



# Living Wage Report

## Kenya

With a focus on rural Mount Kenya Area

Context Provided in Horticulture Industry

June 2015 – with update to October 2016

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Photo Courtesy of Fairtrade International and Photographer Malin Olofsson

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# Living Wage Estimates

## Kenya

With focus on rural Mount Kenya Area

Context Provided in the Horticulture Sector

### INTRODUCTION

#### 1. BACKGROUND

This report estimates a living wage for the rural Mount Kenya area for June 2015. The living wage estimated in this report we feel can be viewed as useful for rural Kenya, since prices in the rural Mount Kenya area are reasonably representative of prices in rural Kenya as a whole according to the Kenya National Bureau of Statistics (KNBS) 2007 Basic Report on Well-being. The KNBS rural price deflator for rural Central Province (0.98), where Mount Kenya is located, was only slightly below average (i.e. slightly below 1.00) for rural Kenya. The rural price deflator for Central Province was very similar to those for Rift Valley Province (0.98), Western Province (0.99), and Eastern Province (1.01), although slightly lower than for Coast Province (1.04), Nyanza Province (1.07), and North East Province (1.09) according to KNBS (2007).<sup>1</sup>

This report is in a sense a companion report to an earlier report by the authors that estimated a living wage for the non-metropolitan Lake Naivasha area of Kenya in March 2014. Both reports focus on areas where the fresh cut flower industry in Kenya has concentrations of flower farms. The largest concentration of flower farms in Kenya cluster around Lake Naivasha. Much smaller concentrations of flower farms are found in other areas that include rural areas of Mount Kenya and Kericho as well as areas fairly close to Nanyuki town where workers live in non-metropolitan urban areas that are similar to conditions around Lake Naivasha.

The need for the current report for rural Mount Kenya became apparent after our 2014 living wage estimate and report for the Lake Naivasha area was completed and it was found that flower farm workers in the Lake Naivasha area lived in urban areas near to flower farms and not in rural areas as had been expected. This meant that our living wage estimate for Lake Navaisha area was not representative of a living wage for rural Kenya and so was not relevant for other locations in Kenya where workers live in rural settings such for many flower farms, coffee farms, and tea plantations.

This report and our earlier report for Lake Naivasha use the same new methodology developed by the authors to estimate a living wage. This methodology builds on our earlier work on living wages published by ILO (see Anker, 2006a, 2006b, 2011) and our manual on how to estimate a

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<sup>1</sup> Small upward adjustments would be reasonable for living wage estimates for rural Coast Province, rural Nyanza Province, and rural North-East Province (see text).

living wage published in January 2017 by Edward Elgar Publishing (**Living wages around the world: Manual for measurement**). Our methodology has been used to estimate living wages for urban areas in more than twelve countries for multi-national corporations. It has also been used to estimate living wages in many countries for Fairtrade International and other members of the Global Living Wage Coalition (GLWC) that includes published living wage reports and estimates for rural Western Cape Province South Africa, rural northern Dominican Republic, rural southern Malawi, non-metropolitan urban Lake Naivasha Kenya, Ziway Ethiopia, Minas Gerais Brazil, Dhaka Bangladesh, and rural Bhadohi Uttar Pradesh India. Many other living wage studies are currently underway such as in China, Ecuador, Ghana, Guatemala, Mexico, Pakistan, Sri Lanka, Vietnam, and Costa Rica. The present study and report was commissioned by Fairtrade International while our 2014 living wage study and report for Lake Naivasha was commissioned by Fairtrade International, Sustainable Agricultural Network (SAN)/Rainforest Alliance, and UTZ.<sup>2</sup> The report is published through the Global Living Wage Coalition, of which all of the standards mentioned as funders for the Kenya reports are members, along with GoodWeave International, Forest Stewardship Council (FSC), and Social Accountability International (SAI), and in partnership with the authors and the ISEAL Alliance.

This report is purposely shorter than our 2014 report for Lake Naivasha. Readers are referred to our 2014 report that is available on the GLWC website for more details and explanations of our methodology, Kenyan context, background and history of living wages, and general principles of our living wage methodology. The present report emphasizes comparisons between our estimate of a living wage for the rural Mount Kenya area and our earlier estimate of a living wage for the makeshift non-metropolitan urban area that has sprung up near Lake Naivasha and its flower farms. Readers should remain aware, however, when reading this report, that flower farms in the Mount Kenya area are located in both peri-urban (non-metropolitan urban) areas that are similar in living costs and so living wage to the Lake Naivasha area, as well as rural areas that, as will be shown in this report, have a much lower living wage because living costs are much lower. The present report also updates our living wage estimates for rural Mount Kenya area and non-metropolitan Lake Naivasha area for inflation to October 2016 (when a validation workshop was held in Nairobi with stakeholders from flower farms, tea plantations, and coffee estates as well as civil society) so that our non-metropolitan Lake Naivasha and rural Mount Kenya living wages are up-to-date and more comparable. The present paper also takes into consideration the views of participants from this workshop.

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<sup>2</sup> The 2014 living wage study for Lake Naivasha Kenya was the fourth pilot study done as part of the “Shared Approach to Living Wage” memorandum of understanding that Fairtrade International, Rainforest Alliance, Sustainable Agriculture Network, and UTZ have with ISEAL and three other certifying or standard setting organizations (Forestry Stewardship Council (FSC), GoodWeave, and Social Accountability International (SAI)). This memorandum of understanding commits these organizations to “adopt a common definition of living wage and apply a common methodology to estimating living wage levels ... with long term goal and shared mission of these seven organizations to see improvements in workers’ conditions, including wage levels, in the farms, factories and supply chains ... by seeking support from brands, buyers, and retailers to make wage growth possible at the primary production level possible and ... working together with the relevant stakeholders.”

## 2. LIVING WAGE ESTIMATE

Our estimate of a living wage for rural Mount Kenya for June 2015 is KSh11,937 (\$124) per month before consideration of taxes and other mandatory deductions and KSh12,969 (\$135) after consideration of taxes and mandatory (NSSF, NHIF, and PAYE) to get gross pay needed by workers to be able to live at a decent standard of living. These are equivalent to a KSh12,852 net living wage and a K13,943 gross living wage for October 2016 after taking into consideration inflation in Kenya between June 2015 (study date) and October 2016 (validation meeting with stakeholders and civil society) as well as new tax laws and tax rates. This is much lower than our living wage for the Lake Naivasha area (KSh19,305 take home living wage, \$191; and KSh22,104, \$219 gross living wage) after updating our 2014 estimates for inflation in prices between March 2014 and October 2016 according to KNBS (Kenyan Bureau of Statistics) CPI statistics as well as new tax laws and tax rates. It is again worth noting as indicated above that it is possible to consider our living wage estimate for the rural Mount Kenya area in the present report as a living wage estimate for rural Kenya since prices in rural Central Province (where Mount Kenya is located) are only 2% lower than average rural prices in Kenya as a whole according to KNBS (2007).

Before beginning this report, it is important to point out that while the living standards we used to estimate our living wages for rural and non-metropolitan urban Kenya are decent, they are for a basic standard of living in keeping with the concept of a living wage. It is also useful to point out as was done in our 2014 report that the real wages of flower farm workers have fallen significantly in recent years despite being negotiated in CBAs (by around 40% between 2004 and 2014 for newly hired workers); and that the reason why our estimated living wage for Lake Naivasha area is much higher than our living wage for rural Mount Kenya is because most flower farm workers in the Lake Naivasha area (as well as many flower farm workers in the Mount Kenya area) live in urban townships that have sprung up near to flower farms.

The remainder of this report provides an explanation of how our living wage was estimated. Readers are referred to our 2014 report for the Lake Naivasha area for more details on the methodology and justification of this approach. Transparency is stressed so that stakeholders, the value chain, and others are able to query assumptions and calculations that went into making our living wage estimates for Kenya. In both Lake Naivasha and rural Mount Kenya areas, houses where workers live were visited to find local housing costs; markets and shops where workers buy food were visited to find local food prices; discussions were held with key informants in each area such as key members of civil society, government, NGOs, and trade unions; and secondary data from government and researchers, and reports from researchers, NGOs, government, and international organizations were used.

## 3. INTRODUCTION TO LIVING WAGE<sup>3</sup>

The idea of a living wage is that workers and their family should not have to live in poverty. But a living wage should do more than simply keep workers and their families out of poverty. It should also allow them to participate in social and cultural life. In other words, wages should be

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<sup>3</sup> This section borrows in part from our 2014 Lake Naivasha living wage report for completeness.



sufficient to ensure that workers and their families are able to afford a basic life style considered decent by society at its current level of development. Workers should receive a living wage in normal work hours without having to work overtime. The following definition of a living wage (which is consistent with findings in the comprehensive ILO review of living wages in Anker, 2011) was agreed to by 7 standard setting/certifying organizations: Fairtrade International, GoodWeave International, Forest Stewardship Council (FSC), Rainforest Alliance, Sustainable Agriculture Network (SAN), Social Accountability International (SAI), and UTZ, as well as by the GLWC partner, ISEAL Alliance.

Remuneration received for a standard workweek by a worker in a particular [time and] 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, healthcare, transport, clothing and other essential needs including provision for unexpected events.

The idea of a living wage is not new (see Anker 2011 for the following and other quotes). Nor is it a radical idea. Indeed, it can be thought of as a mainstream idea throughout history. Adam Smith (1776) wrote that “No society can surely be flourishing and happy, of which far greater part of the members are poor and miserable. It is equity besides that they who feed, clothe and lodge the whole body of the people should have such a share of the produce of their own labor as to be themselves well fed, clothed and lodged.” Pope Leo XIII (1891) in Papal encyclical *Rerum Novarum* stated that “Remuneration must be enough to support the wage earner in reasonable and frugal comfort. If through necessity, or fear of worse evil, the workman accepts harder conditions because an employer or contractor will give no better, he is the victim of fraud and injustice.” American President Franklin D. Roosevelt (1933) wrote that “Liberty requires opportunity to make a living – a living decent according to the standard of the time, a living which gives men not only enough to live on but something to live for.” International Labor Organization Constitution (1919) states that “Peace and harmony in the world requires provision of an adequate living wage”, and United Nations’ Universal Declaration of Human Rights (1948) states that “Everyone who works has the right to just and favorable remuneration ensuring for himself and his family an existence worthy of human dignity.” See Anker (2011) for descriptions of living wage by other prominent individuals, international organizations, NGOs, companies, and governments.

#### 4. HOW OUR LIVING WAGES FOR KENYA WERE ESTIMATED

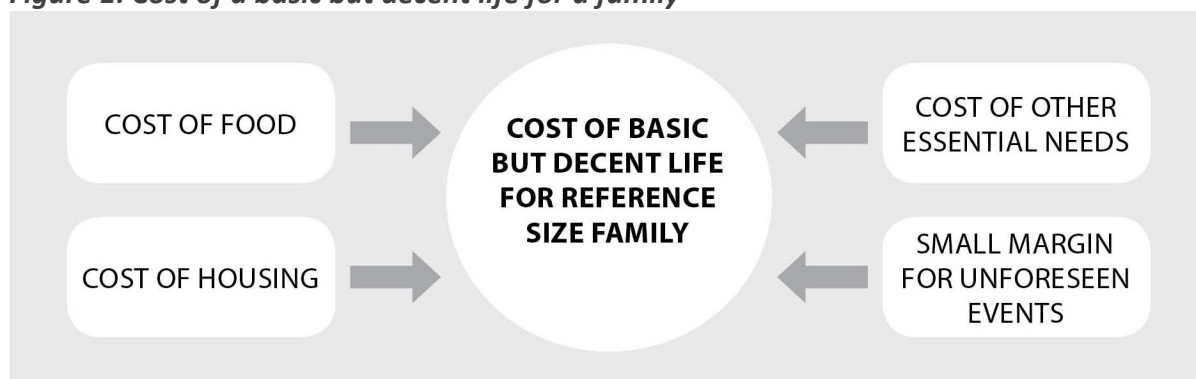
The figures below illustrate how we estimated living wages for the rural Mount Kenya area and the non-metropolitan urban area around Lake Naivasha.

