



Food and Agriculture Organization
of the United Nations



Prevalence of Food Insecurity in Belize - 2021

Prepared by FAO under the Project TCP/SLC/3707
November 2021

Highlights

The estimated prevalence of food insecurity in the national population of Belize, based on data collected by the Statistical Institute of Belize (SIB) through the Labour Force Survey in April 2021, is as follows:

| | Moderate or severe ($FI_{mod+sev}$) | Severe (FI_{sev}) |
|---------------------------------|--|--------------------------|
| | 2020/2021 | 2020/2021 |
| World | 30.4 | 11.9 |
| Latin America and the Caribbean | 40.9 | 14.2 |
| Belize | 45.5 | 5.9 |

Notes: The estimates for the World and Latin America and the Caribbean are from FAO (2021) and the estimates for Belize are from the SIB.

Source: FAO and SIB

$FI_{mod+sev}$

is the proportion of the population experiencing **moderate to severe** food insecurity in Belize.

Results show that 45.5% of the population in Belize was affected by moderate or severe food insecurity in 2021.

FI_{sev} is the proportion of the population of Belize experiencing **severe** food insecurity.

5.9% of the population is estimated to have been affected by severe food insecurity.

The estimated prevalence of food insecurity by District (household level)

| | Moderate + Severe | Severe only |
|---------------------|--------------------|-------------------|
| Total sample | 41.4 (±3.5) | 5.4 (±1.2) |
| Corozal | 51.07 (±7.51) | 4.56 (±2.31) |
| Orange Walk | 46.37 (±7.17) | 4.73 (±2.29) |
| Belize | 29.44 (±7.29) | 5.26 (±2.74) |
| Cayo | 48.56 (±7.27) | 4.7 (±2.36) |
| Stann Creek | 40.47 (±7.28) | 7.65 (±3.25) |
| Toledo | 52.08 (±8.18) | 7.05 (±3.3) |

Source: Computed by FAO using SIB LFS data

The estimated prevalence of food insecurity by Ethnic Group (household level)

| | Moderate + Severe | Severe only |
|---------------------|--------------------|-------------------|
| Total sample | 41.4 (±3.5) | 5.4 (±1.2) |
| Creole | 35.61 (±8.15) | 7.15 (±3.28) |
| Garifuna | 31.58 (±12.45) | 6.64 (±4.42) |
| Maya | 57.09 (±8.4) | 8.73 (±3.77) |
| Mestizo/Hispanic | 45.63 (±4.83) | 4.36 (±1.52) |
| Mennonite | 21.1 (±9.11) | 1.56 (±1.75) |

Source: Computed by FAO using SIB LFS data

1. Introduction

The FAO has developed the **Food Insecurity Experience Scale (FIES)** to measure the severity of food insecurity at the household or individual level in a given population. The FIES is an experience-based metric of severity of food insecurity that relies on people's direct responses to eight questions regarding their access to adequate food (see Annex). Each question refers to a different experience and is associated with a different level of severity of food insecurity. The analysis of FIES data, using the methods developed by FAO, produces estimates of the proportion of the population facing food insecurity at different levels of severity that can be made internationally comparable. Thus, the FIES is used to compile one of the two Sustainable Development Goal (SDG) indicators selected to measure progress towards the SDG Target 2.1: **by 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round**. As custodian agency for this indicator, FAO provides technical support to its member states to generate and disseminate national FIES data.

The FAO, in collaboration with the Caribbean Community (CARICOM) Secretariat has supported the Statistical Institute of Belize (SIB) to collect the FIES data, by including a food security module in its first quarter 2021 Labor Force Survey (LFS). This report presents the estimated prevalence of food insecurity in the national population of Belize, based on data collected through the LFS and analysed by the FAO, in collaboration with the SIB.

