Living Wage Report

Rural Belize

Study Date: May 2018 – updated to May 2021

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Living Wage Report

Rural Belize

CONTENTS

Living Wage Report

Rural Belize

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Living Wage Estimate

Rural Belize

Study Date: May 2018

SECTION I. INTRODUCTION

1. BACKGROUND

This report estimates a living wage for rural Belize for May 2018.[1] It does this using two different types of analysis. This includes the usual Anker methodology approach described in Anker and Anker (2017) whereby seconday data from existing household surveys are combined with primary data collected in new fieldwork, as in a typical Anker living wage benchmark study (see Global Living Wage Coalition website for examples www.globallivingwagecoalition.org). But unlike other Anker living wage benchmark studies, non-food non-housing costs are estimated in part using data for neighboring countries and an international cross-section analysis, because the national secondary data on household expenditures are missing for Belize. Also unlike other Anker methodology living wage benchmrk studies, this report also refers to an Anker Reference Value for rural Belize based on the Anker Reference Value methodology, which itself is based on a rigorous statistical analysis of 40 internationally comparable and quality-assured Anker methodology studies spread across 23 low-income and middle-income countries carried out primarily under the auspices of the Global Living Wage Coalition (see www.globallivingwagecoalition.org for a description of the Anker Reference Value methodology).

This report is part of a series of living wage reports for the Global Living Wage Coalition (GLWC) using the Anker methodology to estimate living wages in rural and urban areas around the world. These studies have been commissioned by members of the Global Living Wage Coalition which brings together Fairtrade International, Rainforest Alliance (RA), and Social Accountability International (SAI), in partnership with the ISEAL Alliance and Richard Anker and Martha Anker. All of these studies use the methodology described in Anker and Anker (2017), which has gained wide-spread acceptance and has been used to estimate living wages in rural, urban and semi-urban areas around the developing world. The GLWC's shared mission is to provide high quality and consistent knowledge and information about living wage levels as well as to foster implementation, and impact necessary for stakeholders of all types to collaborate in a non-competitive environment toward wage increases globally in the farms, factories and supply chains participating in their respective certification systems and beyond, with the long term goal for workers to be paid a living wage.

2. LIVING WAGE ESTIMATE FOR RURAL BELIZE

Our estimate of a gross living wage (aka living wage) for rural Belize for May 2018 is Belizean Dollar BZ$890 (US$442)[2], This gross living wage takes into consideration that workers have mandatory payroll

[1] The fieldwork study areas of Mango Creek, Trio Village, Cow Pen, San Juan, Santa Cruz, Bella Vista are in the Stann Creek and Toledo Districts in the South of Belize. Results, however, are generalizable to all rural areas in Belize.
[2] Exchange rate used was BZ$2.0153 = 1 US$ as of May 2018.

deductions of BZ$21 (or approximately 2.4%) for the country's public social security system of the Belize Social Security Board. This means that the take home pay net living wage required for workers paying these mandatory payroll deductions is BZ$869 (US$ 431) in May 2018.

The gross living wage for May 2021 (updated by inflation projected to May 2021) is BZ$905 (US$449) per month (using an exchange rate of 2.0147 BZ$=1 US$). And the updated net living wage for May 2021 taking into account mandatory deductions from pay is BZ$881 (US$437).[3] Total household costs per month for basic but decent living standard for reference family updated to May 2021 came to BZ$1,401 (US$695). Note that these updated figures for May 2021 are provisional estimates since at the time of writing this report, the latest available inflation rate data from government was for January 2021. For expositional purposes, we used this latest reported annnual inflation rate for January 2021 to project forward to May 2021 on the request of funders.[4]

In this report, May 2018 study values are presented for the sections that relate to the cost of decent living. For section V (Estimating Gaps between Living Wage and Wage comparators), the inflation updated May 2021 living wage value is used to better compare to other 2021 measures of prevailing wages.

3. CONTEXT AND METHODOLOGY

3.1 The Belizean economy

Belize is an extremely small and sparsely populated country on the eastern coast of Central America. To its north, it borders with Mexico and to its east Guatemala. Its official language is English, but with recent influx of Central American migrants (especially from Guatemala), Spanish is such a common language that the country can be considered effectively bilingual.

In 2020, the Belizean population was estimated at 397,682. With 22,790 km^2, and just under 17 inhabitants per square kilometer, Belize has one of the lowest population densities in the world. Approximately 46% of the population is said to reside in an urban area. The largest city in the country, Belize City, has a population of under 60,000. The capital, Belmopan, has only 16,000 inhabitants. Life expentancy is around 75 years for men, and 79 years for women, thereby outperforming most of the other countries in Central America, save Costa Rica.

In 2019, Belize's per capita gross domestic product (GDP) was US$4,815 (in 2019 US$, World Bank indicators). With this, Belize is considered by the World Bank to be an upper-middle-income country, but Belize's level of development indicated by its GDP per capita in USD substantially overstates the living standard of typical families in Belize for two reasons. First, Belize's per capita income is inflated by it being a tax haven. And second, Belize is a relatively expensive place to live compared to other countries in the region as indicated by the ratio between the World Bank purchasing power parity (PPP) to USD for Belize.

Poverty rates are high in Belize. Official data on poverty rates from national or international sources is difficult to find, but Doby (2018) and Lano (2017) suggest that around 42% of the population lives below the national poverty line. UNICEF (2016: 1) argues that 49% of all children in Belize live in poverty, and "these national averages mask the socio-economic, ethnic and geographic disparities that exclude many children from lifesaving and life-building services, particularly in southern Belize". Not surprisingly in this context, Belize struggles with malnutrition. About 15% of all children do not receive adequate nutrition.

[3] This is the 90-day average exchange rate for March 2021.

[4] Given that inflation is so low in Belize (only 1% annual inflation rate in January 2021), the final estimate for May 2021 is not expected to be very different. For example, there was only 1.4% inflation in the two-year period between the May 2018 study and May 2020

Poverty also hits indigenous ethnic groups especially hard (Doby, 2018). In 2009, 68% of the indigenous Maya population lived in poverty.

Belize's economy depends heavily on agriculture and tourism. First, agriculture accounted for 8.3% of GDP in 2019 (CEPALSTAT, 2020), and the primary sector as a whole employed 16% of the labor force in 2017 (SIB, 2019). The banana industry alone made up 1.2% of the country's GDP and employed 3,100 persons, in 2017. Other large sectors are the citrus industry, which made up 1.6% of GDP and employed 2,800 people, and the sugar industry, which made up 3.4% of GDP and employed almost 5,200 people. These products, sugar, bananas and citrus fruits (concentrate and solids) also constitute Belize's main exports. While the United States is an important trading partner for citrus fruits, over 60% of sugar and bananas are exported to the UK. In fact, the banana industry exported 90% of all its production to the UK and Ireland in 2017. Second, with the world's second largest barrier reef, over a hundred caves and a rich Mayan culture, tourism and commerce are another key economic sector (accounting for 27% of GDP in 2019), as well as transport (10%) (CEPALSTAT, 2020). The services sector employs around 70% of the labor force. As such, the Government of Belize has designated agriculture and tourism as the two main development priorities. See Appendix 1 for a short description of the banana industry in Belize. It is important that Southern Belize, where most of the citrus and banana production is located, attracts migrant labor, especially from Guatemala. The female labor force participation rate for ages 25-59 years is 47%, while it is 91% among men. However, the country faces a high unemployment rate at 9%, with unemployment more than thrice as high among women than men (15.6% vs. 4.8%, respectively) (SIB, 2019). The female unemployment rate (ages 15 and over) is even higher than the national average in rural areas (17.4%) although slightly lower for men in rural areas (5.1%). At the same time, underemployment is also reasonably high. About 15% of the labor force works less than 35 hours per week (SIB, 2019), again with a notable difference between men (11%) and women (22%).[5]

3.2 Methodological strategy

This study uses elements from two diffferent types of Anker living wage methodologies: (i) the typical Benchmark study which uses information from secondary and primary data sources for Belize, and (ii) an Anker Reference Value that estimates a typical rural living wage for a country at Belize's level of development. Secondary data sources and references are provided at the end of this report. Appendix 2 provides detailed information of the methodological strategy used for the fieldwork primary data part of this study and report.

For much of the required information from secondary sources, we used data from the Statistical Institute of Belize (SIB), specifically from its annual Labor Force Surveys, Consumer Price Index expenditure weights, and other surveys published on their website. The latest household expenditure survey data in Belize (2010) presented a particular challenge. The dataset provided by the SIB did not allow us or a team of specialized statisticians to identify the exact composition of the household expenditure data provided. For this reason, we were forced to implement an alternative strategy for estimating NFNH costs. To arrive at a reasonanble NFNH/Food ratio for rural Belize, we used a statistical analysis of NFNH/Food ratios from 40 quality-assured Anker methodology living wage studies to estimate a likely NFNH/Food ratio for rural Belize. We also used NFNH/Food ratios from quality-assured Anker methodology living wage studies for other countries in the Central America region (Mexico, Nicaragua, Guatemala, and Costa Rica).

[5] On a critical note, child labor is a national challenge. In 2017, the SIB indicated that 4,989 children were engaged in child labor. Nationally, this represented 4.7% of Belize's children, although in certain districts such as Corozal, this rate is was high at 9.1%. In Stann Creek and Toledo, 3.2% and 5.4% of the children are engaged in child labor, respectively. This is especially an issue among boys, who represent 72% of all working children, and it is more common in rural areas than in urban areas (76% of all working children live in rural areas).

Note that since Anker Living Wage Reference Values are based on a statistical analysis, they have a margin of error which is around +/- 10% using a 95% confidence interval. This margin of error can be larger for specific areas in a country that have atypical living costs, which we do not believe is the case for rural southern Belize given that Belize is such a small country.

As such, this report is based on an estimate of a living wage for rural Belize that uses available data from secondary source for Belize, primary data collected in fieldwork in 2018, NFNH/Food ratios from neighboring countries, and an international analysis of NFNH/Food ratios. This reportalso uses an Anker Living Wage Reference Value for rural Belize.

