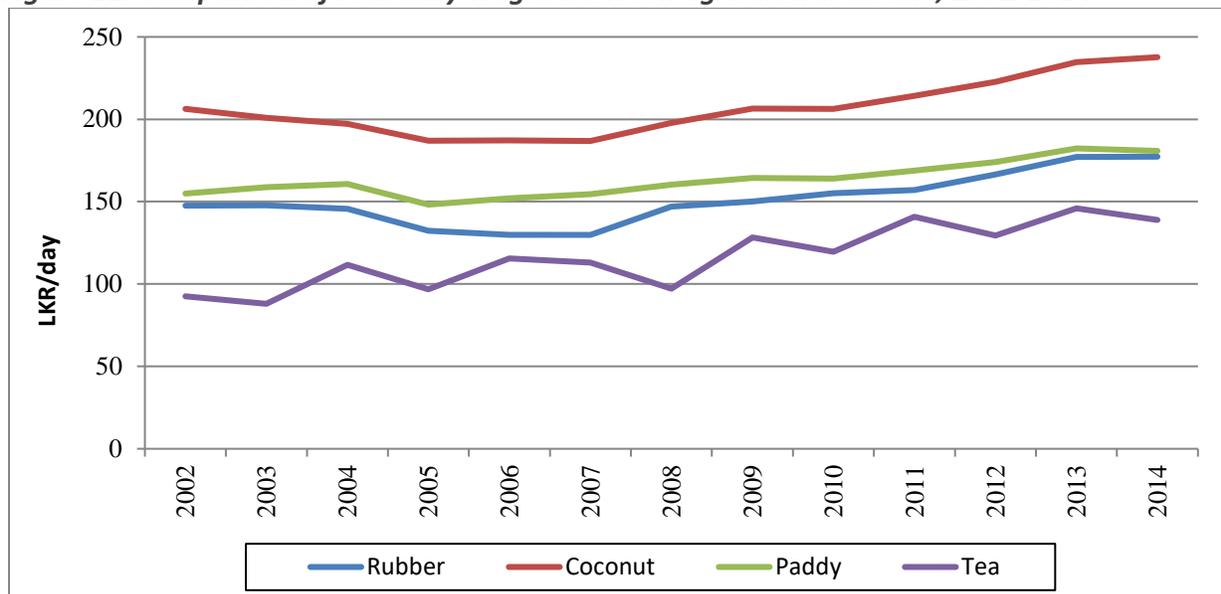
Figure 10: Sub-sectoral nominal wage rates, 2014



Source: Rajadurai, 2015.

Figure 11 illustrates the average daily wages of informal sector workers in different commercial plantation segments and in the paddy sector in real terms (i.e. taking inflation into account) between 2002 and 2014. Based on this comparison, tea plantation sector comprises the least-paid workers. Also, the fluctuation of the real wages year by year of tea estate workers implies a higher volatility of real wages in the tea sector compared to the other three agricultural sectors.

Figure 11: Comparison of real daily wages between agricultural sectors, 2002-2014