2. What is the FIES?

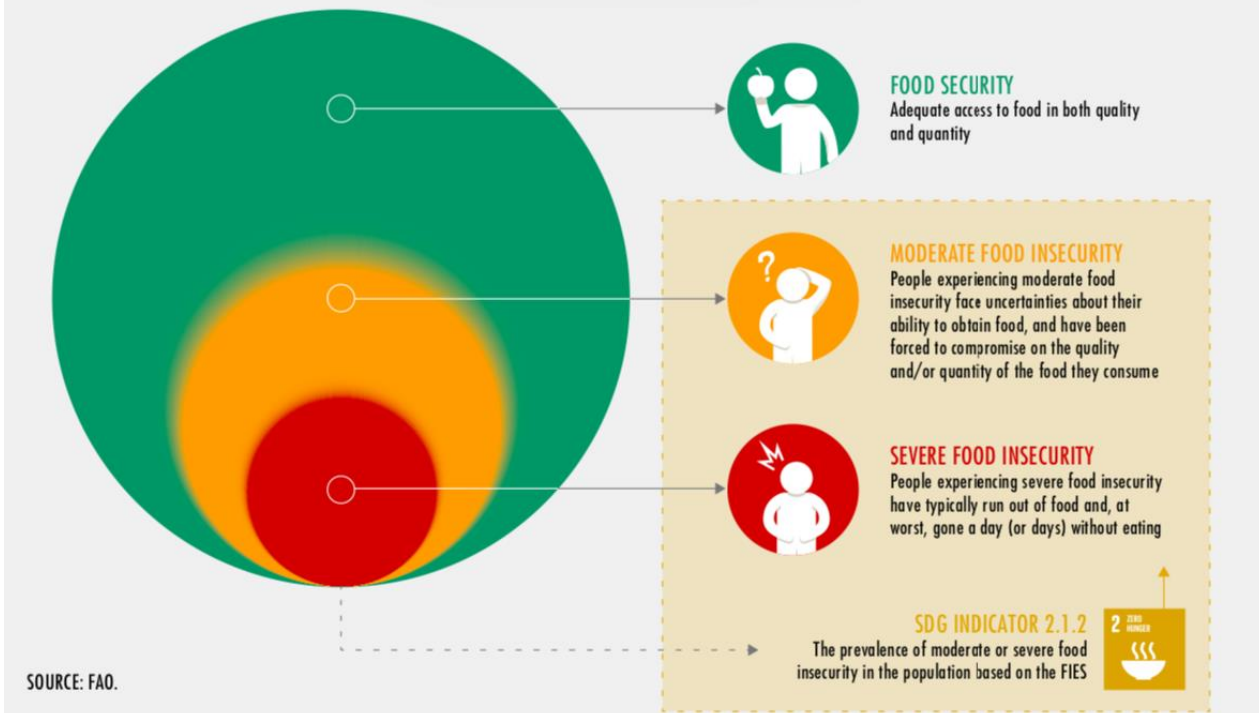
The **Food Insecurity Experience Scale (FIES)** is an experience-based metric of food insecurity severity that relies on people's direct responses to eight questions about their access to food. Based on their responses to the FIES Survey Module items, the individuals surveyed are assigned a probability of being in one of three classes, as defined by two globally-set thresholds: food secure or marginally insecure; moderately food insecure; and severely food insecure. This information is then used to produce **SDG indicator 2.1.2, Prevalence of moderate or severe food insecurity (Fmod+sev)** in the population, based on the Food Insecurity Experience Scale. **Fmod+sev** is the sum of the proportion of the population affected by moderate food insecurity plus the proportion classified as severely food insecure. As a separate indicator, **severe food insecurity (Fsev)**, is computed by considering only the severe food insecurity class.

People experiencing moderate food insecurity face uncertainties about their ability to obtain food and have been forced to reduce, at times during the year, the quality and/or quantity of food they consume due to lack of money or other resources. It thus refers to a lack of consistent access to food, which diminishes dietary quality, disrupts normal eating patterns, and can have negative consequences for nutrition, health and well-being. People facing severe food insecurity, on the other hand, have likely run out of food, experienced hunger and, at the most extreme, gone for days without eating, putting their health and well-being at grave risk.