4. HOW A LIVING WAGE IS CALCULATED IN ANKER METHODOLOGY

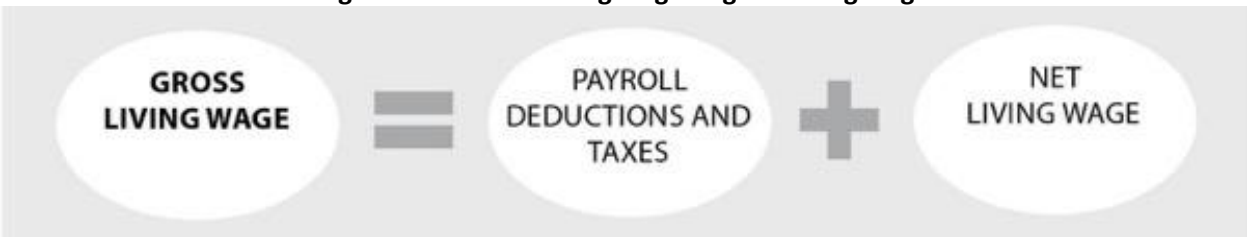
This section provides a brief introduction to how our living wage for rural areas of Southern Belize was estimated in this report based on the Anker Methodology described in Anker and Anker (2017). This process is depicted in figures 1 through 3. To estimate a living wage, cost of a basic but decent quality of life in rural Belize is estimated. This cost for a basic but decent quality of life uses a nutritious low-cost diet; a decent basic healthy house and utilities; funds to cover other costs such as healthcare, education, transport, communication, recreation and cultural activities and participation in social life; and a little extra money to provide a buffer for emergencies and unexpected events. This is estimated for a typical size family in rural Belize with a typical number of full-time equivalent workers per couple.

To estimate costs for each component of basic needs at a basic decency level such as food, housing and utilities, and education and healthcare, secondary statistical data were combined with primary data collected in several locations within southern Belize in May of 2018. The estimates of costs for each of these components is discussed in detail in the following sections.

Figure 1: Components of a basic but decent life for a family

Figure 2: From cost of basic but decent life to net living wage

Figure 3: From net living wage to gross living wage



Source: Anker and Anker (2017).

As will be explained in each section below, we strived to make a conservative estimate for each component of living costs. For example, the living wage model diet is basic, with food items that are consumed locally, are consistent with local food preferences, are relatively inexpensive, and are readily available. Our living wage model diet was developed by first starting with the Belize government poverty line food basket as an initial reference and then adjusting it to be nutritious in calories, macro nutrients, and fruits and vegetables. Yet, the model diet we developed is very similar in terms of its overall cost. For our local housing standard, we relied partly on the very conservative social housing standard of the Belize Housing Mission, and similar housing standards in Guatemala and Costa Rica were also used as a reference. This standard will be explained in detail below, but includes an interior living space of only 42 m^2 (452 ft^2), which is small for a lower upper middle-income country like Belize (Anker and Anker, 2017).

Of special note is the role of migrant workers in Belize's agricultural sector. Although data are hard to come by, it is known that many immigrants from Guatemala and Honduras work in the Southern region of Belize, many in the banana industry. It is also known that many migrant workers do not bring their family to Belize. Thus, it may be assumed that migrants often send a substantial proportion of their wages to their home countries to support family members. This means that most migrants in the southern region of Belize are not only very concerned with living costs and living conditions in Belize, but also those in Guatemala and Honduras. Given this situation, it might seem logical to estimate a living wage for rural Belize partly based on living costs and living standards in those other countries. However, we do not feel that this would be correct as explained below. We feel that a living wage for Belize should be based on living costs and living standards required for decency in Belize. First of all, there has to be one living wage for all workers in rural Belize. There cannot be one living wage for Belizean workers (who support a family in Belize based on Belizean standards and costs) and another living wage for migrant workers (some of whom support families in Belize, while others support a family in, say, Guatemala based on Guatemalan costs and standards). Separate living wages for Belizeans and migrants would not only violate the bedrock principle of equal pay for equal work but also probably lead to discrimination based on nationality - and in the end, might lead to a race to the bottom toward wages well below the living wage for Belize. Secondly, we feel that all workers in Belize (regardless of their nationality) should be able to afford a living standard considered decent for this country. Estimating a living wage based mainly on living costs and standards considered acceptable in a country like Guatemala – which are probably somewhat different than in Belize - could mean that Belizean workers would be not be able to earn what constitutes a living wage in their own country. The decision to base our living wage for rural Belize exclusively on Belizean conditions and costs is generalizable to other countries (see GLWC living wage reports for Costa Rica and Dominican Republic, for example).

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

5. FOOD COSTS

In this section, the cost of a simple, relatively inexpensive but nutritious model diet is presented. The total daily food costs for the model diet for the study area was estimated at BZ$ 4.72 (US$ 2.34) per person per day. For the reference family of 4 people, two adults and 2 children, this represents BZ$ 574 (US$ 285) per month. How the living wage model diet was set and how its cost was determined are explained in this section.

Food cost per day per person of the model diet:

= BZ$ 4.72
(US$ 2.34)

5.1 Model Diet

The general principles used to establish a model diet for rural Belize were the following. First, the diet had to be nutritious, that is, contain enough calories, proteins, fats, carbohydrates, and micronutrients as well as sufficient fruits and vegetables for micronutrients and minerals. For this, World Health Organization (WHO) standards were used as a reference, in accordance with the Anker methodology. This includes acceptable amounts of macronutrients (10-15% of calories from proteins, 15-30% of calories from fats, and 55-75% of calories from carbohydrates) and sufficient micronutrients. Second, the model diet needed to be consistent with local food preferences, to ensure that the food items therein are palatable and locally consumed and be expressed in number of portions easily understandable to laypersons. Finally, the model diet had to be as low in cost as possible given the above constraints and criteria. The model diet for rural Belize contains 2,381 calories per person.[6] This was estimated using Schofield equations for estimating calorie needs as recommended by WHO assuming agricultural workers have a vigorous physical activity level, while other family members have a moderate level of physical activity.

To determine our model diet for rural Belize, we started from the government poverty line diet. Since there is relatively little variation in the poverty line diets across Belize, our starting point was an average of the poverty line diets for the Stann Creek and Toledo Districts, and from there, we made adjustments. Specifically, we decreased the number of food items from 29 to 20 items in order to make estimating the cost of this diet easier (and then added an additional amount to allow for more variety to allow for having fewer food items). The amount of grains and cereals was increased by about 170 grams, based on a diet with rice and maize tortillas. The number of starchy roots and tubers (potato and tannia) was decreased significantly, from 294 grams to 100 grams for nutritional reasons. Plantains were kept almost the same, but the amount of red or black beans was increased substantially to 3 portions per day, or 84 grams. This is in line with food consumption in other countries in Central America, where beans form an important part of the daily diet. Especially in Southern Belize, where there is a substantial influx of migrants from Guatemala, beans are common and popular. They are also a cheap source of protein. Dairy products were slightly reduced, because they are relatively expensive products, and powdered milk was used as it is more commonly consumed and less expensive than liquid milk. The number of eggs, a relatively cheap source of protein, was increased to one egg a day, instead of one every other day. A similar amount of cabbage as a green leafy vegetable was included, and amount for all vegetables and fruits were increased in keeping with WHO recommendations. We assumed that most vegetables are bought on local markets and

[6] The required 2,381 calories per person per day we used for our reference family size (based on WHO equations) is slightly lower than the 2,400 calories used in the poverty line diet.

in supermarkets, rather than being homegrown. Given the model diet is relatively low on fats, we increased oil slightly from 30 to 34 ml, but sugar was halved from 63 grams to the 30 grams which WHO considers the daily maximum amount of added sugar per person per day. To this, we added 11% for variety (since people should not be expected to eat the same foods every day), 1% for spices, and 4% for spoilage and waste. Table 1 shows the model diet used for this report and the costs associated with this diet:

Table 1. Model diet and costs for rural Belize, in BZ$ (May 2018)

Food item	Portion	Edible grams•	Cost per kilo	Cost
Cereals and grains				
White rice	A bit less than one cup of rice per day	179	2.25	0.40
Maize tortilla	3 average size (35gr) tortillas per day	105	2.36	0.25
Prepared cereals				
Macaroni, spaghetti, dry	3 meals of pasta per family, per week	40	5.92	0.24
Roots and tubers (starchy)				
Potato	Less than one pound per person per week	50	4.90	0.33
Tannia	Less than one pound per person per week	50	3.96	0.24
Starchy fruit or vegetable				
Plantains	4 average sized (250gr) plantains per week	143	0.82	0.18
Pulses, legumes, beans				
Black and red beans (average)	3 servings (28gr) per person per day	84	3.72	0.31
Milk and dairy				
Milk, powdered	1 liquid cup per day for children	16	12.42	0.20
White soft cheese (*queso blanco*)	100 gr per person per week	14	11.21	0.16
Eggs				
Chicken egg	1 egg a day	48	4.34	0.24
Meats & Fish				
Chicken broiler & skin raw	4 servings per week	49	5.88	0.42
Snapper	1 serving per week	12	8.26	0.17
Dark green leafy vegetables (GLV)				
Cabbage	325 gr of vegetables, fruits and beans in total••	48	3.91	0.24
Other vegetables				
Onion	325 gr of vegetables, fruits and beans in total	48	4.84	0.26
Cucumber	325 gr of vegetables, fruits and beans in total	48	3.03	0.15
Fruits				
Orange	325 gr of vegetables, fruits and beans in total	48	0.69	0.05
Banana	325 gr of vegetables, fruits and beans in total	48	0.82	0.06

Food item	Portion	Edible grams•	Cost per kilo	Cost
Oils & fats				
Oil	Maximum allowed by WHO	34	2.83	0.10
Sugar				
Brown sugar	Maximum allowed by WHO	30	1.27	0.04
Nonalcoholic beverages				
Coffee	1 cup a day for adults	1.5	36.60	0.05
Total cost of model diet excluding additional costs indicated below				**4.07**
Total cost of model diet including additional costs indicated below				**4.72**
Percentage added for salt, spices, sauces, and condiments				*1%*
Percentage for spoilage & waste				*4%*
Percentage added for variety				*11%*

•Edible grams are reported here. To get to the model diet cost, one must multiply the cost per kilo by purchased grams (not reported here), and not by edible grams.
••The total for vegetables, fruits and beans is 325 grams.
Source: Authors.

5.2 Food prices

Table 1 also indicates the food prices we found in our local market survey. Most food prices were collected in local shops and supermarkets where local workers and their families do their shopping. Also, we visited and took into consideration prices in small vegetable stands, some of which were mobile, from the back of a small pick up truck. However, most shopping was done in the local supermarkets, almost all of them owned by Chinese vendors. In most towns, there were only one or a few supermarkets, and competition between them seemed to be limited. Therefore, we found that food prices were quite homogenous in the regions we visited.