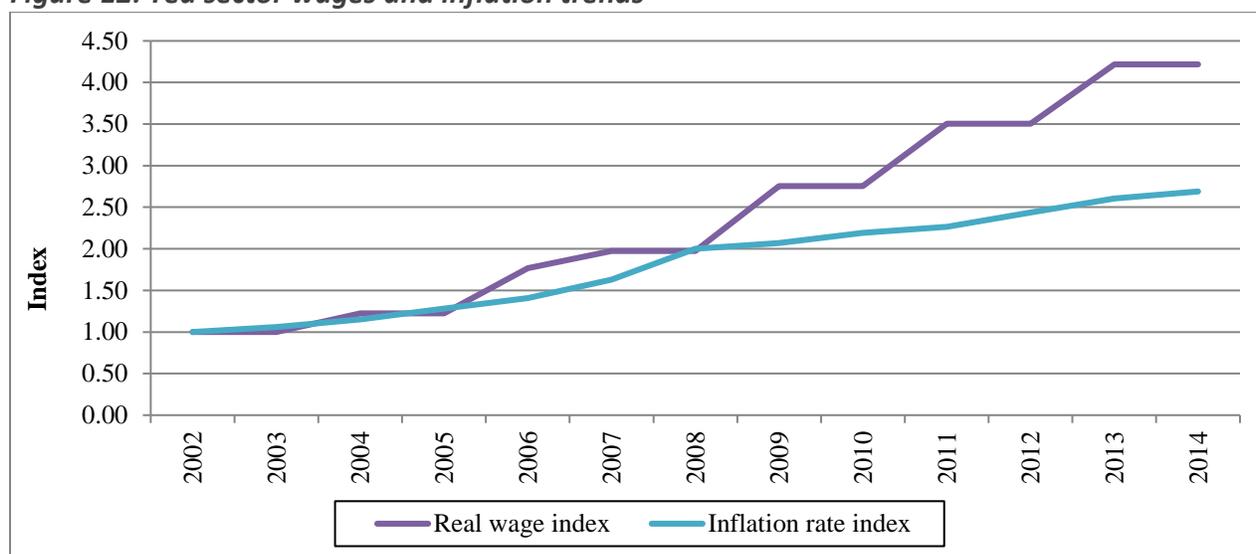


Source: (Central Bank of Sri Lanka, 2015)

Note: Nominal daily wages were converted to real daily wages using GDP deflator (1996=100).

Increases in the prices of goods and services over the years might have had a drastic impact on the plantation workers. Therefore, it is important to compare the wage increases with the inflation rate trends. Figure 12 illustrates the plantation sector wage index (with base year 2002) and the Colombo Consumers Price Index (CCPI) (also with base year 2002). As the figure shows, real wages did not change much between 2002 and 2008 and this was followed by a large increase in real wages between 2008 and 2014. This indicates wage adjustment relative to the inflation has been quite favorable to tea workers since 2008. This might help explain why the poverty rate in the estate sector went down so much in recent years and why the gap between prevailing wages and our living wage is relatively small.

Figure 12: Tea sector wages and inflation trends



Source: Authors calculation based on the Central Bank data (Central Bank of Sri Lanka, 2015).

16. CONCLUSIONS

Our take-home pay net living wage estimate for tea pluckers for December 2015 in the estate sector in Sri Lanka is LKR 19,126 (\$133) per month. Our gross living wage estimate is LKR 21,115 (\$147) per month after adding mandatory deductions. Table 9 below summarizes how our living wage estimates were arrived at. Our living wage estimates are much higher than the official poverty line wage for Sri Lanka (LKR 8,236) and the PPP adjusted World Bank extreme poverty line wage (LKR 6,170). Most importantly, our living wage is well above the World Bank poverty line of \$3.1 per day wage per month (LKR 10,067). It is clear that both the Sri Lankan official poverty line wage and World Bank poverty lines wages are too low to provide sufficient income to afford a basic living wage.

Existing salary package of the tea pluckers include the basic wage (LKR 450/day) plus mandatory allowances that include an attendance incentive (RS. 140/day), price share supplement (LKR 30/day), attendance bonus (LKR 850 per annum), and an over kilo payment for each additional kilo plucked over the threshold amount (LKR 20 per kg). It is important to note that even though the above allowances are mandatory and all workers are entitled to them, all workers may not necessarily get the full pay package depending on their attendance over and above allowed paid leave. The gross living wage estimate is considerably higher than the current wage given by the existing cash wage salary package of the tea pluckers, which we estimate is equivalent to LKR 16,022 per month. However, it is important to include the value of in-kind benefits provided by plantations in the existing salary package and use this full benefit package for comparison purposes to our living wage. The commonly received in-kind benefits for tea

pluckers include housing that we estimate is worth LKR 949 on average per worker per month. The final prevailing wage after considering in-kind benefits (LKR 16,971) still leaves a monthly wage gap of LKR 4,143 (LKR 166/day) relative to our estimated living wage of LKR 21,115.