We started by estimating cost of a basic living standard that would be considered decent for present day rural Kenya and non-metropolitan urban Kenya. This was done by summing up separate estimates for the cost for a reference size family of a low cost nutritious diet, basic decent housing, and all other needs at a decent level in each area, plus a small margin for

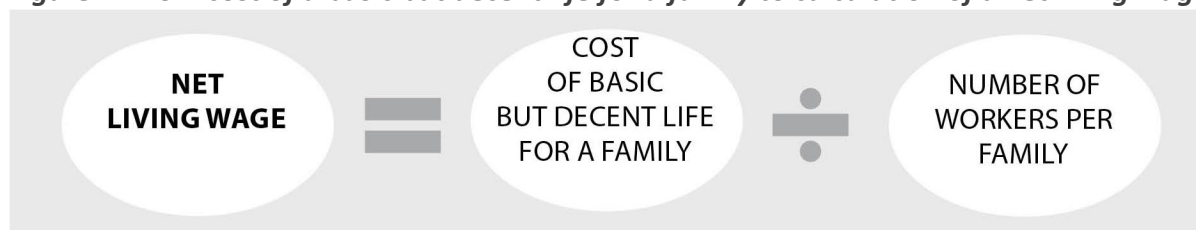


unforeseen events such as illnesses and accidents to help ensure that common unplanned events do not easily throw workers into poverty (figure 1). Before accepting our preliminary estimates of cost for all non-food non-housing items, we made sure that sufficient funds are provided for health care and education as these are considered human rights around the world. The sum of these three expense groups (food, housing, and non-food non-housing) plus a small margin for unforeseen events) represents the total cost of a basic but decent quality of life for a typical family size in the area. This cost is then defrayed over a typical number of full-time equivalent workers per family to get the net living wage (figure 2). This living wage indicates take home pay required and so represents a net living wage estimate. A gross living wage is then estimated by adding mandatory deductions from pay such as for social security, national health services, and income taxes (figure 3).

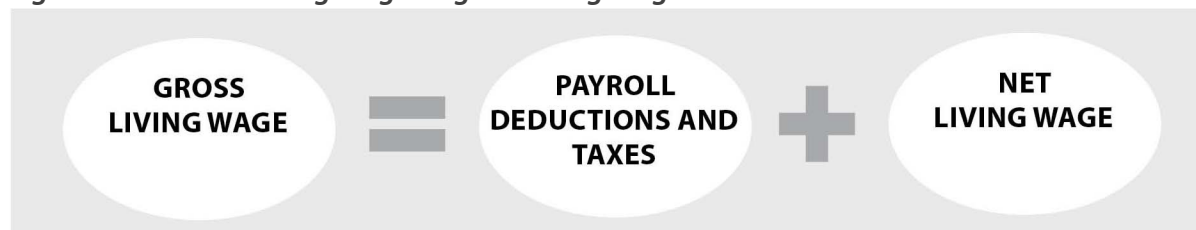
**Figure 1: Cost of a basic but decent life for a family**



**Figure 2: From cost of a basic but decent life for a family to calculation of a net living wage**



**Figure 3: From net living wage to gross living wage**



## COST OF A BASIC BUT DECENT LIFE FOR A WORKER AND THEIR FAMILY

### 5. FOOD COSTS

Food cost was estimated using local food prices and a low cost nutritious model diet that is consistent with local conditions and relative food prices. This meant that the model diets and food prices differed somewhat between the rural Mount Kenya area and non-metropolitan urban Lake Naivasha area.

#### 5.1 General Principles Used to Develop Model Diet

The following general principles were used to establish the model diets used to estimate food costs for our living wage estimates for Kenya. The rural and non-metropolitan urban model diets needed to be:

- i. Nutritious - with sufficient calories as well as acceptable quantities of proteins, fats, and carbohydrates, and fruits and vegetables - to help ensure that workers and their families have enough to eat and can be healthy. Note that our model diet for rural Mount Kenya area has more calories per person (2.8%), because we assume that spouses in rural Kenya have vigorous physical activity whereas we assume that spouses in non-metropolitan urban Kenya have moderate physical activity.
- ii. Relatively low in cost for a nutritious diet. Both model diets include less expensive types of cereals, beans, meats/fish, fruits and vegetables, etc. found in local markets that workers find acceptable in order to keep down total food cost. This approach mimics how cost conscious workers shop for food while maintaining nutritional standards. Note that we estimate that food prices are around 8% lower in the rural Mount Kenya area compared to the Lake Naivasha area based on our local food markets surveys in these areas.<sup>4</sup>
- iii. Consistent with income levels. Our model diet for rural Mount Kenya is a slightly less expensive diet than our model diet for Lake Naivasha in that it includes fewer grams of relatively expensive foods and greater quantities of less expensive foods. This is consistent with Engel's Law and lower income levels in rural areas compared to urban areas in Kenya.

<sup>4</sup> To get an idea of the difference in food prices between rural Mount Kenya and Lake Naivasha areas, we calculated the cost of our rural Mount Kenya model diet using: (i) prices from our local food market survey for June 2015 for rural Mount Kenya area and (ii) prices for March 2014 for Lake Naivasha area. We found that cost of this model diet was virtually the same (0.1% difference). This means that food prices are lower in rural Mount Kenya area by around the inflation in food prices in Kenya between March 2014 and June 2015, which was 8.3% according to KNBS CPI statistics.

- iv. Consistent with local food preferences, local food availability and local food costs. Both of our model diets for Kenya include considerable amounts of maize meal, beans, and commonly eaten green vegetables.

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## **5.2 Model Diet Used to Estimate Food Costs for Living Wage**

The model diet we used to estimate a living wage for the rural Mount Kenya area is shown below in Table 1. There are 2351 calories in this model diet. This is slightly more than the 2288 calories used to estimate our model diet for Lake Naivasha area.<sup>5</sup> Note that we assumed for both rural Mount Kenya and non-metropolitan urban Lake Naivasha that one adult (person working on flower farm or possibly a coffee farm or tea plantation) has vigorous physical activity level while children in the reference family have moderate physical activity level. For the rural Mount Kenya area, we assumed that the spouse has vigorous physical activity in keeping with typical activity patterns in rural Kenya, while the spouse in the non-metropolitan urban Lake Naivasha area has moderate physical activity in keeping with typical urban activity patterns.

The model diets we used for the rural Mount Kenya area and the urban non-metropolitan Lake Naivasha area are quite similar - although the rural Mount Kenya model diet is less expensive per person, which is consistent with Engel's Law and the fact that rural Kenya is poorer than urban Kenya. We began development of our model diets for urban and rural Kenya with information on actual food consumption in rural or urban areas of Kenya. This led to small differences in our rural and urban model diets, because people in urban areas are reported to eat more expensive foods than people in rural areas in surveys, since people in urban areas tend to have higher incomes. Despite this, differences in our model diets for urban and rural Kenya are relatively small because we require both model diets to meet WHO minimum nutrition standards. The only differences in our model diets for rural Mount Kenya and Lake Naivasha are: (i) fewer slices of bread in rural Mount Kenya model diet (1 slice every other day in the rural Mount Kenya model diet compared to 2 slices per day for children and 1 slice for adults every day in the Lake Naivasha model diet); (ii) less milk for adults in the rural Mount Kenya model diet (1/4 cup of milk to add to tea for adults in the rural Mount Kenya model diet compared to 1/2 cup to add to tea in the Lake Naivasha model diet); (iii) slightly less potatoes (90 grams in the rural Mount Kenya model diet compared to 100 grams in Lake Naivasha model diet); and (iv) slightly more cooking oil in the rural Mount Kenya model diet (30 grams in the rural Mount Kenya model diet compared to 25 grams in the Lake Naivasha model diet).

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<sup>5</sup> The number of calories required was determined using Schofield equations (WHO/FAO, 2003) that are widely used to estimate calorie needs. These equations are based on age, sex, average height, and activity level of family members. Information on average height for adult women is from 2008/09 DHS based on data from Subramanian et al (2011). Average height for adult men was assumed to be 10 centimeters (about 4 inches) higher. The average number of calories required per person for the reference family turned out to be 2351 calories per person for rural Mount Kenya area and 2288 calories per person for Lake Naivasha area.

The model diet for the rural Mount Kenya area is shown in Table 1. The cost of this model diet was increased by 10 percent to allow for some variety, by 1 percent to allow for salt, spices, and condiments,<sup>6</sup> and by 3 percent to take into consideration minimal spoilage and wastage.<sup>7</sup> Variety is important to ensure that a diet is nutritious and people have some opportunity to vary their diets. This is especially important for vegetables, fruits and meats. These same percentages were used to estimate the cost of food for Lake Naivasha area.

**Table 1a: Our model diet and food cost per person per day using food prices observed in markets where workers shop in rural Mount Kenya area, June 2015**

Food items <sup>c</sup>	Grams edible <sup>a, b, j</sup>	Cost per kg <sup>e</sup>	Cost <sup>f</sup>	Comments <sup>w</sup>
Maize	379	38.3	14.53	Maize provides 58% of all calories. Rice is more expensive. Rice is possible sometimes using miscellaneous funds for variety.
Bread	13	112.5	1.46	Equivalent to 1 slice every other day (compared to 2 slices pd for children & 1 slice pd for adults in Lake Naivasha)
Potato	90	26.2	3.14	Potato least expensive root and tuber (also in Lake Naivasha)
Beans	56	76.3	4.27	Least expensive bean in each market visited. Average of wariumu (kidney bean) and next least expensive bean used in Lake Naivasha.
Milk	175	50	8.73	Fresh unpackaged milk (same in Lake Naivasha). 1 cup for children; and 1/4 cup for adults to add to tea (compared to 1 cup for children and ½ cup for adults in Lake Naivasha).
Egg	7	220.1	1.73	1 egg every week. Buy from farmer ½ the time as less expensive.

<sup>6</sup> Households spend approximately 1% of their food expenditure for salt, spices and condiments according to data from both 2005/06 Kenyan Integrated Household Budget Survey and 2010 urban CPI expenditure weights.

<sup>7</sup> "A significant proportion of the food produced [in Kenya] is lost due to post-harvest spoilage and wastage, including in some cases from toxin causing micro-organisms. Losses are often substantial for grain and produce (fruits and vegetables) along with spoilage of animal products including milk, meat and fish. Losses of stored maize are estimated to be a staggering 30-40% per annum." (Republic of Kenya, Agricultural Sector Coordination Unit, 2011 National food and nutritional security policy)

Food items <sup>c</sup>	Grams edible <sup>a, b, j</sup>	Cost per kg <sup>e</sup>	Cost <sup>f</sup>	Comments <sup>w</sup>
Meat/poultry/fish	22	349	9.23	Mutton (with offal once per 10 meals). Less expensive than beef. Allows for around ¼ kg purchased mutton for family every other day. (Beef and offal used for Lake Naivasha).
Vegetable 1	61	11.5	0.88	180 edible grams of vegetables. Cabbage least expensive vegetable (same in Lake Naivasha)
Vegetable 2	61	19.9	2.31	Kale next least expensive vegetable (same in Lake Naivasha)
Vegetable 3	61	25.7	2.12	Avocado least expensive non-green vegetable (carrot used in Lake Naivasha)
Fruit	61	46.1	3.61	Average of mango (least expensive fruit) & orange (least expensive fruit available year around). (Mango and banana used in Lake Naivasha).
Cooking oil	30	120	3.60	Vegetable oil sold by block (same in Lake Naivasha). Much less expensive than liquid vegetable oil sold in bottle.
Tea	1.5	400	0.58	Loose tea (same in Lake Naivasha). 2 cups per day for adults.
Sugar	30	95.8	2.87	Sugar in plastic bag packed by local seller. Much less expensive than pre-packed branded sugar. 7 teaspoons per day.
Total			59.06 (\$0.62)	Around 15% lower than for Lake Naivasha considering inflation in food prices between March 2014 and June 2015.
Total with 14% miscellaneous food costs <sup>d</sup>			67.92 (\$0.71)	