In total, 602 prices for 42 different food items were collected. This means several prices were collected for each food item. Most of these prices were obtained by observing price tags, and if these were not available, by asking the vendors. Whenever food items were not sold at a standard price per kilo or pound or in a standard packaging with the weight written on it, these food items were purchased and weighed to obtain a price per average weight, and in order to calculate (or rather confirm) percent edible (by taking away the skin of bananas for example). Subsequently in the analysis stage, price data that were unusual/outliers for each study location were ignored. After this, for each food item, the lowest price for acceptable quality in supermarkets and general stores (usually supermarket) was selected whereas for open markets with multiple vendors the average price on offer for acceptable quality was selected. This resulted in around four or five price references representing lower prices per location. This process was followed in order to imitate the way that cost-conscious shoppers do their shopping. Then, we took the mean price across all study locations.

Since we collected food prices in May 2018, there is an implicit assumption that these prices are representative of food prices throughout the year. Given planting and harvest seasons for a variety of crops, there is no reason to believe that these months are abnormal months. In Belize, the climate conditions result in a relatively constant production of food and we found that most food items are abundant throughout the year, and while prices of individual food items do fluctuate slightly, it seemed reasonable to assume that such fluctuations do not alter the food prices and costs considerably. Second, even when food prices for some food items fluctuate over the year, this mainly affects vegetables and fruits. Given the abundance of vegetables, fruits and grains available throughout the year, people simply

substitute similar alternative food items. Therefore, we assume that the prices documented are representative for the year. Also, the 11% we add for variety for our living wage model diet allows for substitution of certain food items which might be more expensive at a certain point in the year, for another cheaper food item. This is especially true for fruits and vegetables, of which there was abundant supply in the fieldwork locations. Considering this discussion, in the end no adjustment was felt to be necessary for seasonality of food prices.

Figure 4. Photos of local food markets

Source: Courtesy of Koen Voorend

6. HOUSING COSTS

Housing costs are estimated by summing up the costs of rent for local acceptable healthy housing, utility costs, and costs for minor repairs and maintenance. In this, the Anker methodology differs from other methodologies to measure living wages and poverty lines where all non-food costs (including housing costs) are estimated in one go. That is, in the Anker methodology, housing costs are separated out from the non-food costs data, and are based on a basic but acceptable housing standard, and not actual

spending patterns. As such, it avoids reproducing poverty consumption patterns and provides better estimates of the cost of acceptable housing (Anker and Anker, 2017).

In the Belizean context, several of the houses we visited in rural Southern Belize met the minimum standard acceptable by the WHO, UN-HABITAT and others. Such decent housing is typically a stand-alone house on a small piece of land with access to publicly provided water and electricity. Many of these houses are owned by the inhabitants with an interior space of around 42 m^2 (452 ft^2). The house is typically made of thin prefabricated walls (sometimes in combination with wood), a zinc roof, a cement floor, two sleeping rooms, a small living room and kitchen and a shower, and a flush toilet with a sceptic tank. This 42 m^2 interior space does not include an outside sink for washing clothes, and a small terrace, which are typically outside to the back of the house. However, despite Belize being an upper-middle income country, it is equally true that many of the houses we visited in Southern Belize were far removed from this standard. Indeed, during fieldwork, the research team encountered several houses in deplorable state. In this context, fieldwork was crucial to determine the cost of a house that meets our living wage decency standard.

Rent in the rural areas of Southern Belize we visited for our minimum standard for housing, as described in the next section, is estimated to cost about BZ$ 250 (US$ 124) per month. This amount represents the rental price for an acceptable house over the different locations visited during fieldwork. Rental prices were collected by visiting houses in the fieldwork sites and asking around for rental prices for houses. Some of the houses visited met our minimum conditions and others did not. Since rental markets were not well developed in all study locations, it was not always easy to obtain rental prices.

This amount does not include utility costs and maintenance and repair costs, which we estimate at an average of BZ$ 90 (US$ 45) per month (see below). This gives a total of BZ$ 340 (US$ 169) per month for housing.

6.1 Standard for basic acceptable housing

Our standard for basic acceptable housing for rural Belize was arrived at based on several sources, which mutually reinforced one another. First, the WHO, other international organizations and international covenants and conventions set minimum healthy housing standards. This includes, for example, need for permanent floor, permanent walls, and roof to protect against the elements and disease. Also needed is safe water, sanitary toilet, adequate living space, adequate ventilation, adequate light, safe outside environment, good condition of the house, etc. Certain conditions are not allowed, such as earth floor, mud or stick walls, thatched or leaky roof, slum surroundings, or environmental hazards nearby (Anker & Anker, 2017). Second, based on secondary data which indicate housing conditions in rural Belize, and specifically for the Toledo and Stann Creek regions which are at the center of the fieldwork sites visited, the living wage local housing standard needs to be consistent with local housing conditions when these are above international minimum standards. Table 2 indicates local housing conditions in 2010.

Table 2. Housing conditions in rural Belize in 2010 from the Belize Population and Housing Census, 2010 (SIB, 2010)

Item	Rural	Stann Creek	Toledo
Main Material of Outer Walls			
Wood	39.1	49.0	61.7
Plywood	3.0	5.0	0.7
Concrete/ Brick	43.0	39.4	31.6
Wood and Concrete	3.2	1.6	3.8
Sticks/ Palmetto/ Stucco	6.2	0.7	0.5
Other	5.3	4.1	1.7
Not Reported	0.2	0.1	0.1
Main Roofing Material			
Sheet Metal	79.7	81.9	64.5
Concrete	10.2	11.1	5.3
Thatch	7.5	5.2	29.1
Other	2.4	1.6	0.9
Not Reported	0.2	0.2	0.1
Main Flooring Material			
Concrete	68.5	53.6	62.1
Wood	22.1	42.2	13.6
Earth/ Sand	7.5	2.9	23.8
Other	1.6	1.1	0.5
Not Reported	0.2	0.3	0.1
Level of Repairs Required			
No repairs	51.1	57.8	58.6
Repairs	49.0	42.2	41.4
Minor Repairs	33.9	41.3	35.5
Moderate Repairs	26.2	18.4	20.5
Major Repairs/ Irreparable	39.5	40.1	43.6
Not Reported	0.4	0.2	0.5
Type of Cooking Facility			
Kitchen in Dwelling	71.0	77.5	65.9
Other Cooking Space in Dwelling	6.0	3.6	9.4
Cooking Space Outside Dwelling	18.8	10.8	19.8
No Cooking Space	3.8	7.7	4.6
Not Reported	0.4	0.4	0.2
Type of Cooking Fuel			
Wood/ Charcoal	26.1	11.2	51.2
Butane/ Biogas	72.3	85.8	47.5
Other	1.5	2.8	1.2
Not Reported	0.1	0.2	0.1
Method of Garbage Disposal			
Take to Dumpsite	19.5	10.3	11.9
Burn	50.1	22.2	51.7
Municipal Collection	8.2	45.2	21.6
Private Garbage Truck	15.4	14.8	5.9

Item	Rural	Stann Creek	Toledo
Other	6.4	7.2	8.7
Not Reported	0.4	0.4	0.2
Type of Toilet			
Flush Toilet (Septic Tank)	45.3	65.0	27.8
Pit Latrine Ventilated and Elevated	11.4	5.2	10.8
Pit Latrine Ventilated only	8.1	5.9	7.0
Pit Latrine Not Elevated Not Ventilated	21.4	13.5	27.7
Pit Latrine Elevated only	9.0	7.4	11.3
Other	0.6	0.6	0.4
None	4.0	2.3	14.8
Not Reported	0.2	0.2	0.2
Source of Water			
Public Piped into Dwelling	40.4	59.6	24.0
Public Piped into Yard Only	28.3	25.5	37.3
Private Piped into Dwelling/ Yard	8.6	6.9	7.4
Dug Well	9.8	2.1	11.0
Private Catchments not Piped	4.7	1.9	3.5
River/ Stream/ Creek/ Pond/ Spring	3.8	1.9	10.2
Other	4.3	2.0	6.6
Not Reported	0.1	0.1	0.1
Source of Lighting			
Electricity from Public Source	72.9	82.6	55.5
Electricity from Private Source	5.0	2.6	9.4
Electricity Drop from Neighbor	5.1	4.2	2.6
Kerosene/ Gas Lamp	8.6	2.8	19.2
Candle	6.6	6.3	10.8
Other	0.7	0.4	1.1
None	0.8	0.8	1.1
Not Reported	0.3	0.3	0.1
Average Number of Persons Per Bedroom	**1.6**	**1.8**	**2.6**
Number of Bedrooms in dwelling			
1		32.9	53.9
2		35.8	25.5
3		22.0	13.4
4		6.1	4.5
5		1.8	1.7
Number of bedrooms for 4-person family			
1	28.0	23.3	50.1
2	39.2	43.7	27.8
3	25.1	25.2	15.7
4	5.8	6.2	3.7
5	1.3	1.0	1.8

Source: Authors based on SIB, 2010.

We set our local housing standard based on information in table 2 above and international standards. This standard, which is presented in table 3, is quite basic. It consists of a two-bedroom house, with one toilet and shower combination, a small kitchen, and a separate living room. Each room typically has one window. It also has a small washing sink outside the back of the house. The materials used for this standard are prefabricated cement walls (possibly in combination with wood, if in good repair), a cement or tiled floor, and a zinc iron roof. There is (publicly) provided electricity, although cooking is often done with LPG gas. Water is usually piped into the dwelling, and the toilet facility connects to a septic tank. The size of the housing standard was set after consulting by phone with the Belize Housing mission, formerly Habitat for Humanity Belize. This is a Christian, non-profit, organization that assists people in poverty with the construction of a house. The houses the organization constructs are small but decent. They have concrete spread footings with block stem walls with a roofing system from treated lumber roof rafters with pressed, aluminum roof sheeting.

For countries in the region, including Belize, Guatemala and Nicaragua, this NGO uses a social housing standard of between 36 m^2 (e.g. Guatemala) and 42 m^2 (e.g. Belize) depending the country's development level. For Belize, a minimum size of the house of 42 m^2 for 4 members was used in this report, which is like in Costa Rica (Voorend, Anker and Anker, 2019). This size is quite conservatively small for a middle-income country like Belize. Also, 2010 Census data shows that at least 64% of all 4 person households in rural areas in Belize have houses with 2 or 3 bedrooms (SIB, 2010), which argues for a relatively small housing standard. Finally, during fieldwork, we confirmed that our housing standard is reasonable for the study regions.