This means that there is a considerable difference between prevailing wages for most workers on tea estates and our estimate of a living wage for the estate sector. Finding this difference is not surprising as estate sector workers have traditionally been considered as one of the poorest communities in Sri Lanka, having low living conditions. Even though, there have been significant improvements over the years, the living conditions of the tea estate community are still not up to standard, in spite of recent wage improvements. The sector is lagging behind other regions of the country with low quality houses having poor sanitary facilities and insufficient living space that creates adverse health effects on estate workers. However, all these conditions cannot be attributed only to the existing wage gap as plantation sector workers earn a relatively higher wage than the workers in other formal sectors including economically important industries such as garment, manufacturing, food and beverages and hotel and tourism. That prevailing wages of plantation workers are much lower than the average salary of urban formal sector employees (LKR 29,642) is understandable given the higher cost of living in urban areas.

There has been significant labour out migration from the estate sector. The future labour supply of tea plantations is at risk due to the reluctance of younger generations in tea estate worker families to follow their predecessors and work on the tea estates. Poor job recognition given to estate workers relative to similar jobs in other ventures and increased income opportunities and better livelihoods that are available in urban areas and overseas are also contributory factors for the labour supply problems in the estate sector.

It is important to emphasize that the living standard we used to estimate our living wage is basic for Sri Lanka and so represents a minimum level for decency for the estate sector in Sri Lanka. For example, conservative assumptions were used to estimate living costs for our living wage such as inclusion of less expensive food items in our model diet and use of basic decent housing standards. It is also worth noting that considerable thought and effort was made to increase the transparency of the estimation process used and to make it easier for stakeholders and others to understand the basis for our living wage estimate.

Table 9: Calculation of living wage for Sri Lanka estate sector

PART I. FAMILY EXPENSES	LKR	USD ^a
Food cost per month for reference family (1)	18,190	127
Food cost per person per day	133	0.93
Housing costs per month (2)	5,003	35
Rent per month for acceptable housing ^b	4,000	14
Utilities and minor repairs per month	1,003	21
Non-food non-housing costs/ month taking into consideration post checks (3)	8,866	66
Preliminary estimate of non-food non-housing costs	7,406	52
Health care post check adjustment	360	3
Education post check adjustment	1100	12
Additional 5% for sustainability and emergencies (4)	1,603	11
Total household costs per month for basic but decent living standard for reference family (5) [5=1+2+3+4]	33,661	235
PART II. LIVING WAGE PER MONTH		
Living wage per month, net take home pay (6) [6=5/#workers]	19,126	133
Mandatory deductions from pay (7) (list these in notes to table) ^c	1,989	14
Gross wage required per month for Living Wage (8) [8=6+7]	21,115	147
PART III: LIVING WAGE BASIC WAGE IN INDUSTRY CONSIDERING VALUE OF TYPICAL IN-KIND BENEFITS, CASH ALLOWANCES, AND BONUSES IN INDUSTRY		
Typical value per month of common in-kind benefits in industry (9A) (list in notes to table) ^d	949	7
Typical value per month of common cash allowances and bonuses in industry (9B) (list in notes to table) ^e	4,7730	34
Net living wage basic wage when workers receive typical in-kind benefits, cash allowances, and bonuses in industry (10) [10= 6-9A-9B]	13,404	93
Gross living wage basic wage when worker receives typical in-kind benefits, cash allowance, and bonuses in industry (11) [11= 8-9A-9B]	15,394	107

Notes: ^a Exchange rate of LKR143.45 to USD was used to calculate USD values. ^b Since there is no rental housing market in estate sector, user cost for acceptable owner-occupied housing was calculated based on the construction cost and service life expectancy of the home, using straight line depreciation method.