The figure1 below illustrates the meaning of food security, moderate food insecurity and severe food insecurity, with each category shown as a proportion of the total population.

Figure 1:

EXPLANATION OF FOOD-INSECURITY SEVERITY LEVELS MEASURED BY THE FIES IN SDG INDICATOR 2.1.2



3. How does the FIES work?

The principles underlying experience-based food security measurement have a long history grounded in ethnographic studies conducted to understand the experience of food insecurity. Research revealed that food insecurity, as seen from the perspective of individuals and households, is characterized by **uncertainty and anxiety** regarding food access and changes in food consumption, commonly leading to a less balanced, lower **quality** diet. With increasing severity of the food insecurity condition faced, the **quantity** of food consumed also decreases, as portion sizes are reduced, meals are skipped and at its most severe, people are forced to go without eating for entire days. These dimensions of the experience of food insecurity appear to be **common across cultures**, thus paving the way for a common, internationally valid, measurement scale.

▶ The FIES is a standardized, globally valid, experience-based food security scale, developed by FAO as the consolidation of decades of experience with the use of similar tools in several countries. The key innovation of the FIES methodology is that it produces food insecurity prevalence estimates

- whose validity and reliability can be formally assessed and
- that can be compared across countries and over time

The strength and rigor of the analytic approach, coupled with the long-tested robustness of the specific questions included in the FIES survey module, make it capable of producing reliable food insecurity prevalence estimates across a wide spectrum of countries in terms of languages, culture, and socio-economic conditions, **even in countries with very low or very high rates of food**

insecurity. This makes it ideal as the basis for indicators to be used in the context of a universal agenda such as the 2030 Agenda for Sustainable Development.

4. Key concepts and methods

A concept essential to experience-based food insecurity scales is that the **items** (questions) and the **respondents** (individuals or households) are positioned on the **same underlying scale** of severity of food insecurity (Figure 2).

Figure 2: Food insecurity along a continuum of severity



Data, in the form of binary (“yes”/“no”) responses, are analyzed through **Rasch model**. The probability of a respondent answering “yes” to an FIES item is modelled as the logistic function of the distance along the scale between the severity of the respondent’s condition and the severity of the item.

- ▶ The more severe a respondent’s food insecurity status is, the higher the probability they will respond affirmatively, as shown below.

The probability of receiving an affirmative answer to the j -th question by the i -th respondent in a sample is given by:

$$Prob(X_{i,j} = \text{Yes}) = \frac{\exp(a_i - b_j)}{1 + \exp(a_i - b_j)}, \quad \forall i, j,$$

where a_i and b_j represent, respectively, the position of the respondent and of the item on a one-dimensional scale of severity.

4.1 Statistical validation and parameter estimation

The relative position of items and respondents on the scale of severity is expressed by their respective estimated **parameters**, the mean severity level and of the related standard error that can be associated with each item and that can be assigned to each respondent, based on patterns of responses.

- ▶ Note that the order of the FIES items in terms of the severity they reflect is not given a priori, but is instead revealed by the relative ranking of the estimated item parameter. Under the assumptions of the Rasch measurement model, the severity of a given experience of food insecurity, relative to that of other experiences depends on the frequency with which people respond affirmatively to that item, which in turn is determined by the specific conditions of the population considered. The rationale behind this is

that more severe experiences are expected being reported less often than less severe ones. This is akin to a relatively difficult test question eliciting a smaller proportion of correct answers than easier ones do.

A respondent's **raw score** (an integer number with a value between zero and eight), that is, the **sum of affirmative responses given to the eight FIES questions**, is the simplest statistic that can be computed using the FIES. For data that pass the statistical validation tests, the raw score in itself can be considered already an ordinal measure of food insecurity severity, with lower raw scores corresponding to less severe food insecurity. The respondent parameter, on the other hand, provides an interval measure of the severity of food insecurity and is the proper metric to use to produce indicators of food insecurity that are formally comparable across countries and contexts.