Table 3. Living wage housing standard for rural Belize

Element	Minimum standard
Structure, Roof and Floor	• Permanent structure and walls. Made of concrete, cement, prefabricated material, or bricks. Zinc iron is unacceptable. Wood is acceptable in combination with concrete structure, if in good repair. • Roof: made of corrugated iron without leaks. • Floor: made of cement or tiles. Wood is acceptable if in good condition and off from the ground.
Electricity and cooking fuel	• Lighting source: electricity is standard; it is common in the rural areas of interest • Cooking fuel: Electricity or gas as a minimum acceptable standard.
Water source and toilet	• Water: piped into dwelling or yard. • Toilet facility: minimum acceptable standard is a sceptic tank with a flush toilet.
Number of rooms	• Two bedrooms • One (small) living room
Minimum number of m^2	• 42 m^2, consistent with the minimum standard of social housing
Other	• Minimum one window per room • Roof or ceiling at least at 2 m. Ceiling is not required. Common to have just a roof. • Safe food storage: separate area. • Minimum indoor pollution from cooking: separate space for cooking or good ventilation • No site hazards • No garbage on the street • No slum area acceptable

Source: Authors.

Figure 5. Photos of local houses

Acceptable houses **Unacceptable houses**

Notes: Houses to the left met the decent housing standard. Houses to the right were not considered acceptable. Top-right: no decent protection, unfit walls with holes, small. Center-right: in part of town with regular floods when heavy rains. Bottom-right: Unfit walls, not enough space, too few windows.
Source: Courtesy of Koen Voorend

6.2 Rent for basic acceptable housing

In the fieldwork locations in southern Belize, information was collected for over 50 houses. After cleaning the data, dropping some observations because the data was incomplete or estimates of total size were considered unreliable, we obtained 40 observations. Generally, people were open to let the research team into their homes and access was relatively easy. Several of the inspected houses were dropped from analysis because some of the necessary information was missing, or because the information provided on

rental prices was deemed too unreliable (for example, an estimate given by neighbors). Rental markets were generally not very well developed, but it was not difficult in the field to obtain information on rent.

Appendix 3 provides detailed information gathered for rental houses visited in the region, some of which meet the standard while others do not, while Figure 5 shows some examples of acceptable and not acceptable housing. To get to the BZ$ 250 estimate we considered the cheapest acceptable house we could find in each location and took an average across locations. This gave an estimate of BZ$ 250, after which we checked whether in all locations one could rent an acceptable house for this sum. This was the case in 4 out of 5 locations, but not in Mango Creek. However, the houses visited in Mango Creek were considerably larger than the housing standard considered for this report and if the average cost per m^2 for the houses visited in Mango creek is considered, BZ$ 250 should be enough to afford a decent house in this location as well.

6.3 Utilities

Our estimate of utility and other housing costs is based on information on utility costs obtained from 38 households visited. Generally, people knew the exact amount or had a good idea of utility costs since these costs are paid monthly. We considered such estimates reasonably reliable. Based on this information, an average cost per household for gas and electricity was obtained after excluding outliers. An average cost per person for water usage was obtained, and this was multiplied by four members to estimate the household costs. This gave the following estimates, as shown in table 4. We assumed a small token amount for maintenance and repairs considering that we are dealing with rentals.

Table 4. Total housing cost (rent + utilities) for decent housing in rural Belize

Item	Average cost in BZ$ per month for reference family
Water	16
Electricity	40
Gas	32
Total services	***88***
Maintenance and repair	2
Total Utilities and Repair	***90***
Average monthly rental price	**250**
Total monthly cost of Housing	***340***

Source: Authors.

7. NON-FOOD NON-HOUSING COSTS

Non-food and non-housing (NFNH) costs are estimated in a different way than food costs and housing costs in the Anker methodology. Whereas food costs and housing costs are estimated based on normative standards - nutritious diet and healthy housing standard – NFNH costs are based mainly on secondary data and so current household expenditures in rural Belize according to recent household expenditure survey data. This is done because it would be too difficult and time consuming to decide on appropriate standards and prices for the many NFNH needs of families that include clothing and footwear; furniture and household equipment; health care; education; recreation and culture; transportation, telephones; personal care; etc. However, since health care and education are considered human rights around the

world, separate enquiries and post checks are done and NFNH is adjusted when necessary to make sure that sufficient funds are included in our estimate of NFNH needs for these human rights.

Unfortunately, the 2010 Household Expenditure Survey data (latest such survey) which could allow us to estimate the NFNH/Food ratio for rural Belize are not in a form that can be analyzed. The research team encountered issues with the microdata (e.g. no dictionary to identify variable fields) that made it impossible to use these data. An alternative source of CPI expenditure weights were not considered realisticly reflective of the situation for typical Belizean households since the food expenditure weight was only 19.4% which suggested a consumption pattern in line with those in high-income countries.

Because of the lack of usable data on the distribution of household expenditures in Belize, we estimated the NFNH/Food ratio, which is crucial to estimating the living wage in the Anker Living Wage methodology, in a different way. We did this using two different approaches. First, we estimated what the NFNH/Food ratio would be for a rural area of a country at Belize's standard of living using regression analysis of NFNH/Food ratios for 40 locations in 23 developing countries from quality-assured Anker living wage benchmark studies. This anlaysis indicated a NFNH/Food ratio of 0.714 for rural Belize. Second, we looked at the NFNH/Food ratio found in quality-assured Anker living wage benchmark studies for other countries in the Central America region. Results shown in Table 5 indicate an average NFNH/Food ratio for somewhat similar areas (rural Nicaragus, rural Guatemala, and rural Chiapas Mexico) was 0.663. The other two values in table 5 are consistent with 0.66 considering that these are for areas with substantially higher income levels.

Considering these two possibiliites - 0.714 from international regression analysis and 0.663 from relevant neighboring countries, we decided to use a NFNH/Food ratio of 0.70 which is between these two estimates.

Table 5. NFNH/Food ratios from Anker living wage studies in other countries in the Central America region

Country and area	NFNH/Food ratio	Comments
Nicaragua, rural	0.66	Relevant, similar development level as Belize
Guatemala, rural	0.65	Relevant, similar development level as Belize
Chiapas, México, rural	0.68	Relevant, similar development level as Belize
Central Mexico, rural	1.15	Not relevant, higher development level than Belize
Costa Rica, rural	1.35	Not relevant, much higher development level

Source: Authors based on existing Living Wage Benchmark studies in the region.

8. HEALTHCARE AND EDUCATION POST-CHECKS

In the Anker Living Wage Benchmark methodology, post-checks of the secondary data are made for healthcare and education costs using data from fieldwork. Blind and uncritical use of an extrapolation method to estimate NFNH costs based solely on secondary data runs the risk of underestimating amounts required for NFNH needs that meet a decent standard. Therefore, it is considered important to make sure that there are sufficient funds available for healthcare and education, as these are considered as human rights in the Anker methodology and throughout most of the world.

To estimate how much is implicitly included in the preliminary NFNH estimate for healthcare and children's education, we used the percentages of NFNH that are for these human rights according to Consumer Price Index expenditure weights. This is done in table 6. This indicates that healthcare

expenditure represents 4.1% of total household expenditure, which is 13.4% of NFNH expenditure and BZ$ 54 (US$ 27). Similarly, education expenditure represents 3.3% in the total househld expenditures, or BZ$ 43 (US$ 21).

Table 6. Healthcare and Education spending in total household expenditure in rural Belize

Expenditure group	% of household expenditure	Percent of NFNH	Amount in BZ$	Amount in US$
Preliminary NFNH	30.5		**402**	199
Healthcare	*4.1*	***4.1./30.5=13.4%***	***54***	*27*
Education	*3.3*	***3.3/30.5=10.8%***	***43***	*21*

Source: Authors.

During fieldwork, data was collected on local healthcare and education costs so that we could compare these fieldwork estimtes with amounts for these included in the preliminary NFNH estimate indicated in table 6 above. The objective was to evaluate whether the latter estimates are enough to ensure access to decent healthcare and education.

8.1 Healthcare post-check

In Belize, there is both a public and a private healthcare system. Both are overseen by the Ministry of Health, which is not only the responsible governing body but also the largest provider of public health services in the country. The public health system provides affordable care for free or at low costs. In principle, health services are not charged for if patients have a Sickness and Maternity insurance (health insurance) from the Belize Social Security Board. For patients without health insurance, services are available but are charged for, although fees are low.

The organization of healthcare is through a multi-layered system, with hospitals (both public and private), and for coverage of especially rural areas, such as in the South, through regional and rural clinics. The largest and most important hospital is the public Karl Heusner Memorial Hospital, located in Belize City, which is the national and regional referral hospital. Then, within the capital of each district, regional hospitals serve the local population. For rural areas, a total of 60 public clinics serve as a first contact with the health system for many patients.

Despite recent improvements (Mac Arthur, Nelson and Woodeye, 2014), the health system encounters several challenges (PAHO, 2009; 2020). The larger hospitals have funding issues, equipment problems, medical supply shortages, and operation management problems (Mac Arthur, Nelson and Woodeye, 2014). Similarly, many of the public clinics face challenges of inadequate staffing and have limited capacity to deal with all patients (especially more serious cases) (PAHO, 2020). Another issue is the challenge of extending coverage of health insurance. This means that quality public care is not available to all Belizeans. In part, the increasingly important private system fills some of the gaps the public system leaves. However, although prices of private healthcare are low if compared to other countries in the region (such as Costa Rica), not everybody can afford them.

In this context, it is reasonable to assume that the public health system does not cover all health needs. In our estimation of local healthcare costs, based on the extensive fieldwork we did, we assume that some of the reference family's healthcare visits are to private clinics, and that they sometimes buy medicine in a private clinic or pharmacy. We also account for the fact that not all people have health insurance by including the small fee the public system charges for uninsured patients. In table 7, our calculation of the healthcare costs for a reference family is explained. The information included in this table comes from our

fieldwork, data provided by the Independence Clinic of the Belize Social Security Board, information from a private clinic, and information from private pharmacies. We assumed a person needs 5 healthcare visits per year - 3.6 visits to a public health clinic/doctor a year, 0.7 visits per year to a private clinic (with estimated cost of BZ$ 30 per visit), 0.7 visits per year to a private pharmacy (with estimated BZ$ 15 per visit). Per family, we assumed that twice a year a specialized blood test or ultrasound was necessary, at a cost of BZ$ 100 each.