Notes: pd indicates per day. pw indicates per week. <sup>a</sup> Edible (consumed) quantity differs from purchased quantity for foods with inedible parts such as fruits and vegetables with inedible skin or stem; beef with bone; and egg with shell. Percentage inedible is drawn from United States Department of Agriculture (USDA) web site ([www.ndb.nal.usda.gov/ndb/foods](http://www.ndb.nal.usda.gov/ndb/foods)) except for mango since people in Kenya eat skin of mango. <sup>b</sup> Number of calories, proteins, fats, and carbohydrates are estimated using USDA reported values per 100 grams for each food item. <sup>c</sup> Specific food items used to cost our model diet are foods that are low cost for each major food group. <sup>d</sup> Additional miscellaneous food costs are assumed to be 14 percent. This consists of: (i) 1% for miscellaneous foods not listed in our model diet such as salt, spices, chicken stock cubes and condiments (with soft drinks, cakes and sweets excluded); (ii) plus 10% to allow for some variety (e.g. fish or chicken sometimes; rice sometimes; more expensive vegetables and fruits sometimes; holiday meals sometimes; etc.); (iii) plus 3% for minimal waste and spoilage. The assumed 1% for salt, spices and condiments is similar to approximately 1% households spend for these according to 2005/06 Kenyan Integrated Household Budget Survey data and 2010 urban CPI weights. Assumed 10% for variety is a conservative assumption. Assumed 3% for spoilage and waste is a conservative assumption. <sup>e</sup> Cost per kilo is based on prices observed in food markets and shops in rural Mount Kenya in June 2015. Food prices for each food item included in model diet were collected from 5-12 sellers. Median of observed prices was used except for egg which was assumed to be purchased directly from farmer one-half the time. Observed prices of kale was reduced by 10% to take into consideration that its price in June (month of our local food market survey) is typically higher than average for the year. <sup>f</sup> Cost for each food item was calculated by multiplying quantity purchased by cost per kg. <sup>g</sup> In addition to having a sufficient number of calories (2351), our model diet meets WHO recommendations for proteins (10-15% of all calories), fats (15-30% of all calories) and carbohydrates (less than 75% of all calories). 10.6% of calories in the model diet are from proteins, 24.1% are from fats and oils, and 65.2% are from carbohydrates. <sup>h</sup> Diet is for average person in family of 5.5 persons. Portions for adults are bigger than for children. Calories required by adult males, adult females and children were calculated using Schofield equations. Then, average number of calories required per person for the reference family was calculated which turned out to be 2351.

Cost of our model diet for rural Mount Kenya in June 2015 is KSh67.92 (\$0.71) per day, which is around 15% lower than cost of our model diet for Lake Naivasha. This difference in cost is traceable to (i) lower food prices in rural Mount Kenya area which we estimated to be around 8% lower, and (ii) our model diet for rural Mount Kenya area having fewer grams of some expensive food items such as bread and milk for adults - see above - in keeping with it being a poorer area. Total food costs for the reference family is, however, only around 6% lower for rural Mount Kenya area compared to Lake Naivasha area (taking into consideration inflation since March 2014), because the reference family is bigger in the rural Mount Kenya area.

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### 5.3 Food Prices

To estimate the cost of our model diets, local researchers collected food prices from local markets where workers typically shop in both rural Mount Kenya and Lake Naivasha areas. This allowed us to estimate the cost of our model diet using prices that workers actually pay for food. Local researchers visited 5 markets in the rural Mount Kenya area and collected prices from 5-12 different sellers for each of many different food items. In this way, it was possible to determine which food items were least expensive for each food group (e.g. mango and orange for fruits; mutton for meats; kale, cabbage and avocado for vegetables); these foods were then included in our model diet for the rural Mount Kenya area. <sup>8</sup>

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<sup>8</sup> For each major food group (e.g. meats/fish/poultry, vegetables, oils, fruits, pulses, etc.), we identified the lowest cost item(s) per edible gram for inclusion in our model diet to represent each major food group. For example, fruits are represented in our model diets by mango and orange for rural Mount Kenya and by mango and banana for

Since food prices were collected in a particular month (March for Lake Naivasha and June for rural Mount Kenya), there is an implicit assumption that these prices are representative of food prices throughout the year. Even though the way we choose food items to include in our model diet (lowest cost food items for each food group) takes into consideration seasonality in food prices, it is still possible that the food prices we collected in March and June overestimated or underestimated typical food prices over the year. This is especially possible for vegetables and fruits that are often seasonal. To determine if June food prices for rural Mount Kenya are reasonably representative of prices throughout the year, we analyzed monthly food price data for 2011-2013 reported by Kenya National Bureau of Statistics (KNBS) on its web site as well as used results from an article that looked at seasonality of wholesale fruit and vegetable prices in Nairobi, Mombasa and Kisumu for 1994-2003 (Mathenge and Tschirley, 2006). Based on these analyses of seasonality in food prices, we decided to reduce the prices we observed in June for the rural Mount Kenya area by 10% for kale.<sup>9, 10</sup>

## 6. COST OF HOUSING FOR WORKERS IN RURAL MOUNT KENYA AREA

Housing costs for our living wage were estimated by summing the cost of: (i) rent for an acceptable dwelling or use value of an acceptable owned house, and (ii) utility costs (water, lighting, and cooking fuel).<sup>11</sup> We estimated this to be KSh3,260 (\$34) per month.

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### 6.1 Standard for Basic Acceptable Housing

In order to estimate cost for basic acceptable housing, it is necessary to set minimum standards for housing. We used the same housing standard for the rural Mount Kenya area as for the Lake Naivasha area with one exception. Electricity was not required for the rural Mount Kenya area, because a minority of rural houses in Kenya have access to electricity. Readers are referred to our 2014 living wage report for Lake Naivasha area for justification of our housing standard, which is indicated below:

- durable floor such as cement
- durable walls such as stone or cement

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Lake Naivasha; vegetables are represented by cabbage, kale and avocado for rural Mount Kenya and by kale, cabbage and carrot for Lake Naivasha; milk by unpackaged unpasteurized milk in both areas; meats/fish/poultry by mutton and offal for rural Mount Kenya and by beef and offal for Lake Naivasha; roots and tubers by potato in both areas; oils by oil sold in solid block in local markets in both areas; sugar by brown sugar packed by local shop in plastic bag in both areas; and cereals by maize in both areas.

<sup>9</sup> We did not reduce the June price we observed for cabbage despite the clear seasonality found by Mathenge and Tschirley (2006), because we found a very low price for cabbage in our local market survey for rural Mount Kenya area (only KSh11.5 per kilo, and so about \$0.05 per pound).

<sup>10</sup> Potato prices in Kenya are known to be seasonal with lower prices around harvest periods especially July-August and to a lesser extent January-February. The issue here is whether March or June prices are average for the year. Since they appear to be average for June and high for March, we adjusted the March price but not the June price for potatoes.

<sup>11</sup> We assume that there is no need for fuel for heating.



- durable roof of zinc iron or cement without leaks
- sufficient number of windows for adequate lighting and ventilation (preferably 2 windows per room)
- pit latrine in good condition with slab and sufficiently deep for proper drainage and used by at most 15 persons
- electricity (Lake Naivasha area only)
- safe water source
- kitchen area separate from sleeping quarters
- around 30-40 square meters of floor space <sup>12</sup>
- building in reasonable condition
- safe outside environment

The above housing standard exceeds current housing conditions found in rural Kenya. This is necessary to ensure healthy and decent housing as stipulated in international conventions and by international organizations. For example, according to data from the 2005/06 Kenyan Integrated Household Budget Survey, the 2007 Health Expenditure and Utilization Survey and the 2008/09 Demographic and Health Survey, only 26% of rural houses in Kenya have a cement floor, only 23% have concrete/stone/cement walls, only 10% have a flush toilet/ ventilated improved pit toilet, and only 38% have piped water, borehole, or protected well (although around 76% of rural houses have a zinc iron roof). Only 8% of rural homes had electricity according to 2008/09 DHS, but this percentage is known to have increased significantly in recent years.

Our housing standard is basic. Acceptable houses in our standard are not required to have an indoor toilet, indoor running water, indoor kitchen, or electricity.

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## **6.2 Rent for Basic Acceptable Housing**

To help determine rent of an acceptable house, 4 typical rented homes of flower farm workers in the rural Mount Kenya area were visited. All 4 houses were well below our housing standard. Three of these rentals consisted of one small room of around 100 square feet (10 feet by 10

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<sup>12</sup> Kenya Ministry of Housing (2004) considers low cost urban housing as “comprising a minimum of two habitable rooms, cooking area and sanitary facilities, covering a minimum gross floor area of 40 square meters for each household”.

feet) or around 9 square meters, and the fourth rental included two small rooms totaling around 180 square feet of living space. All four rentals had a cement floor and zinc iron roof with wood walls. The rooms were without any facilities such as indoor water or toilet. Their wood walls consisted of very poorly joined slats that let in so much air that tenants lined the inside of their walls with cardboard. Their outdoor pit toilets were all in very poor condition. These four unacceptable rentals rented for KSh600-1,300 per month excluding utilities and cost KSh66.7 per square meter on average. This implied around KSh2,000-2,400 per month (KSh2,200 on average) for an unacceptable house with the required 30-36 square meters of living space.<sup>13</sup>

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### 6.3 User Cost of Owned House in Rural Mount Kenya Area

Three approaches (user cost, payment outlays, and acquisition cost) are used by national statistical offices to estimate the value of owner-occupied housing (ILO, 2004, Consumer Price Index Manual). The International Comparability Program (ICP) of the World Bank follows the user cost approach to estimate purchasing power parity values (PPP) for all countries in the world (OECD and Statistics Norway, 2010; and Diewert, 2010). Below we also use the user cost approach to estimate the use value/rental equivalent value of acceptable owner-occupied houses in rural Mount Kenya area. This estimate requires information on: cost of building an acceptable house, maintenance and repair costs, and expected service life of a house.<sup>14</sup>

Most families own their home in rural Kenya and do not rent (81% own their house according to the 2008/09 DHS). As a result, there is not much of a rental housing market in rural Kenya and the rental housing that is available is often substandard as we found. This means that a better way of estimating the cost of housing would be to look at the cost of owning a home in rural Kenya.

We obtained information on the cost of building a new house in the rural Mount Kenya area from several sources - (i) a flower farm worker in the area who recently built a poorly constructed house in a rural area, (ii) a NGO official who built a well-constructed addition to his house in rural Central Province, (iii) a coffee farm in Central Province that recently built a rural

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<sup>13</sup> We also spoke with managers of a coffee farm in the Kiambu area of Central Province about the cost of renting in a rural area. They indicated that a 2-room house could be rented for KSh2,500-3,000 per month. They also indicated that a bare 12 feet by 12 feet room rented for KSh1,000-1,500 per month (or KSh93.4 per square meter on average), which implied KSh2,800-3,800 per month for a house with 30-36 square meters. These estimates are higher than those for the rural Mount Kenya area as expected because Kiambu is much closer to Nairobi.

<sup>14</sup> Note that we ignore in our calculation the opportunity cost of money invested in a house even though this is often included in the user cost approach. This cost is typically estimated by multiplying the net invested value of a house by a reasonable real interest rate (usually around 2.5%) and then subtracting the expected rate of capital appreciation. We ignore this, because how to estimate the opportunity cost of the investment in a house is highly controversial and subjective. The appropriate real interest rate and the expected capital appreciation rate to use are highly subjective and, in any case, they have counterbalancing effects. Readers are referred to the authors' manual on living wages for justification of our approach (Anker and Anker, 2017).

house, (iv) Habitat for Humanity that builds basic but decent houses, and (v) the Institute of Quantity Surveyors of Kenya.