Statistical validation is the assessment of whether the measure obtained is valid and reliable enough for the intended policy and research uses. Statistical validation assesses the quality of the FIES data collected by testing their consistency with the assumptions of the Rasch model . This analysis involves the interpretation of several statistics that reveal 1) if there is any item that do not perform well in a given context, 2) the possible presence of additional dimensions captured in the data, 3) cases with highly erratic response patterns, 4) items that may be redundant, and 5) the proportion of total variance in the data that is accounted for by the measurement model.

4.2 Computation of food insecurity prevalence estimates

Across different countries and subpopulations, the same FIES item may be associated with a different level of severity due to specific interpretations of the question as the result of nuances in adaptation and translation of the item in the local language, or to actual differences in the way food insecurity is experienced and managed in diverse cultures and livelihood systems. Moreover, as the Rasch model is defined in terms of differences in severity levels only, the “zero” of the measurement scale is not identified (one could add an arbitrary constant to all measures, without changing any of the differences).



By convention, the origin of the measurement scale is thus set to the average of the items' severities, which is specific to each application. This means that estimated item and respondent parameters **cannot be immediately compared across applications of the FIES**, and that each application of the FIES generates a different, somehow arbitrary scale of food insecurity.

Before comparing measures obtained in different context, is thus necessary to refer them to a *reference scale* (similarly to what happen with temperature measures, where one can use one of several reference such as the Celsius, Fahrenheit, or Kelvin scales).

The FIES global reference scale has been established by FAO, based on data collected between 2014 and 2019 in about 150 different countries in the world.

While reliable classifications of food insecurity in a country could be obtained for any arbitrary threshold of severity, to calculate **internationally comparable estimates of the prevalence of food insecurity**, classes of food insecurity must be defined by **standard thresholds** set at the same level of severity in all countries. To achieve that, the standard thresholds that permit estimation of the

two FIES-based indicators described below are set at the severity of two FIES items on the FIES global reference scale.¹

The **equating** procedure ensures that these standard thresholds are mapped to the national scales, and respondents are then assigned **probabilistically** to common food insecurity classes, given their raw scores. The probabilities of being *at least moderately* food insecure, or in other words, beyond the “moderate” threshold, and of being *severely* food insecure, are determined by assuming that a respondent reporting a certain raw score belongs to a group within which food insecurity severity is distributed normally, centered on the severity level corresponding to the estimated respondent parameter, with a standard deviation equal to the estimated standard error. The prevalence of food insecurity in the population is then given by **the weighted sum of the raw score-specific probabilities**. The weighted proportions of individuals living in a household reporting each raw score in the population are used as weights.

▶ Two FIES-based indicators can be used for **national and global monitoring** purposes. Note that the first indicator is an estimate of the *sum* of the moderately food insecure and the severely food insecure segments of the population.

- **FI_{mod+sev}** The proportion of the population experiencing **moderate and severe food insecurity** (SDG indicator 2.1.2)
- **FI_{sev}** The proportion of the population experiencing **severe food insecurity**

Interpretation

People experiencing **moderate** levels of food insecurity will typically eat low quality diets and might have been forced, at times during the year, to also reduce the quantity of food they would normally eat, while those experiencing **severe** levels would very likely have gone for entire days without eating, due to lack of money or other resources to obtain food.

¹ The FIES global standard scale is a set of item severity values that has been created based on results from over 140 countries covered by the Gallup World Poll in 2014, 2015, 2016, 2017, 2018 and 2019. The severity on the global standard scale of the 5th item shown in the survey module in Annex (termed “ATELESS”) separates mild from moderate food insecurity, while the severity of the 8th item (“WHLDAY”) separates moderate from severe levels.