Table 7. Overview of estimate of healthcare costs per year per reference family based on our fieldwork

Health services per reference family	Yearly costs (in BZ$)
Visits to a health centers, public and private	
11 visits to public health center/clinic with insurance at BZ$ 0	0
5 visits to public health center/clinic without insurance at BZ$ 2 per visit	10
- of which 2 times additional cost for blood tests/ultrasound	200
3 visits to a private health center at BZ$ 30	90
1 Emergency Social Security hospital visit per year at BZ$ 0	0
Private medicine purchases such as from pharmacies	
20 times purchase medicine per family per year at BZ$ 15	300
Total: Minimum healthcare costs for reference family per year	**600**
Estimate of monthly healthcare costs for reference family	**50**

Source: Authors.

This means that based on our fieldwork and quick assessment, we estimate that a reference family has a cost for healthcare of BZ$ 50 per month for healthcare services of a minimum acceptable quality. This amount is almost identical to the amount for healthcare included in our preliminary NFNH estimate from secondary sources (BZ$ 54). Therefore, no NFNH adjustment was made following this healthcare post-check.

8.2 Education post-check

Similarly, we did a post-check for children's education. Belize has a British-based public education system that provides primary, secondary and tertiary education. Education in Belize is compulsory between the ages of 6 and 12 years for primary education. Primary school starts at 5-6 years of age with the first two years classified as "infant" years. The next 4 years of primary education are classified as "standard" years. At 11-12 years of age, childen can move on to secondary education, which is is divided into four "forms" (Form 1-4). After that, the system offers two more forms (Form 5 and 6), in college, which is a two-year post-secondary course. These last two forms usually imply a substantially larger fee.

Although primary education is free on paper, many schools charge a registration cost, a maintanance fee and/or a fee for an education for physical education and an ID card. Other school related expenses such as for books and utensils, make it difficult for many poor families, especially in the South, to keep their children in the education system.

The Economic Commission for Latin America and the Caribbean (www.cepal.org) considers completion of secondary school as minimum requirement for breaking the poverty cycle, and the Anker living wage methodology considers completion of secondary school as a human right and necessary for decency. For our rapid assesment of education costs, we assume that education must extend through Form 4.

Table 8. Overview of Estimate of Average Yearly Education Costs per Reference Family with 2 Children through High School

Type of expense	Kinder (3-4 years)	Primary (infant 1-2, standard 3-6)	High School (Form 1-4)
Registration fee	25	52	256
Yearly fees (monthly fees x 10)	450	150	0
Materials (pens, pencils, notebooks, uniforms, shoes, schoolbag)	125	153	173
Yearly education cost per child	600	355	429
Number of years in each level	2	6	4
Total education cost per child per level	**1,200**	**2,130**	**1,716**
Total costs			
Total cost of education per child (4) = (1) + (2) + (3)			5,046
Average yearly cost of education per child (18 years) (5) = (4)/18			280
Average yearly cost of education for reference family (6) = (5) x 2 children			561
Estimate of monthly cost of education for reference family (7) = (6) / 12 months			**47**

Source: Authors

Table 8 indicates our post-check estimate for education. The information used in the table comes from extensive fieldwork visiting schools (primary and secondary, both public and private) and asking them and parents about the cost structure, as well as visiting shops where school uniforms, utensils, bags and other school materials were sold, to document prices. We assumed that for primary school, the public system suffices, but we do acknowledge a small monthly fee in recognition of the fact that the public school system does not seem to cover all students and that private schools are typically more expensive.

The data collected in our fieldwork indicates on education costs indicate a monthly cost of BZ$ 47. This amount is very similar to the BZ$ 43 included in the preliminary NFNH estimate. Therefore, no adjustment was made in this education post-check.

9. PROVISION FOR UNEXPECTED EVENTS TO ENSURE SUSTAINABILITY

Since large unforeseen expenses and events can quickly throw workers with a basic life style into poverty and debt from which they may not be able to recover, it is common when estimating a net living wage to add a small margin above the cost of a basic quality life to allow for unexpected events. Margins of 5% and 10% percent have been the most common in other living wage methodologies (Anker, 2011). For rural Belize, it was decided to use a 5% margin for sustainability to allow for unforeseen emergencies. This percentage is recommended in the Anker and Anker (2017) methodology and has been used in all GLWC living wage studies. Note that interest and debt payments are ignored in our calculations. It is assumed that a living wage would be sufficient to enable workers to stay out of crippling debt.

10.COST FOR BASIC BUT DECENT LIVING STANDARD

The distribution of the costs of a basic but decent life in the rural Southern region of Belize is summarized in table 9. This estimate is based on a combination of Belize-specific data consisting of new primary fieldwork data (on food prices, housing costs, education costs, and healthcare costs) and secondary data (on number of calories required, family size, and number of workers per family) as well as data on

NFNH/Food ratio from other Central American countries as well as from an international cross-section analysis.

Table 9. Monthly cost structure of basic, decent life in rural Belize

Item	BZ$	US$
Food cost per month for reference family (1)	**574**	**285**
Food cost per person per day for model diet	4.72	2.34
Housing costs per month (2)	**340**	**169**
Rent per month for acceptable healthy housing	250	124
Utilities and minor repairs per month	90	45
Non-Food Non-Housing per month after post check adjustments (3)	**402**	**199**
Non-Food Non-Housing - Preliminary estimate	402	199
Healthcare post check adjustment	0	0
Education post check adjustment	0	0
Additional 5% for sustainability and emergencies (4)	66	33
Total household costs per month for basic but decent living standard for reference family (5) [5=1+2+3+4]	**1,382**	**686**

Source: Authors.

SECTION III. LIVING WAGE FOR WORKERS

11. FAMILY SIZE NEEDING TO BE SUPPORTED BY LIVING WAGE

Living wage is a family concept. This is clearly shown by the ILO comprehensive review of living wages (Anker, 2011). The need for a living wage to support a family is also included in the living wage definition of the Global Living Wage Coalition (see above). It is, therefore, necessary to determine an appropriate family size for rural Belize to estimate a living wage.

A family size of 4 persons (two adults and two children) is used for rural Belize. This family size is based on information on: (i) total fertility rate and child mortality rate and therefore number of surviving children women in rural Belize are typically having, and (ii) average household size in rural Belize.

First, the national total fertility rate in 2018 was 2.3 births per woman (World Bank, 2020). Adjusted for infant and child mortality (around 11 per 1,000 live births in 2018 according to World Bank, 2020), this suggests a mortality adjusted total fertility rate of less than 2.3. However, given that rural fertility rates in the world are generally higher than urban fetility rates, the rural mortality adjusted total fertility rate is likely to be closer to 2.5 births, which would imply a nuclear family size of around 4.5 members.

Second, data from the 2010 Population Census (SIB, 2010) indicate that average household size in 2010 was around 4.1. After excluding single person households (which do not include children) and very large households (8+ members) which are almost always extended family households in which there is a high likelihood of having more than 2 workers (a scenario not contemplated when the number of workers in the reference family is determined and so the living wage is estimated) as recommended by the Anker methodology, average household size is 4.0. We then adjusted this 4.0 to take account of the fact that average household size is higher in rural areas than in urban areas, and this gave us a rural average household sie of around 4.3. However, given that the 2010 census is rather old, and the general tendency in Belize has been towards a smaller household size, the rural average household is likely to be closer to 4 than to 4.3.

Based on the above analysis, we decided to use a 4 person reference family size for rural Belize as this is consistent with average rural household size. This was a judgement call, however, as a reference family size of 4.5 members was also a possibility as this is more consistent with the likely rural mortality adjusted total fertility rate.

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

Given that the living wage is a family concept, it is appropriate to expect more than one adult in a family to provide support through work.[7] Therefore, it is necessary to determine the number of full-time working adults per reference family that provide financial support.

In this report, we use 1.59 full-time equivalent workers per family to estimate the living wage for rural Belize. To determine the number of full-time equivalent workers per household to use to estimate our living wage, data was gathered from the 2017 labor force survey for Belize for males and females age 25+ on: (i) labor force participation rates (LFPR), (ii) unemployment rates, and (iii) number of hours worked to

[7] In the Anker living wage methodology, it is considered unacceptable for children to work and be expected to provide support for the family. Therefore, in our living wage benchmark calculations, it is assumed they do not work, which is consistent with the decency concept of a living wage.

determine the extent of part-time employment.[8] From this data, the likelihood of full-time employment was calculated as follows (see table 10):

Likelihood of full-time employment = LFPR × (1-unemployment rate) × (1 – part-time employment rate/2)

Table 10. Estimate of percentage of adults 25-59 who are full-time equivalent workers for rural Belize

Variable	Age group	Rural adjusted		
		Men	Women	Average
Labor force participation rate	25+	0.91	0.47	
Unemployment rate	25+	0.0343	0.0991	
Part-time employment rate *	25+	0.1114	0.2969	
Estimated percentage of persons working full-time **	25+	0.83	0.36	**0.59**

*Underemployment is defined as less than 35 hours work per week.
** Calculated as: LFPR × (1-Unemployment rate/100) × (1- (Part-time employment rate/100/2)).
Source: Authors.

This means that the monthly cost of a decent but basic living standard for a family of 4 persons of BZ$ 1,382 (US$ 686) was divided by 1.59 (equal to one full-time worker such as on a banana plantation plus a spouse who works 59% of full-time) to determine the take home pay required to pay for the cost of a basic but decent lifestyle in rural Belize, without considering any possible income taxes and payroll deductions. That is, **the net monthly living wage for rural Belize is BZ$ 869 (US$ 431) for May 2018**.

13. TAKE HOME PAY REQUIRED AND TAKING INCOME TAXES AND MANDATORY DEDUCTIONS FROM PAY INTO ACCOUNT

To estimate a living wage, it is necessary to add possible income tax and mandatory deductions from pay to the net living wage to ensure that workers have sufficient take home pay to be able to afford a decent standard of living for their family.

In Belize, an income tax of 25% applies to annual income of BZ$ 29,222 (US$ 14,500) or higher. Workers would not have to pay income tax on our rural living wage.

In formal labor relations in Belize's private sector, the most important mandatory payroll deduction for workers is for Belize's Social Security Board (SSB), which administers two insurance schemes: 1) Sickness and Maternity; and 2) Old Age, Disability and Survivors. The contributions are based on weekly earnings and wage classes, which are summarized in table 11. The living wage estimate considered weekly is in the BZ$ 180-219.99 bracket, and thus BZ$ 4.75 is due weekly. This is the equivalent of BZ$ 20.58 per month, or about 2.4% over the net living wage.