A small basic rural house with stone walls, zinc iron roof, and cement floor and foundation costs KSh450,000-500,000 to build using local materials according to Habitat for Humanity. This includes the cost of local materials and skilled labor but not the cost of unskilled labor that has to be provided for free by the eventual owner. If we assume that the free unskilled labor is worth around 10% of construction costs, the cost of a Habitat for Humanity house would come to around KSh495,000-550,000 (around KSh520,000 midpoint). This is much more than the approximately KSh200,000 cost reported by a flower farm worker who recently built a small rural house. But this flower farm worker's house did not come close to meeting our housing standard since it had poorly joined wood walls and did not have a cement foundation or floor (which alone would cost around an additional KSh150,000 according to a local architect). An official of an NGO working in Nairobi reported that he recently spent KSh140,000 for a well-constructed 100 square foot (9.3 square meters) addition in a rural area – which implies around KSh450,000-540,000 (around K500,000 midpoint) for a building without amenities for 30-36 square meters of living space on a prorated per square meter basis. A coffee farm we visited in Central Province indicated that a small basic house costs them KSh340,000 to build. But this cost did not include the cost of sand or labor and so its cost could be somewhere around KSh500,000 all in. It is worth noting that the above estimates of the cost of building a small house in rural Mount Kenya area is much lower than the cost of building according to the Institute of Quantity Surveyors of Kenya (<http://architecturekenya.com/much-will-building-cost-construct-kenya/>). For 30 square meters, construction cost in Nairobi is said to be KSh1,230,000 for a high class single unit (maisonette) and KSh960,000 for a low cost low rise flat.

The above estimates of construction cost for a basic but decent 30-36 square meter house indicate that this is somewhere around the KSh520,000 cost of a Habitat for Humanity house. This cost is similar to the around KSh500,000 cost reported by a coffee farm we visited in Central Province as well as by a NGO official we spoke to. Also, KSh520,000 is roughly consistent with the KSh200,000 cost of a flower farm worker's poorly constructed house with badly joined wood walls and poorly laid out earthen floor.

### ***6.3.1 Service life of an acceptable house***

The Habitat for Humanity office in Nairobi felt that their houses have a service life of 70 years. In contrast, the coffee farm managers and NGO official we spoke to felt that 50 years was a reasonable estimate of service life for well-constructed rural houses. Our feeling is that a service life of 50 years is a reasonable assumption given that: (i) Habitat for Humanity in Nairobi also assumed very high annual maintenance costs (see next section), (ii) Habitat for Humanity in Malawi felt that their houses have a service life of 30 years, (iii) the typical service life assumption for houses in Europe and the United States is 70 years (OECD and Statistics Norway, 2010), and (iv) we recommend using 50 years in our (Anker and Anker, 2017) living wage manual for developing country situations in the absence of reliable data on this.

### **6.3.2 Maintenance and repair costs**

The typical assumption for maintenance and repair costs is between 2% and 4% of house value with 2% the most common assumption for high-income countries (Diewert, 2010). This implies an annual cost for maintenance and repairs of a basic acceptable house of between KSh10,400 (using 2%) and KSh20,800 (using 4%). This is much less than the KSh30,000 that Habitat for Humanity in Nairobi felt was necessary for annual maintenance and repairs which we feel is too high.

### **6.3.3 Estimating user cost of owned house using above information**

We estimate the user cost of a basic house in rural Kenya to be around KSh26,000 per year using what we feel are reasonable assumptions of – KSh520,000 cost of construction for a Habitat for Humanity House (which is similar to construction cost from other sources), 50 years of service life (typical assumption for developing countries), and 3% annual cost of routine maintenance and repairs (typical assumption). This cost consists of KSh10,400 per year for depreciation (i.e. 520,000 building cost/50 service years) and KSh15,600 per year for routine maintenance and repairs (i.e. 520,000 building cost  $\times$  .03). This implies around KSh2,200 per month (i.e. 26,000/12).

### **6.3.4 Summary of cost of rental or rental equivalent user cost of owned house**

Above we made two estimates of housing costs. Rental cost for sufficient space for an unacceptable quality house in the rural Mount Kenya area would be at a minimum between around KSh2,000-2,400 per month. We also estimated that the cost for a small but decent acceptable owned house would be around KSh2,200 based on the user cost approach using what we feel are reasonable assumptions about service life and maintenance and repairs of this house. Taking these two estimates together, we decided to use KSh2,200 for the cost of a house. This is our estimate of the user cost of a small decent owned house for rural Kenya. It is within the range of observed rents for houses with sufficient living space but poor amenities. Note that this cost is less than one-half of the KSh5,000 per month rent we found in 2014 for the non-metropolitan urban Lake Naivasha area and the KSh4,500 for rent found by the Kenya Human Rights Commission in its living wage study of the non-metropolitan urban area near Nanyuki in the Mount Kenya area (Kambo, 2015).

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## **6.4 Utilities Costs**

Utility costs also need to be estimated. This includes cost of cooking fuel, water, and lighting. We estimated utility costs for the rural Mount Kenya area in two ways. We estimated utility costs using information we collected from workers in the rural Mount Kenya area on how much they reported to us that they spend for utilities. For this, we included a value for the time families spend to collect free firewood and water. How this was done is explained in following sections. This indicated a total of KSh1,060 (\$11) per month for utilities for the rural Mount Kenya area. To check to see whether our estimate was reasonable, we estimated utility costs in a second way. We used 2005/06 Kenya Household Income and Budget Survey data and multiplied the ratio for rural areas of the % of household expenditures for utilities to the % of household expenditures for food according to this survey by the cost of our model diet. This

indicated utility costs of KSh861 (\$9) per month. This amount is lower than our KSh1,060 estimate based on our primary data analysis, because we attributed value to the time that families spend collecting firewood and water in our estimate. Note that KSh1,060 is much lower than the KSh2,700 for utilities we found for the non-metropolitan urban Lake Naivasha area. The main reason for this large difference is that workers in the Lake Naivasha area buy their water and charcoal at high prices whereas workers collect their own water and firewood in the rural Mount Kenya area.

#### **6.4.1 Cooking fuel**

Firewood is by far the most common cooking fuel in rural Kenya (87% of rural households use firewood for cooking according to the 2008/09 DHS).<sup>15</sup> While some people in rural areas buy firewood, most collect their firewood. According to workers we spoke to, collecting and preparing firewood took around ½ to 1 hour per day. If we assume that this time is worth KSh25 per hour (which is roughly 10% less than the agricultural minimum wage per hour in 2015 assuming a normal workweek of 44 hours in recognition that return for unpaid family labor is generally less than a market determined wage such as the official minimum wage), this would imply a “cost” for firewood of approximately KSh380 per month if we use the lower end of the ½ to 1 hour per day range for collecting and preparing firewood. This is much less than the KSh1,200 per month for cooking fuel used for our Lake Naivasha living wage and the around KSh1,200 spent by two workers in the rural Mount Kenya area we spoke to who bought their firewood and charcoal.

#### **6.4.2 Lighting and electricity**

Electricity is not considered necessary for decency in rural Kenya, because a minority of rural households have electricity (8% according to the 2008/09 DHS, although this percentage is known to have increased markedly since then). Most rural households use kerosene for lighting (85% according to the 2007 Health Expenditure and Utilization Survey). Discussions with workers indicated that kerosene generally costs around KSh300 per month (i.e. 5 liters per month times KSh60 per liter). This is half of the KSh600 we used for electricity for Lake Naivasha and which workers renting in rural Mount Kenya area indicated to us that they spent for electricity. This is also lower than the KSh900 that the Kenya Revenue Authority assigned in 2014 to the monetary value of electricity for calculating income tax (Kenya Revenue Authority, 2009).

#### **6.4.3 Water**

Most rural households get their water from springs and surface water (50%), followed by wells or boreholes (28%), and piped water (21%) according to the 2008/09 DHS. We found a similar pattern for the rural Mount Kenya flower farm workers whose homes were visited. Those who collected water reported generally spending around 30 minutes each day collecting water. If we assume that half of rural households spend 30 minutes a day to collect water and the other half have water available near home from a well or tap, and that one hour of time is worth KSh25 (i.e. approximately 90% of the official agricultural minimum wage rate), this implies a cost of

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<sup>15</sup> It is worth noting that the workers who we spoke to who rented in the rural Mount Kenya area generally used LPG for cooking because they had no place to store firewood.

approximately KSh380 per month for water. Kenya tax authority uses KSh200 to value provision of water for agricultural employees (Kenya Revenue Authority, 2009). KSh380 per month for water is much lower than the KSh900 we used for Lake Naivasha area living wage where people buy water from vendors who deliver water.

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## 6.5 Summary of housing costs

Our estimate of housing costs per month for rural Mount Kenya is KSh3,260 (KSh2,200 for house and KSh1,060 for utilities). This is much less than the KSh7,700 for the Lake Naivasha area (KSh5,000 for rent and KSh2,700 for utilities). A large difference was expected, because urban areas have both higher rents and higher utility costs compared to rural areas.

## 7. NON-FOOD AND NON-HOUSING (NFNH) COSTS

Non-food non-housing costs (NFNH) for the rural Mount Kenya area were estimated in four steps. The same approach was used for Lake Naivasha area. In step 1, NFNH costs were estimated based on household expenditure patterns in Kenya according to the 2005/06 KIHBS (Kenyan Integrated Household Budget Survey). Rural data were used for rural Mount Kenya area and non-metropolitan urban data were used for Lake Naivasha area. This approach, which relies on a variant of Engel's law,<sup>16</sup> is simple and provides a preliminary estimate of the cost of NFNH needs. Step 2 removes unnecessary expenditures for a decent living standard (tobacco and private motor vehicle) for both areas. Step 3 adjusts the 2005/06 HIES household expenditure data for both areas to take into consideration that these data indicate average household expenditure and not expenditure for households at the 40<sup>th</sup> percentile of the household expenditure distribution that we are interested in. Step 4 looks more carefully at health care and education costs based on discussions with workers and key informants in both areas to determine if funds included for these from steps 1-3 are sufficient for decency - and then adds additional funds when required to ensure that adequate funds for these are available in NFNH. For details of the approach used, readers are referred to our 2014 living wage report for Lake Naivasha.

We estimated that all NFNH costs for decency for rural Mount Kenya area was KSh4,818 (\$50) per month for the reference family of 5.5 persons. This covers alcohol; clothing and footwear; household furniture, contents and appliances; health care; education; transportation; communications; recreation and culture; eating away from home; and miscellaneous goods and services such as insurance, bank services, and personal care.

Several aspects of our NFNH estimate are worth noting. First, the NFNH to Food ratio used to make the preliminary estimate of NFNH costs in steps 1-3 was 0.336 for the rural Mount Kenya area. This is much lower than the 0.728 ratio used for the Lake Naivasha area. A lower ratio for rural Mount Kenya is consistent with the fact that rural areas almost always have fewer NFNH expenses than urban areas. For example, households in rural areas have fewer expenses for

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<sup>16</sup> Engel's law is from 1857 and states that the percentage of total expenditure that households spend for food decreases as household income increases (see Anker 2011).

transportation compared to urban areas (e.g. 2.9% of all expenditures for rural areas compared to 6.3% for non-metropolitan urban areas, and 8.7% for metropolitan urban areas). Therefore, the preliminary estimate of NFNH costs for rural Mount Kenya (KSh3,818) is much lower than for non-metropolitan urban Lake Naivasha (KSh8,066). Second, post checks in step 4 increased the preliminary NFNH estimate for rural Mount Kenya by more than post checks did for Lake Naivasha (by KSh1,000 per month compared to KSh300 per month) mainly because while families in rural and urban areas having similar costs for health care and education, the preliminary NFNH estimate for rural Mount Kenya is much lower than that for Lake Naivasha because the NFNH/Food ratio is much lower for rural areas than for non-metropolitan urban areas.