^c Mandatory deductions from pay include 8% EPF, LKR 150 each for union fund and Kovil Fund. ^d Common in-kind benefits include imputed cost for housing based on HIES 2012/13. ^e Common cash allowances and bonuses include attendance incentive (LKR 140/day), price share supplement (LKR 30/day), attendance bonus (LKR 850/annum), and over kilo payment after deducting employees EPF contribution (LKR 18.40/kg).

Table 10: Key values and assumptions for a living wage estimate

KEY VALUES AND ASSUMPTIONS	Comments
Location (industry or establishment if relevant)	Tea industry workers in Sri Lanka
Exchange rate of local currency to USD	LKR 143.45/USD (average Dec 2015)
Number of full-time workdays per month	25 days
Number of hours in normal workweek	40 hours
Number of workers per couple	1.76
Reference family size	4.5
Number of children in reference family	2.5

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ANNEXES

17. ANNEX 1: PAYMENT SCHEDULE (DECEMBER 2015)

Type of worker	Basic wage (per day)	Attendance allowance AI (per day)	Price share supplement PSS (per day)	Attendance bonus (per annum)	Over kilo payment (per kg)	Special extra rates (per day)
Plucker	450	140	30	850	18.40*	-----
Plucking Kangany/supervisor	450	140	30	850	-----	4.57
Sack worker	450	140	30	850	-----	1.52
Factory worker	450	140	30	850	-----	0.92
Indoor worker	450	140	30	850	-----	6.08
Outdoor worker	450	140	30	850	-----	3.8
Housing worker	450	140	30	850	-----	5.31
Medical orderly	450	140	30	850	-----	2.28
Watcher	450	140	30	850	-----	2.28
Sundry Kangani/supervisor	450	140	30	850	-----	3.05
Pruning worker	450	140	30	850	-----	2.66
Spraying worker	450	140	30	850	-----	1.59

Note: *After deducting worker's contribution for EPF (8%).

18. ANNEX 2: HEALTH CARE POST CHECK AND ESTIMATE OF NEEDED HEALTH CARE COSTS

	Cost/visit (LKR)	Number of visits per person/year	Cost per family of 4.5 persons/year (LKR)	Cost per family/month (LKR)
Doctor fee [1]	359	2.26	3,651	304
Medicine [2]	407	3.3	6,044	504
Laboratory test [3]	194	0.9	786	65
Total monthly cost for reference family (LKR) [4] = [1] + [2] + [3]				872
Amount implicitly included in preliminary NFNH estimate (LKR) [5]				512
Health care post check adjustment (LKR) [6] = [5] - [4]				360

Source: Rapid assessment survey by authors.

19. ANNEX 3: EDUCATION POST CHECK AND ESTIMATE OF NEEDED SCHOOL COSTS BY LEVEL

	Primary (Grades 1-5)	Lower secondary (Grades 6- 9)	Upper secondary (Grades 10-11)	Collegiate (Grades 12- 13)	Total
School/institute fees [1]	699	15	204	135	
School funds/ exam fees [2]	72	97	120	150	
Uniforms and school bag [3]	1,299	1,500	931	1,200	
Stationary (e.g. books, pencils, pens, etc.) [4]	2,799	2,344	2,131	1,500	
Private tuition fees (monthly) [5]	2,057	5,200	3,720	7,800	
Other expenses (monthly) [6]	1,585	511	1, 616	12,000	
Total cost [7] = sum of [1] to [6]	8,518	9,671	8,724	22,787	
Number of years in each level [8]	5	4	2	2	
Cost per child per level excl. nursery [9] = [7]*[8]	42,591	38,683	17,447	45,574	144,295
Cost per child per year [10] = [9]/18					8,016
Cost per child per month [11] = [10]/12					668
Cost for 2.5 children per month [12] = 2.5*[11]					1,670
Amount for education in preliminary NFNH [13]					566
Amount added to preliminary NFNH [14] = approx. [11]-[13]					1,100

Source: Rapid assessment survey by authors.