[8] This was done in the following way. Labor force participation rate, unemployment rate, and part-time employment rate were calculated separately for men and women age 25+ based on data for all-Belize. Each of these three national rates was then adjusted to a rural rate by multiplying it by the ratio of the rural/national rate for each of these variables.

Table 11. Social Security contributions by wage class

Weekly earnings in BZ$	Social insurance contribution in BZ$
Less than 70	0.83
70-109.99	1.35
110-139.99	1.95
140-179.99	3.15
180-219.99	4.75
220-259.99	6.35
260-299.99	7.95
300 and over	9.55

Source: Social Security Board: https://www.ssa.gov/

For this report in the calculations of our living wage, we assume the SSB deduction is made so that workers are registered in the Social Security Institute. Thus, rural workers with a formal labor contract would pay BZ$ 4.75 weekly on the living wage for the SBB and no income tax. **Therefore, the gross monthly living wage for rural Belize is BZ$ 890 (US$ 442) for May 2018.**

Of important note is the situation of migrant workers in Belize. As previously mentioned, there is a substantial participation of migrants in the agricultural sectors in Southern Belize. The living costs estimated in this report pertain to nationals and migrants alike (see Voorend, Anker and Anker, 2021, for a detailed discussion on this), but migrants in Belize must cover the additional cost of the work permit that should be considered in order to ensure formal work relations. The Belize Immigration office, on its website (https://immigration.gov.bz/permits/work-permit/) specifies that the yearly fees for a General Workers/Farmhands (in the banana, sugar and citrus industries, other than seasonal agricultural) are BZ$ 1,500 (US$ 745). These costs should be considered in the payment of a living wage. They could either be covered as a one-time payment each year by the employer hiring the migrant worker, or could be paid in monthly installments of approximately BZ$ 125.

SECTION IV. ANKER LIVING WAGE REFERENCE VALUES FOR RURAL BELIZE

This report ran into a problem when estimating NFNH costs, because usable data were not available for Belize to estimate NFNH costs which is one of the main components of lving costs. To estimate NFNH costs, we had to rely on NFNH/Food ratios from other Central American countries as well as on results from an international cross-section analysis of NFNH/Food ratios from 40 quality-assured Anker methodology benchmark studies.

Since these alternative approaches to estimating NFNH costs are far from ideal, we decided to also report in this section an Anker Living Wage Reference Value for rural Belize that is based on a different methodology than the typical Anker Living Wage Benchmark methodology described in Anker and Anker (2017). This Reference Value methodology is based on a rigorous statistical analysis of 40 internationally comparable and quality-assured Anker methodology studies spread across 23 low-income and middle-income countries carried out primarily under the auspices of the Global Living Wage Coalition. See www.globallivingwagecoalition.org for a description of the Anker Reference Value methodology. This Anker Reference Value provides a second and more approximate net living wage estimate for rural Belize with a confidence interval around it of around + or – 7%. We feel that this estimate puts us in a better position to decide if the net living wage estimated in previous sections in this report using the Anker and Anker (2017) methodology of BZ$ 869 per month is reasonable.

The Anker net living wage Reference Value for rural Belize for 2020 was estimated as BZ$ 904 with a 95% confidence interval of BZ$ 842 to BZ$ 970. This value assumes that, since Belize is such a small country with only around 400,000 people and only around 60,000 people in its largest city and 16,000 in its capital city, the difference in living costs between rural and urban areas in Belize is half of what is typical for developing countries. We feel that this was a reasonable assumption also because in our fieldwork we found that most families in the study area shopped in small semi-urban centers, even those living in a rural area. In addition, we found that these semi-urban centers were not highly urban in nature often having only a few paved roads (see Appendix 2).

We feel that the fact that the BZ$ 869 net living wage for May 2018 estimated above in this report and the Anker Net Living Wage Reference Value for rural Belize are similar confirms the reasonableness of our estimate based on the Anker and Anker (2017) methodology, and for this reason, BZ$ 869 for the net living wage and BZ$ 890 for the gross living wage (aka living wage) are used in the remainder of this report, updated for inflation until May 2021.

SECTION V. ESTIMATING GAPS BETWEEN LIVING WAGE AND WAGE COMPARATORS

In this section, we provide context for our living wage estimate. First, we updated the May 2018 living wage estimate for unflation to May 2021.[9] Inflation has been low since May 2018. It is estimated to be 1.4% for this time period according to data from the Statistical Institute of Belize. As such, the updated May 2021 net living wage is BZ$ 881 (US$ 438). In 2021, social security contributions changed slightly. Rural workers with a formal labor contract now would pay BZ$ 5.34 weekly on the living wage for the SBB

[9] As the latest available inflation data from government at the time of writing this report is January 2021, we assumed that the reported annual inflation rate for January 2021 remained unchanged for February-May 2021. At a later date, we will replace this assumption by actual inflation rates when these inflation data for February-May 2021 become available.

and no income tax. That implies a monthly amount of BZ$ 23.53 for social security. **Therefore, the gross monthly living wage for rural Belize is BZ$ 905 (US$ 449) for May 2021.**

To compare our living wage to wage comparators in 2021, we rely on secondary references for poverty lines and the minimum wage in Belize. First, we used the minimum wage, which is set at BZ$ 3.30 per hour. We calculated the minimum wage per month in the following way using the legally defined 45-hour workweek: 45 hours x BZ$ 3.30 = BZ$ 148.50 per week, or BZ$ 644 per month (BZ$148.50 per week x 4.33 week per month) if there are no paid days off for sickness, or annual leave, or public holidays. We, then, calculated a more realistic monthly minimum wage for workers without a permanent contract, based on an average work month of 24 days to allow for some days off. This is done in recognition of the fact that workers need public holidays and annual leave days off and that they sometimes get sick. Therefore, we compare our living wage to a monthly minimum wage that recognizes when hourly minimum wage is paid (BZ$ 594, US$ 254, per month).

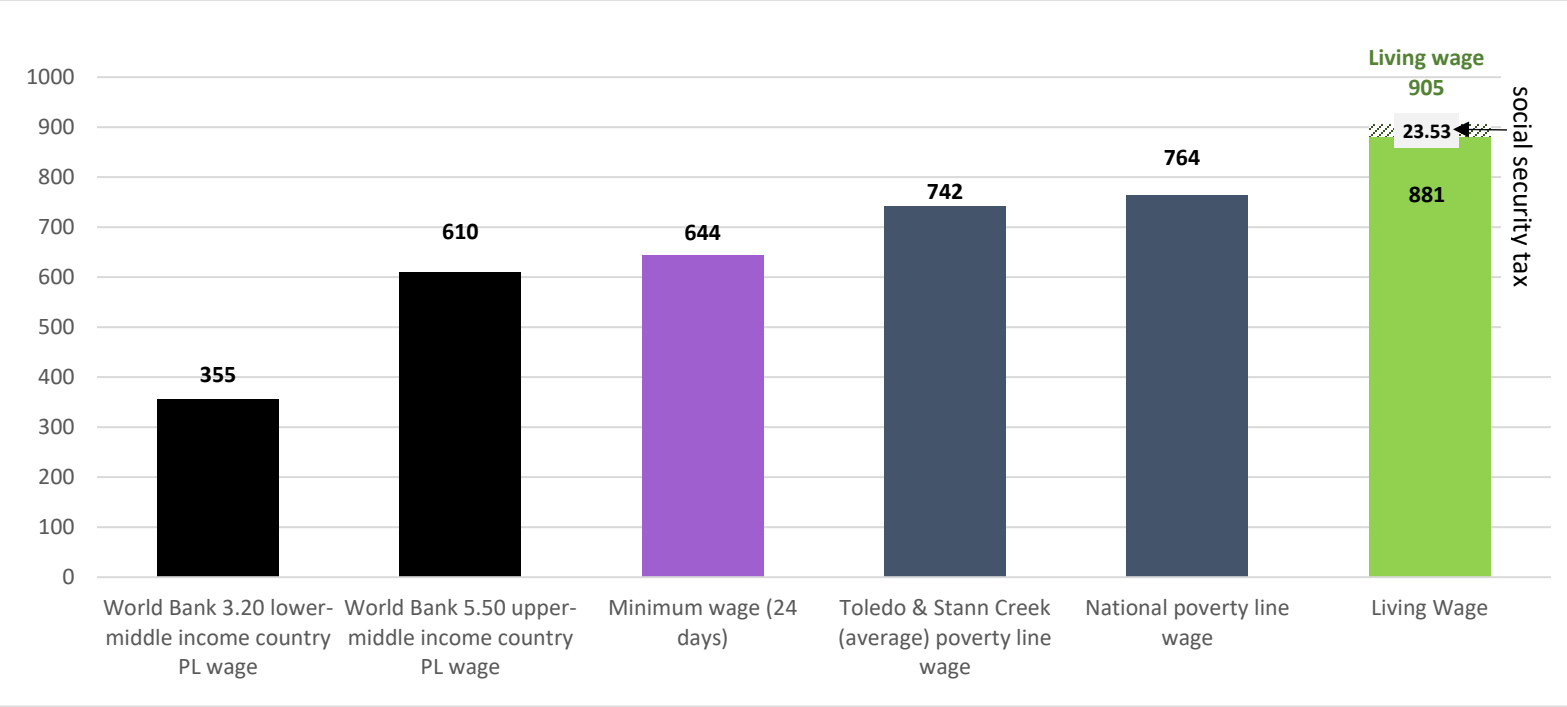
Second, we used international and national poverty line wages. The poverty lines were all considered for 2021 (including updating the national and regional poverty lines for inflation) and converted to poverty line wages for our reference family by multiplying them by four (number of family members in our reference family) and dividing this by the 1.59 number of full-time equivalent workers in our reference family. The World Bank international US$3.20 poverty line for lower-middle income countries and US$5.50 per day poverty line for upper-middle income countries were converted into poverty line wages in local currency using the World Bank's purchasing power parity conversion factor for private consumption together with our reference family size of 4 and our number of full-time equivalent workers in our reference family of 1.59. Note that while Belize is an upper-middle income country according to the World Bank, this is partly due to high income generated by a few key sectors, in particular tourism. This might inflate national per capita income, and so may not reflect typical income in Belize. For this reason of comparison, World Bank poverty line wages are included for both lower-middle income countries and upper-middle income countries.