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## **7.1 Whether funds included in preliminary estimate of non-food non-housing costs for health care and education are sufficient**

### **7.1.1 Health care**

Kenya faces a number of health care challenges with upper respiratory infections and dysentery relatively important in Kenya highlands.<sup>17</sup> Although health care in Kenya is free at government facilities, medicines are often unavailable (Republic of Kenya, Ministry of Medical Services and Ministry of Health and Sanitation, 2009). The fact is that people in Kenya rely on a variety of health care providers. According to World Bank's World Development Indicators (2014), 46.4% of all health expenditures by households in Kenya are out of pocket expenditures. Given this situation, it is clear that funds are needed to enable workers to access private health services at least sometimes.<sup>18</sup>

The preliminary estimate of funds for health care for the reference family in rural Mount Kenya included in NFNH from steps 1-3 was KSh111 (\$1.2) per month per family. This very low preliminary estimate for health care was expected, because it is based on 2005/2006 HIES data, which only consider expenditure for medicines as health care expenditure.<sup>19</sup>

To get an idea of how much our preliminary estimate of KSh111 per month for health care for rural Mount Kenya needs to be increased, we used data on frequency of illnesses from the 2007 Health Expenditure and Utilization Survey<sup>20</sup> and information on costs of consultancies, medicine

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<sup>17</sup> Upper respiratory infections and dysentery are the two most important reasons for visiting a health care according to clinics visited in the rural Mount Kenya area.

<sup>18</sup> Note that if a farm has a health clinic that provides free care to workers (and possibly their families), this would be considered an in-kind benefit that the farm would receive "credit" for as partial payment of our living wage. See detailed discussion on in-kind benefits in our 2014 report for Lake Naivasha.

<sup>19</sup> In a strange bit of logic, KNBS (2007) Basic Report on Well-being in Kenya excludes health expenditure other than for medication because it feels that "such expenditure reflects a regrettable necessity that does not increase welfare. By including health expenditures for someone who has fallen sick, we register an increase in welfare when, in fact, the opposite has occurred. The fundamental problem is that it is not possible to measure the loss of welfare associated with being sick, and which is (presumably) ameliorated to some extent by health expenditures. Including the latter without allowing for the former would be incorrect (Deaton and Zaidi, 2002)."

<sup>20</sup> According to the 2007 Health Expenditure and Utilization Survey, there are approximately 3.2 visits to health care providers per person per year on average in urban areas and 2.5 visits per person per year in rural areas on average. We decided to use the urban data on this on the assumption that this number of visits is needed and that



and lab tests collected from private clinics and pharmacies in the rural Mount Kenya area. According to chemists visited in the rural Mount Kenya area, consultations typically cost around KSh100. Typical medicines cost around KSh350 for dysentery, KSh200 for upper respiratory illness, and KSh1,500 for asthma. Typical lab tests cost around KSh200. These data imply a cost of around KSh800 (\$8) per person per year for visits to private health care facilities if we assume that people go to a private clinic half of the time and to a public facility half of the time as they actually do according to 2007 Health Expenditure and Utilization Survey data (i.e. 3.2 visits per person per year in total  $\times$  1/2 of visits to private provider  $\times$  (KSh100 for consultancy + KSh300 for medicines + KSh200 for lab tests every other visit)). This estimate of KSh800 per person per year implies KSh367 per month for a family of 5.5 persons on a prorated monthly basis (i.e. KSh800 per person per year  $\times$  5.5 persons / 12 months). However, since medicine is sometimes out of stock in government health facilities and so patients sometimes need to purchase medicines from a pharmacy after they visit a government facility, we rounded this KSh367 up to KSh400 (\$4) per month needed for health care.

In summary, our preliminary estimate of KSh111 for health care included in our preliminary estimate of NFNH costs is much too low because the only expenditure KNBS considers as health care expenditure in its household expenditure statistics is for medicines. We therefore increased NFNH by KSh300 (i.e. approximately KSh400-KSh111) because based on a rapid assessment post check of health care costs for rural Kenya, we estimated that health care costs for a reference family was around KSh400 per month. Note that this adjustment to our preliminary NFNH estimate for rural Mount Kenya is the same as the KSh300 post check adjustment for health care we used for Lake Naivasha area.

### **7.1.2 Education**

Desire for education for children is very strong in Kenya. Parents very much want their children to go to school to help prepare them for a better life. This desire was clearly reflected in discussions we had with workers and others as well as by the fact that 17.2% of government budget and 6.7% of GDP is spent on education (World Bank's World Development Indicators).<sup>21</sup>

We assume that for decency parents need to be able to afford to send their children to school through secondary school. We also assume that it is acceptable for children to attend public school and not have to attend a private school, because only 10.6% of primary school students attend a private school and only 12.7% of secondary school children attend a private school in Kenya according to World Bank World Development Indicators.

Kenya's educational system has 8 years of primary school (beginning at age 6) and 4 years of secondary school. There are various expenses for parents such as school fees, remedial classes,

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some people in rural areas are too poor at present to always visit a health care provider when they are sick. This implies approximately 18 visits per year for a family of 5.5 persons.

<sup>21</sup> School enrolment rates are high in Kenya. Almost all children attend primary school. Primary school net enrolment rate was 82% in 2009 and primary school completion rate was 91% in 2006 (World Bank World Development Indicators). Secondary school net enrolment rate is also high at 50% in 2009 (World Bank World Development Indicators).

books, school uniforms, stationary, lunch, and end of term exams. Most students walk to school in rural areas, so transport expenses for school are not important in rural Kenya.

We discussed school costs with workers. School costs are of great concern to workers and there are many different types of costs although these costs vary by school. Workers mentioned having to pay sometimes or always for: school uniforms, sweaters, socks and shoes; exercise books and textbooks; exam fees; activity fees; meals and snacks; teacher motivation fee; remedial classes; district education fee. Children in the rural Mount Kenya area walked to school and so there were no transport costs. Information was obtained from seven workers in the rural Mount Kenya area about primary school costs and from 3 workers about secondary school costs. This is not many parents, and for this reason we use some judgment about reported school costs for rural Mount Kenya area as well as use school costs reported by workers for the Lake Naivasha area.

Rural Mount Kenya parents reported spending around KSh4,000 per year on average for primary school (with a range from around KSh2,000-13,000). This is lower than the typical cost of primary school of around KSh5,000 per year we found when speaking to workers in the Lake Naivasha area (with a smaller range of around KSh3,000-7,500). Three parents in the rural Mount Kenya area indicated that they spent around KSh16,000 per year on average (median) for secondary school (around KSh14,000, KSh23,000 and KSh16,000) which is similar to the around KSh15,000 per year (with range of KSh10,000 to KSh24,000) indicated by parents in Lake Naivasha area. Given that secondary school cost estimates were obtained from only a few workers in the rural Mount Kenya area, we decided to use the similar KSh15,000 per year for secondary school found for Lake Naivasha. For primary school, we decided to use KSh4,000 per year which is the median reported by seven rural Mount Kenya workers (which was less than the around KSh5,000 per year indicated by Lake Naivasha workers). These costs implied school costs of around KSh1,491 per month for a rural Mount Kenya reference family with 3.5 children given that there are 8 years of primary school and 4 years of secondary school (i.e.  $3.5 \text{ children} \times (\text{KSh4,000 per year for primary} \times 8 \text{ years} + \text{KSh15,000 per year for secondary} \times 4 \text{ years}) / 18 \text{ years of childhood}$ ).

Our preliminary of NFNH costs for rural Mount Kenya included KSh764 (\$8) per month for education. This is less than our estimate of school costs based on the above rapid assessment post check of KSh1,491 per month. For this reason, we increased our preliminary NFNH estimate by KSh700 (i.e. approximately 1,491-764).

## 8. MARGIN ABOVE COST OF A BASIC QUALITY LIFE TO HELP ENABLE SUSTAINABILITY

Since large unforeseen expenses can quickly throw workers living at a basic life style into poverty and debt from which they may not be able to recover, such as illnesses, HIV/AIDS, accidents, funerals, etc., it is common when estimating a living wage to add a small margin above the cost of a basic quality life to allow for unexpected events. We used a 5% margin for rural Mount Kenya just as we did for Lake Naivasha and living wage estimates for other countries. This is a conservative estimate of the need for funds for this. Thus, KSh972 (\$10) is

provided for emergencies and discretionary spending for rural Mount Kenya area in the living wage. Note that interest and debt payments are ignored. It is assumed that a living wage would enable workers to be able to stay out of crippling debt repayments.

## SECTION II – LIVING WAGE FOR WORKERS

### LIVING WAGE FOR WORKERS

#### 9. FAMILY SIZE NEEDING TO BE SUPPORTED BY LIVING WAGE

Living wage is a family concept. This is clearly shown by our comprehensive review of living wages for ILO (Anker, 2011). The need for a living wage to support a family is also included in the living wage definition agreed to by the Global Living Wage Coalition (Fairtrade International, Forest Stewardship Council, GoodWeave International, Rainforest Alliance, Social Accountability International, Sustainable Agriculture Network, and UTZ, and partner ISEAL Alliance).

We used a family size of 5.5 persons (two adults and 3.5 children) to estimate our living wage for the rural Mount Kenya area. This is higher than the family size of 5 persons used to estimate our living wage for the Lake Naivasha area that is a non-metropolitan urban area where family size and fertility rates are lower than in rural areas.

Average household size in rural Kenya for households with 2+ persons (i.e. excluding single person households that are not relevant for a family-based living wage) is 5.9 persons according to the 2005/06 Kenyan Integrated Household Budget Survey (KIHBS). The total fertility rate<sup>22</sup> in rural Kenya is 5.2 according to the 2008/09 DHS. Since the infant and child mortality rate is 7.3% in rural Kenya according to World Bank World Development Indicators, this implies 4.8 children survive to age 5 on average in rural Kenya, which would imply a family size of 6.8 when two parents are included (although it is worth noting this number of births occur over a long period of time so that family size at any given point in time is significantly lower than 6.8). Both of these family size indicators indicate an appropriate family size for rural Kenya greater than 5. To be conservative, we decided to use a family size of 5.5 persons for rural Kenya.

#### 10. NUMBER OF FULL-TIME WORKERS IN FAMILY PROVIDING SUPPORT

As living wage is a family concept, it is appropriate to expect more than one adult/parent in a family to provide support through work. We estimated the likelihood that an adult age 25-59 works full-time throughout the year is 71% in rural Kenya and 74% in urban Kenya (as explained below). This means that since we are concerned with a situation where one person in the family works full-time on a flower farm or for another employer, the number of full-time equivalent workers per couple is 1.71 for rural areas and 1.74 for urban areas. We used these values to estimate our living wages for rural Mount Kenya and non-metropolitan urban Lake Naivasha. Both areas have similar values because female as well as male labor force participation rates are very high in both areas, and the higher unemployment rates in urban areas are counterbalanced by higher part-time employment rates over the year in rural areas. How the

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<sup>22</sup> Total fertility rate is “a basic indicator of the level of fertility, calculated by summing age-specific birth rates over all reproductive ages. It may be interpreted as the expected number of children a woman who survives to the end of the reproductive age span will have during her lifetime if she experiences the given age-specific rates.” (UNdata Glossary, 2014).

1.71 and 1.74 values were estimated for rural and urban areas is indicated in the remainder of this section.

To help determine estimate reasonable values for the number of full-time equivalent workers per couple for the rural Mount Kenya area and the Lake Naivasha area, we gathered available data for rural and urban Kenya on: (i) age and sex specific labor force participation rates for ages 25-59, (ii) unemployment rates for ages 25-59, and (iii) average number of hours worked and extent of part-time employment for those who work.

We found labor force participation rates from three sources.<sup>23</sup> All indicated very high rates in both rural and urban Kenya. We estimated that the labor force participation rate for ages 25-59<sup>24</sup> was approximately 92% for urban areas and 90% for rural areas. Readers are referred to our 2014 report for Lake Naivasha for more details.