Figure 6 provides a wage ladder that compares our living wage to poverty line wages and the minimum wage. All are gross wages, because all are before payroll deductions since social security contributions would have to be paid from all of these wage references. Also note that these wage comparators do not consider possible bonuses such as 13th month or other benefits. In Belize, payment of the 13th month is not compulsory and other bonuses are not standard.[10]

Our living wage is much higher than the minimum wage and international and national poverty line wages. Our living wage is around 40% higher than the minimum wage in Belize calculated for a 24-day work month and 48% higher than the World Bank US$ 5.50 poverty line wage for upper-middle income countries. It is 18% higher than the national poverty line wage calculated for the whole country and 22% higher than the average poverty line wage for the Toledo and Stann Creek areas. Undoubtedly, the gap with the living wage is considerably higher than this if one considers that a rural poverty line would be lower than the poverty line wages in figure 6 that are not rural-specific since living costs and norms are undoubtedly lower in rural areas.

[10] In-kind benefits were not included in our calculations of prevailing banana wages, because they are not a common form of wage payment in the Belize banana sector. We found in our fieldwork that while some farms offered housing to workers, this was not for all workers. Also, during our fieldwork, we found that in some cases when workers lived in housing provided by the farm that they were charged rent.

Figure 6. Wage ladder for rural Belize, 2021, in BZ$



Source: Authors.

SECTION VI. CONCLUSIONS

This report estimated a living wage for rural areas of Belize, with special focus on the southern regions where the country's banana (and citrus) production is located. Table 12 provides a summary of the details of the living wage estimate. Table 13 provides some of the key assumptions used to make our living wage estimate. The fieldwork, which collected information on food prices and housing costs, focused on 5 locations in the South of Belize. Given the size of the country, we believe that our living wage estimate is generalizable for all of rural Belize.

The net living wage estimate (i.e. take-home pay required) for rural Belize for May 2021 is BZ$ 881 (US$ 437) per month. When mandatory payroll deductions for the public social security system (SSB) are added (BZ$ 23.53), the gross living wage is BZ$ 905 (US$ 449).

Our living wage is 40% higher than the minimum wage in Belize calculated for a 24-day work month. It is 48% higher than the World Bank international poverty line wage for upper-middle income countries, and 18% higher than the national poverty line wage for Belize.

In closing, it is important to keep in mind that our living wage estimate for rural Belize is conservative, as we used conservative assumptions throughout this report to estimate living costs. For example, we assumed that half of all tortillas eaten at home are made from scratch at a much lower cost than buying them on the street or in a shop; we used lower prices for acceptable rice, oil, fruits and vegetables; and included mostly chicken for meats in our model diet. The healthy housing standard we used to determine housing costs was only 42 square meters of living space for a family with four persons, which is quite small for an upper-middle income country like Belize.

This means that it is important for companies to work towards closing wage gaps to our conservatively estimated living wage. It is imperative that the closing of wage gaps is approached as a collective endeavor of all actors and levels in the value chain. That is, while producers hold part of the responsibility to pay a living wage, so do buyers, retailers and supermarkets who should be actively engaged in ensuring that the costs of paying a living wage to workers are spread out through the entire value chain.

Table 12. Monthly cost structure of basic, decent life in rural Belize, May 2018

Item	BZ$	US$
PART I. FAMILY EXPENSES		
Food cost per month for reference family (1)	**574**	**285**
Food cost per person per day for model diet	4.72	2.34
Housing costs per month (2)	**340**	**169**
Rent per month for acceptable housing	250	124
Utilities and minor repairs per month	90	45
Non-Food Non-Housing per month after post check adjustments (3)	**402**	**200**
Non-Food Non-Housing - Preliminary estimate	402	200
Healthcare post check adjustment	0	0
Education post check adjustment	0	0
Additional 5% for sustainability and emergencies (4)	66	33
Total household costs per month for basic but decent living standard for reference family (5) [5=1+2+3+4]	**1,382**	**686**
PART II. LIVING WAGE PER MONTH		
Net Living Wage per month (6) [6 = 5/# full-time workers]	**869**	**431**
Total mandatory deductions (7)	21	10
Gross Living Wage (8) [8 = 6+7]	**890**	**442**

Source: Authors

Table 13. Key values and assumptions for a living wage estimate

Key values and assumptions	Comments
Location and industry	Rural Belize (Focus on South)
Exchange rate of local currency to USD	2.0153 BZ$ = 1 USD (May 2018) 2.0147 BZ$ = 1 USD (2021)
Number of full-time workdays per month	24
Number of hours in normal workweek	48
Number of workers per couple	1.59
Reference family size	4
Number of children in reference family	2
Preliminary ratio of non-food non-housing costs to food costs	0.70

Source: Authors.

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I. APPENDICES

APPENDIX 1. CONTEXT: THE BELIZEAN BANANA INDUSTRY

The region of focus for this living wage benchmark is Belize's main banana producing area. Therefore, the banana sector served as a backdrop with information on labor dynamics which allowed us to place our living wage in a specific context. The banana industry is the third export crop of Belize behind sugar cane and citrus and provides a significant base for employment and income generation in Belize. All banana production in Belize is concentrated in the South, in the Stann Creek and Toledo Districts, the so-called Banana Belt. Currently, there are about 6,500 actes of banana fields in production, with 9 producing companies operating 22 farms. That is, the Belizean banana industry is characterized by few producers, with relatively large plantations. The sector employs over 3,000 workers, and represents 1.2% of GDP.

The banana producers are organized in the Banana Growers Association (BGA), which constitutes the statutatory body of all banana growers in the country. All farms sell their production to the BGA, which has a contract for its full production with Fyffes, an Irish fruit and fresh produce company headquartered in Dublin, Ireland. This explains why over 90% of all banana exorts go to the UK and Ireland. Prices are set in negotiations every year.

According to the BGA, on its website, "the Belize banana is ranked first in the UK market by its single buyer (Fyffes) and super-markets concerning quality and savor. Being a small industry with a relatively small number of growers, Belize banana growers have the advantage of being able to respond quickly to the demands of the clients concerning special packaging, standards and quality. When other countries closer to the Equator are looking to produce big bananas, the soil and climate conditions of Belize, situated in the Yucatan peninsula get a cooler climate making it difficult to purely focus on productivity and big fruits. As some say, a smaller banana full of nutrients has often more flavor than a big one, the size and taste notably sets the Belize banana apart".

APPENDIX 2: METHODOLOGICAL STRATEGY AND DESCRIPTION OF FIELDWORK SITES

The primary data on food prices, housing costs, education costs and healthcare costs comes from fieldwork visits to the southern Belize region. Fieldwork conducted for this report was done in May of 2018, with a team of three, and with support from Rainforest Alliance the coordinating standards organization. This fieldwork was primarily aimed at collecting price data for an array of food items in the model diet used for our living wage estimate and collecting data to determine the cost of decent housing. There was also fieldwork to collect information on healthcare and education costsfor the post-check exercises as well as to gain general insight on labor relations and prevailing wages.

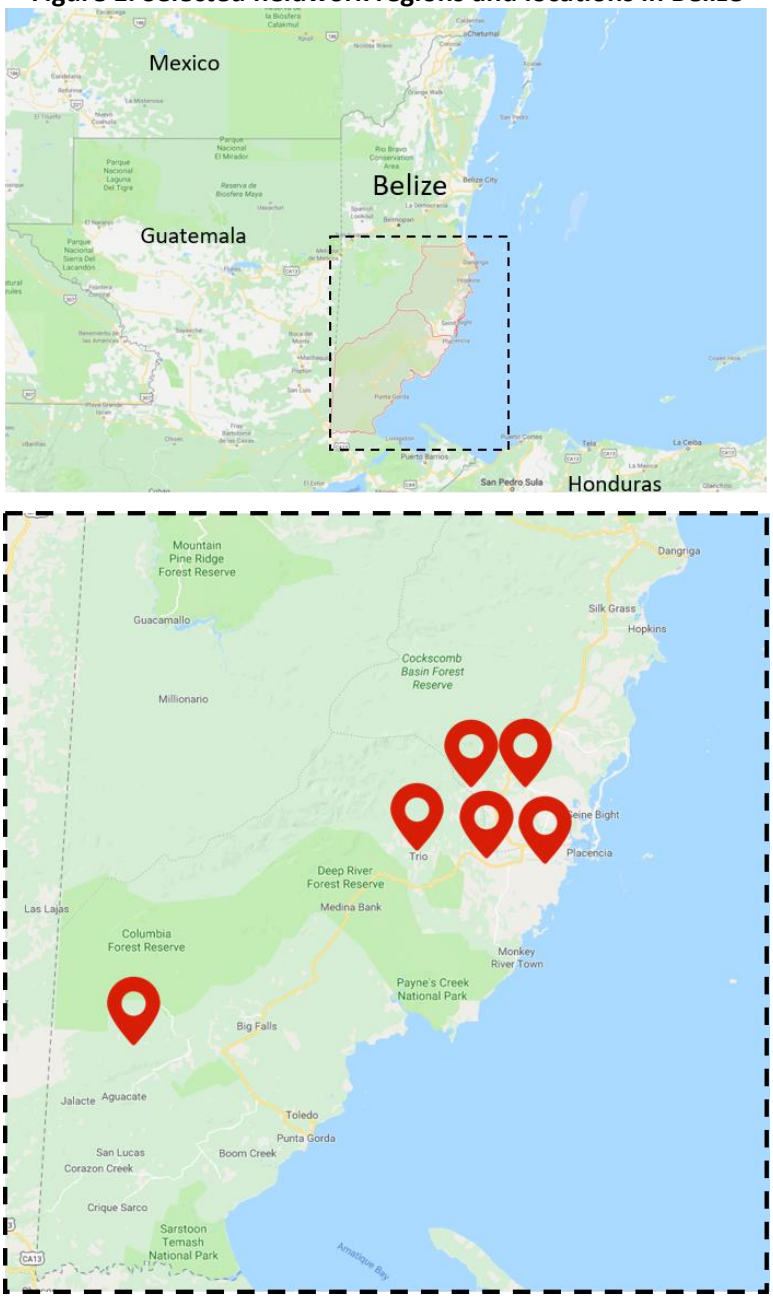
After consulting local experts, priority sites were determined for data collection. Some banana plantations were visited, where contact was made with the farm administration, and consequently with workers. The principle objective was to get in contact with workers, understand their shopping habits and an initial impression of their health, education and housing conditions. A secondary objective was to get a general impression of labor dynamics in the region's agricultural sector.

The locations used for this study are all in southern Belize, in the Stan Creek and Toledo Districts. This was motivated by the fact that all of the country's banana are produced in these regions. Specifcally, the research team did fieldwork in Mango Creek/Independence, Trio Village, Cow Pen, San Juan, Santa Cruz, and Bella Vista. These are all very small, rural towns.

The biggest of these is Independence, or Mango Creek, which is a town of about 5,000 inhabitants. It is the regional center, and has several primary schools, the only secondary school in the region and the Independence Poly Clinic, from where the health system is set up with local dependences in Placencia, San Juan and Bella Vista. Also, most state institutions (like the police and te socials security system) have an office here. It has several supermarkets, and a few hotels, restaurants and soda's. However, besides the main road that runs through the town and a few parallel roads, most roads are not paved. The town has a rural feel to it, and is sparsely populated. Although of all the places we visited there was a larger variation in Mango Creek/Independence, houses are typically small, often (partly) made of wood (sometimes built on poles in light of possible flooding), and independent, with small gardens around them. While housing in Mango Creek is possibly slightly better than in the surrounding towns we visited, there was also a considerable number of houses that would not meet our living wage housing standard.

About 12 kilometers to the north, close to fields of banana production, are two small adjacent rural villages: San Juan and Cow Pen. They are very similar in their characteristics and could almost be considered one slightly larger town. The exact population is unknown, but the San Juan Health Center, which serves San Juan, Cow Pen, Red Bank, George Town, San Roman, Santa Rosa and Maya Mopan, reports a total population for this whole area of 6,953. The San Juan and Cow Pen villages together must have less than 2,000 inhabitants. Besides the health center, and two or three small supermarkets, the town is mainly comprised of houses. All roads besides the main road are unpaved. People typically have a small piece of land, on which they build their houses. These are generally small, often made of wood or a combination of wood and cement. Most people work in the banana industry. About half an hour by car (30km) to the west of Mango Creek/Independence is Trio Village. This is an extremely small settlement, with just a few houses in generally bad repair along a dirt road on the way to a banana farm close by.

Figure 1. Selected fieldwork regions and locations in Belize



Notes: Markers in bottom map indicate study sites.

Source: Authors with Google Maps.

Santa Cruz is a slightly larger village in the Stann Creek District. It is located 33 km north from Mango Creek/Independence, and on the crossroads to the Placencia peninsula, which is popular among tourists. Thus, the town is a mix of its approximately 1,500 residents who commute for work to the nearby Banana Farms, shrimp production and hotels and restuarants in Placencia. It has a few supermarkets and restaurants, but is otherwise a small rural town like the others. In total, there are no more than 10 parallel streets, most of them unpaved.

Finally, Bella Vista is the largest village in the Toledo District of Belize. In 2010, the SIB Census documented a population of 3,508 people, but this must be over 4,000 in 2018. It is located about 16 kilometers south-

west of Mango Creek/Independence. The town is a bit more like Mango Creek/Independence, and on the main road running through it, there is more economic activity in the form of supermarkets, and small businesses and restaurants. Once you drive from the main road into the town, you get to some unpaved parralel roads, around a large open place. Again, it is more of a rural setting, with similar houses as in Mango Creek/Independence.

From the contact with workers, we confirmed the kind of food items they eat, where they buy them, where they live, which kind of services they use and what they pay for them. It also served to coordinate visits to workers' houses, although in Belize people were generally very generous and willing to let the research team in their house. Farms were not selected to be a representative sample of farms in the region. Rather, they served as an "entrance" to workers and people and to understanding habits in the region. In the following days of fieldwork, the research team went directly to the specified locations to collect data on food prices, rental costs and other expenditures related to healthcare, education, transport, etc. We talked to many people on the ground, got to know their houses, visited many supermarkets and fruit and vegetable stands in the region (even the mobile ones) and talked to health and education professionals, headmasters, pharmacy staff, police officials, etc.

The research team visited local stands, shops and supermarkets, where information on the prices of different food items were collected. In total, over 600 different food prices were registered. On occasions when food items were not sold by weight but by unit, the food items were bought to determine their weight and therefore price per kilo. Also, an estimated cost for basic but decent housing was obtained through visits to various neighborhoods and rented houses in the different fieldwork locations to obtain the cost of housing that met our minimum decency standard. Specifically, housing rental prices for over 50 houses were obtained as well as the conditions of each house. Of these, about 40 observations were complete and used for analysis. Finally, for the non-food non-housing post-checks, we conducted a series of meetings and carried out short discussions with experts in the field, farm administration, health specialists, pharmacy vendors, school administration and teachers, as well as people on the streets, with the objective to understand dynamics regarding local access to healthcare, education and transport.

APPENDIX 3. DESCRIPTION AND RENT OF HOUSING UNITS VISITED IN FIELDWORK

Acceptable standard?	Rent in local currency	Size in m^2 & rooms	Comments	Price per m^2
LOCATION 1: Trio Village				
No	250	58 LR, 2BR, K	In bad repair. Wood walls, earth floor in parts of house, no separation animals. No acceptable	4.31
No	225	30 LR, 1BR, K	In good repair, but not acceptable. Too small, not enough bedrooms.	7.50
No	200	35 LR, 1BR, K	In good repair, but not acceptable. Too small, not enough bedrooms.	5.71
Yes	200	42 LR, 2BR, K	In decent repair. Just big enough, with two rooms. Flush toilet with sceptic tank, decent lighting.	4.76
No	150	35 LR, 1BR, K	In good repair, but not acceptable. Too small, not enough bedrooms.	4.29
No	100	30 LR, 1BR, K	Not acceptable, too small, not enough rooms. Kitchen has no chimney/ventilation.	3.33
LOCATION 2: Bella Vista				
No	600	60 LR, 2 BR, K	House in bad repair. Expensive because on main street, but bad state of wooden walls, bad lighting. Needs mayor repair.	10.00
Yes	400	60 LR, 2 BR, K	In good repair. Large enough, and 2 separate bedrooms. Good ventilation and lighting. Decent material.	6.67
Yes	300	54 LR, 2 BR, K	In good repair. Large enough, and 2 separate bedrooms. Good ventilation and lighting. Decent material.	5.56
Yes	300	64 LR, 2 BR, K	In good repair. Large enough, and 2 separate bedrooms. Good ventilation and lighting. Decent material.	4.69
No	200	54 LR, K	In bad repair. Living space and sleeping area not separate. Kitchen in same room, despite good ventilation.	3.70

Acceptable standard?	Rent in local currency	Size in m^2 & rooms	Comments	Price per m^2
LOCATION 3: Santa Cruz				
Yes	600	62 LR, 3 BR, K	In good repair. Big enough, with three rooms, and decent kitchen. Flush toilet with sceptic tank, decent lighting. Good ventilation.	9.68
Yes	600	90 LR, 3 BR, K	In good repair. Big enough, with three rooms, and big kitchen + living space. Flush toilet with sceptic tank, decent lighting. Good ventilation.	6.67
No	450	30 LR, 1 BR, K	In good repair. Not big enough. Only one bedroom and one large living space.	15.00
No	300	48 LR, 1 BR, K	In good repair. Big enough, but only one bedroom. Otherwise, acceptable.	6.25
Yes	250	42 LR, 2BR, K	In good repair. Only just big enough. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	5.95
Yes	250	48 LR, 2BR, K	In good repair. Big enough. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	5.21
Yes	250	54 LR, 2BR, K	Model house. In good repair. Big enough. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	4.63
No	200	48 LR, 2 BR, K	In bad repair. Kitchen no ventilation. Pit toilet with slab, in poor state. Not acceptable.	4.17
No	200	50 LR, K	In decent repair. No bedrooms, one large living space without divisions. Not acceptable.	4.00
No	150	50 LR, K	In decent repair. No bedrooms, one large living space without divisions. No front door, blocked windows. Not acceptable.	3.00

Acceptable standard?	Rent in local currency	Size in m^2 & rooms	Comments	Price per m^2
LOCATION 4: Cow Pen/San Juan				
Yes	600	130 LR, 3BR, K	In good repair. Nice house, large. Meets and surpasses standard by far, but too big and expensive. Acceptable.	4.62
Yes	400	44 LR, 2BR, K	In good repair. Just big enough. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	9.09
Yes	300	60 LR, 2BR, K	In good repair. Big enough. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	5.00
Yes	300	90 LR, 3BR, K	In good repair. Big house, 3 bedrooms. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	3.33
Yes	225	45 LR, 2BR, K	In good repair. Just big enough. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	5.00
No	200	34 LR, 2BR, K	In good repair. Too small, otherwise meets all the standards. Not acceptable.	5.88
Yes	175	45 LR, 2BR, K	In good repair. Just big enough. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	3.89
No	140	36 LR, 1 BR, K	In good repair. Too small, only one bedroom. No private bathroom/toilet. Shared with other family. Not acceptable.	3.89
No	125	36 LR, 1 BR, K	In good repair. Too small, only one bedroom. No private bathroom/toilet. Shared with other family. Not acceptable.	3.47
No	100	50 LR, 1 BR, K	In bad repair. Big enough, but only one real bedroom. Other separation with drapes. Part of house with dirt floor. Not acceptable.	2.00

Acceptable standard?	Rent in local currency	Size in m^2 & rooms	Comments	Price per m^2
LOCATION 5: Mango Creek				
Yes	550	55 LR, 2BR, K	In good repair. Big enough house, 2 bedrooms. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	10.00
Yes	500	120 LR, 3BR, K	In good repair. Big house, 3 bedrooms. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	4.17
Yes	500	96 LR, 3BR, K	In good repair. Big house, 3 bedrooms. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	5.21
No	500	84 LR, 3BR, K	In bad repair. Big house, 3 bedrooms. Kitchen with good ventilation, decent building materials. Good ventilation and lighting. Otherwise, acceptable, but in bad state	5.95
Yes	400	73 LR, 2BR, K	In good repair. Big house, 2 bedrooms. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	5.48
Yes	350	84 LR, 3BR, K	In decent repair. Big house, 3 bedrooms. Kitchen with good ventilation, decent building materials. Good ventilation and lighting.	4.17
Mean rental price per m^2 for acceptable housing:				5.00
Average of monthly cost of cheaper acceptable housing per location				**250**
Monthly cost of acceptable housing by observation				**250**

Source: Authors.