Open unemployment is very high in Kenya, especially in urban areas. We estimated this to be approximately 6.2% for rural areas for ages 25-59 (average of a recent estimate of the rural unemployment rate of 5.1% for ages 25+ from ILO (ILOSTAT) and a rather old estimate of 7.3% for ages 25-59 from the 1998/99 Labor Force Survey). These estimates compare to an estimated urban unemployment rate of 17.1% for ages 25-59 (average of a recent estimate of the urban unemployment rate of 13.7% for ages 25+ from ILO (ILOSTAT) and a rather old estimate of 19.5% for age 25-59 from the 1998/99 Labor Force Survey).<sup>25</sup>

Part-time employment over the year is very important in rural Kenya and relatively unimportant in urban Kenya according to available data. Average number of hours worked per week for persons 25-59 was 37 hours in rural areas according to the 1998/99 Labor Force Survey (latest available source). Many in rural Kenya work seasonally, which is a form of part-time work over the year. Indeed according to the 2008/09 DHS, only 62% of workers work year around, presumably mainly on small farms in rural areas. Although it is difficult to know with precision part-time employment rate in rural Kenya, it is clear that it is high. For rural Mount Kenya area, we assumed that those in the labor force worked 84% of full-time hours on average over the year (i.e. 37 average hours worked divided by 44 hours in a standard workweek).<sup>26</sup>

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<sup>23</sup> Sources were: 1998/99 Labor Force Survey (Central Bureau of Statistics 2003); 2014 estimated labor force participation rates for Kenya from ILO based on 1999 Population Census of Kenya (ILO, LABORSTA); and 2008/09 Demographic and Health Survey (DHS, 2009).

<sup>24</sup> Ages 25-59 are used because those younger than age 25 may still be in school and in any case are less likely to have families of their own; and many persons over age 59 are retired and/or have older children. Note that using ages 25-59 rather than ages 15+ for estimating the unemployment rate is also importance because youth unemployment rate (for ages 15-24) is especially high.

<sup>25</sup> There are also other less reliable estimates of urban unemployment rates - such as from Krishnamurthy and Vercic (2009) – as well as 19.9% for ages 15-64 from the 2005/06 Kenya Integrated Household Budget Survey.

<sup>26</sup> For urban areas, we used a conservative assumption of 5% for part-time employment rate, since part-time work is not believed to be important in urban Kenya especially in light of the fact that the average number of hours worked is 49 hours according to the 1998/99 Labor Force Survey.

Using the figures noted above, we estimated that adults age 25-59 work full-time approximately 0.71 of the time in rural areas (i.e. .90 labor force participation rate  $\times$  1.0-.062 unemployment rate  $\times$  .84 proportion of full-time hours worked) and .74 of the time in urban areas (i.e. 0.92 labor force participation rate  $\times$  1.0-.177 unemployment rate  $\times$  1.0-.05/2 part-time employment rate). This implied 1.71 full-time equivalent workers per couple for rural Kenya and 1.74 for urban Kenya when one adult in a family is a permanent worker who works full-time year around such as on a farm or in a factory.

## 11.MANDATORY DEDUCTIONS FROM PAY

Employees in Kenya have mandatory deductions from pay. These deductions have to be taken into consideration when estimating a living wage, because workers need sufficient disposable income to be able afford a decent basic life for themselves and their immediate family.

Employees must contribute to NHIF and NSSF. This would amount to KSh1,032 (\$11) per month at a rural living wage in June 2015 and KSh1,274 (\$13) in October 2016. Workers in Kenya also have to pay income tax with the rates in the Pay As You Earn (PAYE) system used in Kenya: 10% from KSh1,016-10,164, 15% from KSh10,165-19,740, and 20% from KSh19,741-29,316. But there is a tax relief of KSh1,162. This means that workers earning a rural living wage would not have had to pay income tax in 2015 because in kind benefits are not subject to income tax and NSSF payments are deductible (we estimate that workers would have to pay KSh79 in income tax in October 2016 on our rural living wage updated for inflation to October 2016). This contrasts to the situation faced by workers earning a living wage in the Lake Naivasha area where we estimate that workers would have to pay income tax of KSh1,119 in October 2016. Note that these tax calculations depend somewhat on the value of the in kind benefits that workers receive – since workers do not pay taxes on in kind benefits. As we did not have any specific information for rural Mount Kenya on in kind benefits, we assumed that they have the same value as we estimated for Lake Naivasha.

## SECTION III

# ESTIMATING GAPS BETWEEN LIVING WAGE AND PREVAILING WAGES

### 12. PREVAILING WAGES IN INDUSTRY OF FOCUS AND OTHER INDICATORS

Information on prevailing flower farm wages in this section is based on our understanding of the 2013-2015 flower farm CBA and so wages as of June 2015.<sup>27</sup>

Basic wages vary by type of worker on flower farms. Pack house workers (who are around 20% of all flower farm workers) earn more than other flower farm workers such as greenhouse workers (largest group of workers). Workers' pay also differs with number of years of continuous service with newly hired workers earning much less than workers with many years of experience (see our 2014 Lake Naivasha report). For expositional purposes as in our 2014 report, we cut through this variation by making what we feel are reasonable assumptions in order to estimate typical prevailing wages for most flower farm workers. We use the basic wage plus common cash allowances and reasonable values for common in-kind benefits included in the general flower farm CBA. This is done for greenhouse workers with varying amounts of continuous service as in our 2014 Lake Naivasha report. We do not consider overtime pay in these calculations, because a living wage should be earned in normal work time. And we assume that flower farm workers are permanent and have full-time work throughout the year and therefore that it is not necessary to be concerned with non-availability of work during parts of the year as this reflects the general situation on flower farms.

We estimated that wages in 2015 of greenhouse workers are KSh15,771 for a worker who started in 1997, KSh13,011 for a worker who started in 2004, KSh12,204 for a worker who started in 2009, and KSh9,940 for a worker who started in 2014 (table 2 and figure 4). These wages include KSh4,340 for common cash allowances and in kind benefits.<sup>28</sup>

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<sup>27</sup> Note that in October 2016 a new CBA was signed and backdated to August 1, 2015. See appendix C for information on updated CBA wages.

<sup>28</sup> We used the same amounts for cash allowances and in kind benefits that we used in our 2014 report for Lake Naivasha, because most of these allowances and benefits were set in the two year 2013-2015 CBA. We estimated that there was KSh1,908 for cash allowances and KSh2,432 for common in-kind benefits. There were cash allowances for: housing, leave travel, and death in the CBA. There were common in-kind benefits that reduce workers' need for cash income for: meals, transportation, school, crèche, and health clinic. There were also other benefits that are valuable to workers that we did not consider, because they do not increase current disposable income or reduce expenses within the year such as: gratuity on termination after 5 years of continuous service, severance pay for redundancy, generous paid sick leave, generous paid annual leave, generous paid maternity leave, and termination notice. The assumption of the same value for in kind benefits for rural Mount Kenya as for Lake Naivasha was made in the absence of specific information on this for rural Mount Kenya area.



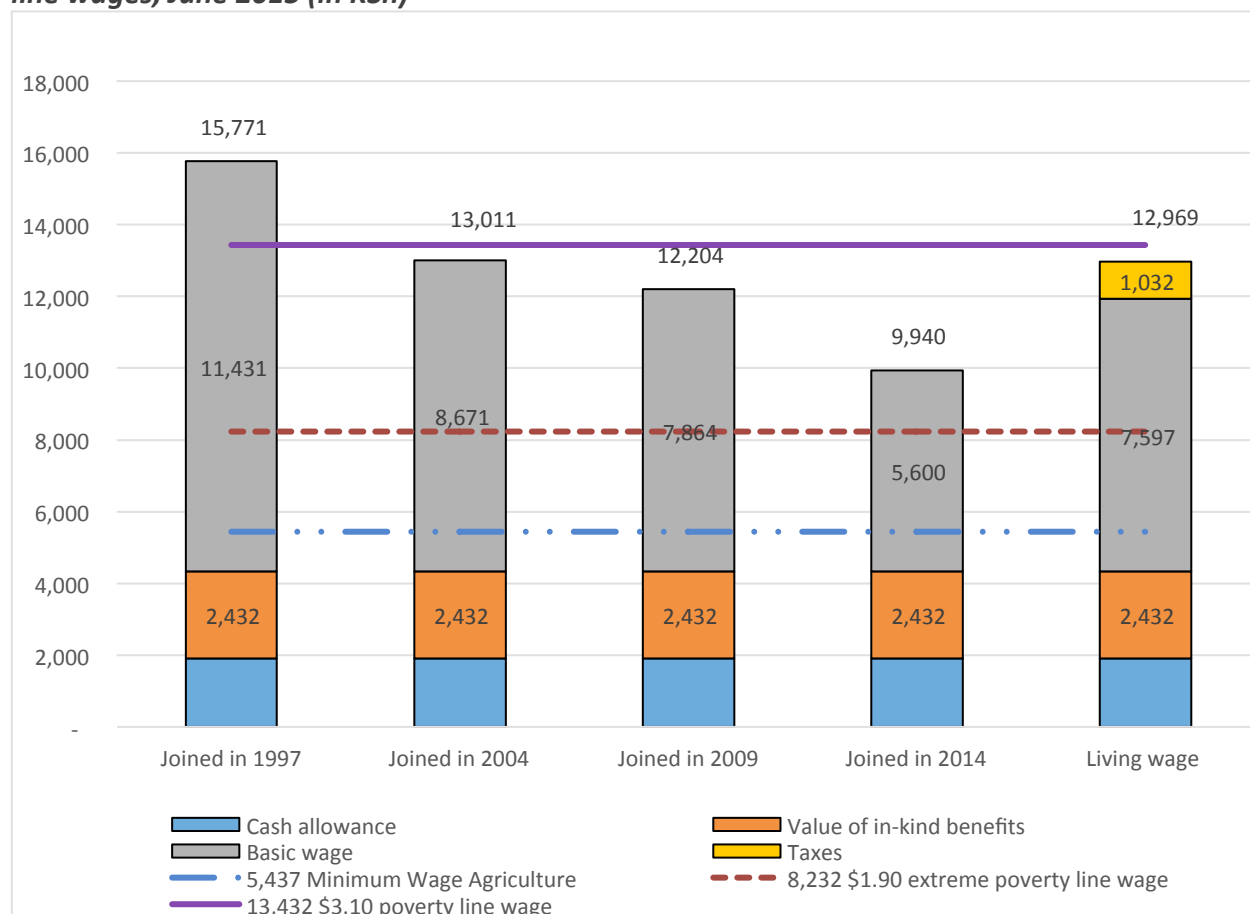
Table 2 and figure 4 compare our rural living wage to prevailing wages indicated above for typical flower farm workers. We have also included for comparison purposes the two World Bank international poverty line wages and the agricultural minimum wage. It is worth noting that prevailing wages in table 2 do not include bonuses or overtime pay. Bonuses are important for pack house workers (who comprise around 20% of flower farm workers) and overtime is important for other workers in certain peak periods such as Valentine's Day and Mother's Day.

Whether or not greenhouse flower farm workers on farms in the rural Mount Kenya area receive a rural living wage depends on the number of years of continuous service that they have, although it is likely that many pack house workers earn a living wage in the rural Mount Kenya area. Greenhouse workers with around at least 11 years of continuous service in the rural Mount Kenya area received a rural living wage in 2015. Greenhouse workers with 6 years of experience earned 6% less than a rural living wage in 2015. Recently hired greenhouse workers earn well below a rural living wage - for example, those with 1 year of experience earned 23% less than a rural living wage in June 2015.

This situation for rural Mount Kenya flower farm workers contrasts sharply with the situation for flower farm workers working and living in non-metropolitan urban areas such as around Lake Naivasha area where flower farm workers earn much less than a living wage (see our 2014 living wage report for Lake Naivasha area). It is also important to note that many flower farm workers in the Mount Kenya area also live in small towns, such as those working on flower farms that are not far from Nanyuki, and that they also earn well below a living wage. The reason for such a large difference in the size of the gap between prevailing wages and living wage for flower farms in a rural area and flower farms near to towns is because, while wages are similar for flower farm workers regardless of where their flower farm is located (since flower farm wages are determined by similar CBAs), living costs are much lower in rural areas of Kenya compared to non-metropolitan urban areas of Kenya such as around Lake Naivasha and Nanyuki. Those living in urban settings face higher food prices, higher rents and utility costs, and higher non-food non-housing needs and costs such as for transport.

Notice that our living wage for rural Mount Kenya is very similar to the World Bank \$3.10 a day poverty line wage. At the same time, it is 2.4 times higher than the agricultural minimum wage and 1.6 times higher than the World Bank \$1.9 a day extreme poverty line wage.

**Figure 4: Rural Mount Kenya wage ladder: Comparing our rural living wage to prevailing wages on flower farms by year started, agricultural minimum wage, and World Bank poverty line wages, June 2015 (in KSh)**



Source: The Authors

**Table 2: Rural Mount Kenya living wage compared to prevailing wages on flower farms, June 2015**

	Cash allowances	Value of common in-kind benefits	Basic wage	Gross pay	% difference Gross pay and Living Wage
Joined in 1997	1,908	2,432	11,431	15,771	+22%
Joined in 2004	1,908	2,432	8,671	13,011	+0%
Joined in 2009	1,908	2,432	7,864	12,204	-6%
Joined in 2014	1,908	2,432	5,600	9,940	-23%
Our rural living wage	1,908	2,432	8,629	12,969	

Source: The Authors

Notes: For expositional purposes, we assumed that wages include value of common cash allowances and fair and reasonable estimated values for common in-kind benefits. Prevailing flower farm wages exclude bonuses and overtime. Bonuses are important for pack house workers who comprise around 20% of flower farm workers.

### 13.CONCLUSIONS

Our living wage estimate for June 2015 for the rural Mount Kenya area is KSh11,937 (\$124) per month before consideration of mandatory deductions and KSh12,969 (\$135) per month considering mandatory deductions that workers must pay. These living wages are KSh12,852 net living wage and KSh13,943 gross living wage in October 2016 when inflation and changes in taxes between June 2015 and October 2016 are taken into consideration. These living wages for rural Mount Kenya should be reasonably representative of the living wage for most of rural Kenya, since prices in rural Central Province where Mount Kenya is located are similar to prices for rural Kenya as a whole according to the Kenya National Bureau of Statistics. And although this report focused on flower farms, we believe that it provides a useful living wage estimate for other rural based farms producing other agricultural products such as coffee, tea, and fresh vegetables, since a living wage is the same for all people living in a geographic area regardless of their occupation or employer.

Tables 3 and 4 below indicate how our living wages were estimated and some key assumptions used to make these estimates. As indicated throughout this report, conservative assumptions were used to estimate our living wage for the rural Mount Kenya area. This means that our living wage estimates are conservative estimates of what is needed for a basic but decent standard of living in rural Kenya. The intention of our living wage estimate for rural Mount Kenya area as well as our living wage estimate made earlier for the non-metropolitan urban Lake Naivasha area (and so by extension for non-metropolitan urban areas near to Nanyuki) is to provide a measure of the wage needed to support a basic but decent life and not a

comfortable middle class life style, and for this reason our living wage estimates represent the cost of basic decency and a frugal but decent life style.

This report is in a sense a companion report to our 2014 report that estimated a living wage for the non-metropolitan urban Lake Naivasha area of Kenya. Both reports focus on the fresh cut flower industry in Kenya, which has a large concentration of flower farms in the Lake Naivasha area and smaller concentrations of flower farms in other areas such as in rural areas around Mount Kenya and Kericho and non-metropolitan areas in the Mount Kenya area near Nanyuki. Our 2014 report for Lake Naivasha provides more details about our methodology and approach to estimating a living wage.

Our net living wage (or net take home pay required for basic decency) for rural Mount Kenya area is around 33% lower than our living wage for non-metropolitan urban Lake Naivasha area when both living wages are updated to October 2016 by inflation. The difference for our gross living wages for October 2016 (i.e. gross pay required for basic decency) between rural Mount Kenya and non-metropolitan urban Lake Naivasha increases to around 37% because tax rates are much higher taxes on the Lake Naivasha living wage than on the rural Mount Kenya living wage. This large difference in living wages for these areas is due to the fact that workers on Lake Naivasha area (and near Nanyuki) flower farms live in urban townships whereas workers on rural Mount Kenya flower farms live in rural areas. As a result, Lake Naivasha (and near Nanyuki) flower farm workers have much greater expenses compared to rural Mount Kenya flower farm workers, because urban settings have higher food prices, higher rents and utility costs, and higher non-food non-housing needs and costs.

Because wages for flower farm workers are set in a CBA that applies to all workers, the gap between prevailing wages and a living wage is much smaller for rural Kenya flower farm workers compared to the gap for flower farm workers near Lake Naivasha and Nanyuki. Whether or not greenhouse flower farm workers in the rural Mount Kenya area receive a rural living wage depends on their number of years of continuous service. Greenhouse workers with around 11 or more years of continuous service in the rural Mount Kenya area received a rural living wage in 2015. Greenhouse workers in the rural Mount Kenya area with 6 years of experience earned around 6% less than a rural living wage in 2015. Recently hired greenhouse workers earned well below a rural living wage - for example, those with 1 year of experience earned 23% less than a rural living wage in 2015. In contrast, flower farm workers in the Lake Naivasha area and near Nanyuki earned much less than a living wage (see our 2014 living wage report for the Lake Naivasha area).

When developing plans to increase flower farm wages, flower farms and the value chain should keep in mind that the real value of wages for flower farm workers have fallen sharply in recent years (by 20-40% between 2004-2014 depending on seniority - see our 2014 Lake Naivasha report) and this has put considerable additional burden on flower farm workers. It is also important to keep in mind that flower farms in Kenya face their own set of problems including pressure from international buyers on prices and competition from Ethiopia as well as a highly overvalued currency (see our 2014 Lake Naivasha report). This means in our opinion that

substantial increases in the wages of flower farm workers in Kenya will require involvement of the entire value chain including buyers, distributors, and retailers. It is hoped that this report will contribute to worker and management dialogue as well as contribute to dialogue between standard setting/certification organizations and the value chain to find ways to increase wages while maintaining a vibrant flower farm industry in Kenya. It is also hoped that this report will help jump start efforts to raise wages in other agricultural industries as well as in flowers, such as for coffee and tea.

**Table 3. Calculation of living wage for rural Mount Kenya for June 2015 (with updated values for October 2016 in last two rows) and percentage difference from living wage for non-metropolitan urban Lake Naivasha <sup>h</sup>**

Expenses and living wage	KSh in June 2015 <sup>a</sup>	USD in June 2015	% difference from values for non-metropolitan urban Kenya <sup>h</sup>
Food cost per month for reference family	11,362	118	-6% <sup>g</sup>
Food cost per person per day <sup>b</sup>	67.92	0.71	-15% <sup>f</sup>
Housing cost per month	3,260	34	-61%
Rent per month	2,200	23	-60%
Utilities per month	1,060	11	-64%
Non-food non-housing cost per month <sup>d</sup>	4,818	50	-47%
Preliminary NFNH	3,818	40	-57%
Health care post check	300	3	+113%
Education post check	700	7	NR (as 0 for Lake Naivasha)
Emergencies and unforeseen events per month	972	10	-35%%
Total cost per month for decent living standard for reference family	20,412	213	-35%
Living wage per month			
LW per month net pay (1.71 full-time workers in reference family)	11,937	124	-33%
Income tax <sup>e</sup>	0	0	<sup>i</sup>
NSSF and NHIF taxes	1,032	11	-35% <sup>i</sup>
LW per month gross pay (1.71 full time workers in family)	12, 969	135	-37%
Living wages updated to October 2016 by inflation and changes in taxes			

LW per month net pay	12,852	127	-33%
LW per month gross pay	13,943	138	-37%

**Notes:** NR indicates not relevant. <sup>a</sup> Exchange rate of KSh96 to USD was used to calculate USD values for June 2015 and KSh101 for October 2016 as these were rates at these times. Shillings and USDs were rounded to nearest shilling and dollar for presentational purposes. <sup>b</sup> Model diets used to estimate food cost are basic but nutritious. Inexpensive foods were used to estimate model diet cost. Food prices were based on local markets surveys. <sup>d</sup> Non-food non-housing costs were estimated in 4 steps (see text). Ratio of NFNH to food was 0.728 for urban non-metropolitan Lake Naivasha and 0.336 for rural Mount Kenya. Post check adjustments to preliminary estimate of NFNH were KSh700 for education and KSh300 for health care for rural Mount Kenya and K300 for health care for Lake Naivasha. <sup>e</sup> We assumed for expositional purposes that a living wage would include common in-kind benefits worth KSh2,432 per month and that this is not subject to income tax. <sup>f</sup> Cost of food per person per day is lower for the rural Mount Kenya area compared to the non-metropolitan urban Lake Naivasha area due to (i) lower food prices, and (ii) a less expensive model diet in terms of grams of expensive foods. <sup>g</sup> Lower cost of food for the reference family in rural Mount Kenya compared to Lake Naivasha (see note f) is reduced by (i) the larger reference family size in rural Mount Kenya area (5.5 compared to 5 for Lake Naivasha) and greater number of calories required per person because of more vigorous physical activity in rural areas of Kenya (2351 compared to 2288 for Lake Naivasha). <sup>h</sup> For comparisons to rural Mount Kenya, Lake Naivasha values for March 2014 were increased by the inflation observed for Kenya between March 2014 and June 2015. Also note that values used in this table for Lake Naivasha for 2014 are slightly different from those in our 2014 report for Lake Naivasha. Because our 2014 report was a pilot study, we adjusted for this table our 2014 values for Lake Naivasha to be consistent with how our living wage methodology developed since this pilot study as indicated in our living wage manual (Anker and Anker, 2017). <sup>i</sup> Values for taxes, and therefore percentage differences, take into consideration changes in tax laws between study dates and October 2016. Income tax was not payable in October 2016 at a rural Mount Kenya living wage. Income tax was KSh1,119 at a Lake Naivasha living wage in October 2016.

**Table 7 Key values and assumptions for a living wage estimate**

KEY VALUES AND ASSUMPTIONS	Comments
Location (& industry if relevant)	Rural Mount Kenya area
Exchange rate of local currency to USD	KSh 96 = US \$1 (for June 2015) KSh101 = US \$1 (for October 2016)
Number of hours in normal workweek	44 hours
Number of workers per couple	1.71
Reference family size	5.5
Number of children in reference family	3.5
Preliminary ratio of Non-Food Non-Housing to Food Costs	0.336

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## ANNEXES

### Annex A. Our synopsis of benefits in collective bargaining agreement (CBA) between Agricultural Employers' Association and Kenya Plantation and Agricultural Workers' Union for 2013-2015

Benefits	Description	Comments (including indication when benefit is also in government Employment Act)
<b>Cash allowances paid within one year</b>		
Housing allowance	KSh1,700 per month. House on farm an option on some farms.	Some farms provide on-farm housing as alternative. Employment Act: "at employer's own expense provide reasonable accommodation ... or pay ... sufficient sum, as rent, to ... obtain reasonable accommodation." Fairtrade flower standard: "ensure that workers receive housing or have access to transportation free where housing and infrastructure are not available in sufficient quantity and quality."
Transport (commute) allowance	Amount varies by farm. Bus provided as alternative on some farms.	Farms often provide bus as alternative to transport allowance in Lake Naivasha area at least.
Leave travel allowance	KSh2,500 per year	For travel to home area. Received whether or not worker travels.
Death allowance	KSh27,000 (equivalent to about KSh7 per month value)	Similar to insurance. Intended to pay for cost and transport of coffin for worker who dies.
<b>In-kind benefits received within year</b>		
Meals	KSh30 per day (our estimate of cost of lunch to farms)	

<b>Benefits</b>	<b>Description</b>	<b>Comments (including indication when benefit is also in government Employment Act)</b>
Paid annual leave	24 days	26 days if > 5 years of service. 21 days in Employment Act. This was not considered an additional payment because it is already taken into consideration in the monthly wage of permanent workers.
Health care	Medicines and medical treatment. Transport to hospital when necessary.	Same as in Employment Act. Must have nurse or other suitable person on site when >100 workers.
Housing	See above	Housing allowance more common than provision of housing.
Transportation to work	See above	Transportation allowance alternative sometimes available.
School		Provided by some farms
Crèche		Provided by some farms
<b>In-kind benefits not received within past 1 year (not considered as partial payment of living wage because not received with year)</b>		
Gratuity	23 days at basic pay per year of service	Paid to workers leaving employment with 6+ years of service for any reason except summary dismissal.
Redundancy/severance pay	21 days of pay for each year of service	Cannot collect both redundancy & gratuity. 2 month notice or 1 month pay in lieu of notice in Employment Act.
<b>Other benefits (not considered as partial payment of living wage because either not received with year, or does not increase monthly take home pay, or is overtime pay)</b>		
Paid sick leave	53 days full pay; 55 days half pay	Requires incapacity certificate from medical practitioner & verification by company medical practitioner. Unusual in practice (e.g. only 35 of 637 workers from one large farm we visited received sick leave in past month). 7 days full pay & 7 days 1/2 pay in Employment Act.
Paid maternity leave	3 months	2 months in Employment Act
Breastfeeding	1 hour per day	For children < 10 months
Compassionate leave	"Should not be unreasonably refused"	Similar to additional paid annual leave
Limit on number of	Probation period cannot	Temporary workers must be confirmed



<b>Benefits</b>	<b>Description</b>	<b>Comments (including indication when benefit is also in government Employment Act)</b>
temporary workers	exceed 2 months	as permanent worker after 2 months.
Paid leave for union officials	2 days for union duties	Also 15 days per year for 4 employees for courses/seminars
Overtime pay	1.5 times rate for overtime	2 times rate for work rest days and holidays

Notes: CBAs also specify basic wage, which is higher than statutory minimum wage for agriculture (KSh4,854 in 2014 and KSh5,436 in 2015). In 2013-2015 CBA agreement, basic wage was KSh5,401-5,900 for new workers with +11.5% in 2014 and 2015 for new workers hired in 2013 (see next table).

## Annex B. Floriculture CBA basic wage, cash allowances, and some benefits, 1997-2015

Years	Basic Wages (KSh) <sup>a</sup>	Housing Allowance	Work Hours	Annual Leave	Leave Travel Allowance	Sick Leave	Termination Notice	Redundancy / Severance Pay	Gratuity	Death of Employee
FGG 1997 – 1999	1,716, 1,959, 2,500, 3,000, 3,500 (14% - 9% on a sliding scale)	500/=	46 & 60	21 w. days	800/=	30 days & 30 days	One months' notice	15 days each yr.	15 days after 10 yrs.	7,000/= inclusive of transport and coffin
FGG 1999 - 2001	1,900, 2,180, 2,750, 3,300, 3,800, (11% % 11%)	750/=	46 & 58	22 w. days	1,200/=	35 days & 40 days	One months' notice	18 days each yr.	18 days	10,000/= inclusive of transport and coffin
FGG 2001 – 2003	2,400, 2,600, 3,200, 3,800, 4,400 (8% & 8%)	800/=	46 & 58	22 w. days	1,200/=	40 days & 45 days	One months' notice	18 days each yr.	19 days	12,000/= inclusive of transport and coffin
FGG 2003 – 2005	2,800, 3,000, 3,700, 4,400, 5,100 (11% & 10%)	950/=	46 & 56	22 w. days	1,200/=	40 days & 45 days	One months' notice	18 days each yr.	20 days	15,000/= inclusive of transport and coffin
FGG 2005 – 2007	3,100, 3,300, 3,900, 4,600, 5,300	1,200/= (cities) 1,000/=	46 & 56	22 w. days	1,600/=	45 days & 50 days	One months' notice	19 days	21 days	17,000/= inclusive of transport

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Years	Basic Wages (KSh) <sup>a</sup>	Housing Allowance	Work Hours	Annual Leave	Leave Travel Allowance	Sick Leave	Termination Notice	Redundancy / Severance Pay	Gratuity	Death of Employee
	(14% - 9% on a sliding scale)	(other areas)								and coffin
FGG 2007 – 2009	3,400, 3,600, 4,300, 4,900, 5,800 (10% - 8% on a sliding scale)	1,500/= (cities) 1,200/= (other areas)	46 & 56	Up to five yrs service – 22 work days. Over five yrs – 24 w. days.	1,800/=	50 days & 50 days	Up to 5 yrs – one month's notice & over 5 yrs – 45 days or pay in lieu	20 days	21 days	19,000/= inclusive of transport and coffin
FGG 2009 – 2011	3,601 – 4,300 4,301 – 4,900 4,901 – 5,800 5,801 and above	1800 (cities) 1500 (other areas)	46 & 56	Up to five yrs service – 23 days. Over five yrs – 25 days.	2000/=	50 full pay 52 half pay	Up to 5 yrs – one month's notice & over 5 yrs – 45 days or pay in lieu	20 days	21 days	22,500/= inclusive of transport and coffin
FGG 2011 – 2013	4,050 – 4,600 – 12.5 4,601 – 5,300 - 12% 5,301 – 6,300 – 11.5 6,301 – 6,500 – 11% 6,501 and above -11%	2,000 (Cities) 1,800 (Muni) 1,500 (Others)	46 & 56	24 w. days (up to 5 yrs) 26 w. days (over 5 yrs)	2,300/=	50 full pay 52 half pay	Up to 5yrs service - 30 days or pay in lieu; Between 5 – 10yrs -45 day or pay in lieu; 10 yrs and above – 60 days' or pay in lieu	21 days' each yr	22 days	24,000/= inclusive of transport & coffin

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Years	Basic Wages (KSh) <sup>a</sup>	Housing Allowance	Work Hours	Annual Leave	Leave Travel Allowance	Sick Leave	Termination Notice	Redundancy / Severance Pay	Gratuity	Death of Employee
FGG 2013 – 2015	5,000 – 5,400 – 12% 5,401 – 5,900 – 11.5 5,901 – 6,900 – 11% 6,901 – 8,000 – 10.5% 8,001 – 9,300 – 10% 9,300 and above- 10%	2,400 (Cities) 2,000 (Muni) 1,700 (Others)	46 & 56	24 w. days 26 w. days	2,500/=	53 full pay 55 half pay	Up to 5 yrs - 30 days or pay in lieu; Between 5 – 10yrs – 45 days or pay in lieu; 10 yrs and above – 60 days	21 days each yr	23 days basic pay	27,000/= inclusive of transport and coffin
<u>Separate farm 1 CBA</u> 2010 - 2012	<u>Nvs – min 1<sup>st</sup> Yr – 2<sup>nd</sup> Yr</u> 7,858 & 8,722= 9,817 & 10,897= 8,500 & 9,435= 8,904 & 9,883= 11,628 & 12,907= 14,783 & 16,409= 18,274 & 20,284= <u>Nbi Min</u> 7,878 & 8,744= 10,685 & 11860= 13,955 & 15490= 17,742 & 19694=  21,929 & 24,341=	<u>Nvs.</u> 2,903/= 2005/= 1809/= 1,809/= 1,451/= <u>Nbi</u> 6,170/= 4,174/= 4,174/= 3,508/= 3,508/= <u>Gen. worker</u> 1,451/= or 15% of basic	46 & 60	Up to 5 yrs – 24 days 5 to 10 yrs – 26 days 10 to 20 yrs - 28 days Over 20 yrs – 30 days	<u>Graded employee</u> Grade 3 - 3,217/= Grade 2-2a 2,574/= Grade 1– 1a 2,333/=	51 full-pay 51 half pay	Up to 5 yrs. – 1 month, Over 5 & up to 10 yrs – 1.5 months, Over 10 yrs – 2 months	24 days	24 days	Provide coffin & 21,000/= for funeral expenses and transport

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Years	Basic Wages (KSh) <sup>a</sup>	Housing Allowance	Work Hours	Annual Leave	Leave Travel Allowance	Sick Leave	Termination Notice	Redundancy / Severance Pay	Gratuity	Death of Employee
<u>Separate farm 1</u> CBA 2012 Sept – 2014 Aug	<u>Naivasha</u> 9,681 & 10,746/= 12,096 & 13,427/= 10,473 & 11,625/= 10,970 & 12,177/= 14,327 & 15,903/= 18,214 & 20,218/= 22,515 & 24,992/= <u>Nairobi</u> 9,706 & 10,774/= 13,165 & 14,613/= 17,197 & 19,085/= 21,860 & 24,265/= 27,019 & 29,991/= 11% & 11%	<u>Graded Nvs</u> 3053/= 2,125/= 1,909/= 1,909/= 1,551/= <u>Nbi</u> 6,320/= 4,274/= 4,274/= 3,608/= 3,608/= <u>General workers</u> 1,451 or 15% of basic	46 & 60	Up to 5 yrs – 24 days 5 to 10 yrs – 26 days 10 to 20 yrs - 28 workdays Over 20 yrs – 30 workdays	<u>Grade 3</u> 3,217/= <u>Grade 2 – 2a</u> 2,574/= <u>Grade 1 – 1a</u> 2,333/= <u>General worker</u> 2,478 – 2,800	51 days full pay & 51 days half pay	Up to 5 yrs. – 1 month, Over 5 & up to 10 yrs – 1.5 months, Over 10 yrs – 2 months	24 days	24 day if terminated, retire or resign provided he/she has served a minimum of five (5) yrs continuous service	Shs.25,000/= for funeral expenses and transportation plus coffin

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Years	Basic Wages (KSh) <sup>a</sup>	Housing Allowance	Work Hours	Annual Leave	Leave Travel Allowance	Sick Leave	Termination Notice	Redundancy / Severance Pay	Gratuity	Death of Employee
Separate farm 2 CBA 2010 – 2011	Gen. 7,776/= Watchmen – 8006/= 7,964/= 8,847/= 7,937=	15 % of basic	46 & 48	1- 5 yrs - 25 days Over 5 yrs – 28 days	150/= - 1,750/= as per distance	50 & 62 subject to production of medical certificate	Up to 3 yrs – 1 month, over 3 yrs – 2 months	20 days	21 days on retirement or resignation	Coffin & 27,500/= for transport of employee or spouse
Separate farm 3 CBA 2011 – 2013	5,890/= 10% & 10%	1,600/= per month or 15% of basic	46 & 48	30 consecutive days at one year in service	2,200/=	50 full days & 54 days at half pay	2 yrs – 1 month Over 2 yrs – 2 months	23 days each yr	5 yrs continuous service - 23 days each yr	23,000/=

Notes: <sup>a</sup> Percentages indicate percentage increases for each year of CBA.

## **Annex C: Update on Kenya flower farm wages and new collective bargaining agreement (CBA) for 2015-2017 signed October 21, 2016**

Very recently on October 21, 2016, the Kenya Agricultural Employers Association and The Kenya Plantation and Agricultural Worker Union signed a new collective bargaining agreement effective retroactively to August 1, 2015 and in force until July 31, 2017. This agreement provided for an increase of 12.5% for workers already employed on July 31, 2015 (end of previous 2013-2015 CBA), with an additional 12.5% increase on July 31, 2016. The housing allowance was increased from KSh1,700 per month to KSh1,900 per month and the leave travel allowance was increased from KSh2,500 per year to KSh2,700 per year for a total increase of 11.4% in cash allowances from KSh1,908 per month to KSh2,125 per month. The basic wage for newly hired general workers was set at KSh6,048, which is around 20% higher than the previous CBA of KSh5,000. It is worth noting that the increase in basic wage is higher than the around 6-7% inflation rate in Kenya (although it is also worth noting that annual food inflation was running at around 11% between October 2015 and October 2016). This new CBA means that the gap between prevailing wage and our living wage is a little lower than in our report.