5. Data

The FIES data used to estimate the prevalence of food insecurity presented in this report were collected by the Statistical Institute of Belize (SIB), through the April 2021 Labour Force Survey (LFS). A food security module was included in the household section of the LFS, and hence shared the same sampling methodology of the LFS.

5.1 Information on sampling and weights²

Belize was divided into 828 enumeration areas (EAs) each containing 150 to 200 households with some areas containing more and others less than the average number of households. The number of households in the country was disaggregated by the six administrative districts: Corozal, Orange Walk, Belize, Cayo, Stann Creek and Toledo. Within each of the six districts, urban and rural areas were defined as the sampling strata. The sampling frame recorded, geospatial information, basic household and building information, as well as contact information for each household. A total of 120 EAs were chosen in the first stage of sampling and those EAs that were exhausted were replaced.

The target population for the April 2021 LFS was the set of persons of working age (Working Age Population or WAP), that is, all persons 14 years or older. A sample of 3000 households was selected across the country covering urban and rural areas (**Table 1**), from which individuals 14 years and over were interviewed. These households were selected from the most recent register of households obtained from the 2020 and 2021 listing exercises and were contacted by trained interviewers who completed data collection for the FIES over a 4-week period from 4 April 2021 to 8 May 2021.

Table 1: Sample Distribution for the April 2021 LFS

| Districts | Urban | Rural | Total |
|-------------|-------|-------|-------------|
| Corozal | 1675 | 275 | 450 |
| Orange Walk | 175 | 325 | 500 |
| Belize | 300 | 200 | 500 |
| Cayo | 250 | 250 | 500 |
| Stann Creek | 225 | 375 | 600 |
| Toledo | 150 | 300 | 450 |
| | | | 3000 |

Source: SIB LFS data

At the first stage of sampling for the April 2021 LFS, 120 clusters were sampled from the country's national sampling frame. At the second stage of sampling, from this master list, a nationally representative sample of 3,000 households was selected.

5.2 The FIES Survey Module

Three different versions of the module were include in the LFS:

² Details provided by SIB-CARICOM/Leopold L. Perriott (2021): *Food Insecurity Survey, Final Report*.

1. **Standard FIES module**, composed of eight dichotomous (Yes/No) variables. The only missing values in this case correspond to “Don’t Know” and “Refused” answers (DK/NS);
2. **"COVID-19" FIES module**, composed of eight follow-up dichotomous (Yes/No) variables.
3. **"4 Weeks" FIES module** composed of eight follow-up dichotomous (Yes/No) variables.

In this report, we present only the results of the standard FIES module that uses a reference period of “last 12 months”, which is the reference period used to produce the SDG indicator 2.1.2. The 30-days estimates provide information on "recent" food insecurity in the country, while the COVID-19 follow-up questions give an idea of how many respondents attribute each FIES experience to COVID-19

5.3 Data collection

Data collection for the first round 2021 LFS, where the FIES module was included, was conducted by mixed-mode: telephone interview and face-to-face interview. The Survey Solution software was used to construct the CAPI application. Interviewers called each household of the sample using a telephone number provided in the sample listing. All calls were recorded using Cube ACR and the respondents were made aware that the interview would be recorded for quality control. A team of interviewers visited households which did not have access to telephones or which declined to be interviewed by telephones. An overall response rate of 86.9 % was achieved for the LFS, with 91.7 % response rate for rural areas and 80.8 % for urban areas.

6. Results

6.1 Model validation and calibration

The FIES data of Belize have been analyzed and validated by the FAO, in collaboration with the SIB. The adherence to the Rasch model’s assumption has been tested in accordance to the quality standards required for reliable estimation of the prevalence of food insecurity.

Table 2 reports the estimated parameters and infits³ for the FIES item in Belize. All of the questions meet the standard requirements and therefore were used for in the Rasch model.

³ The infit statistics are commonly used to assess how well responses to items correspond to the Rasch-model assumptions (or “fit” the model). They are chi-square-type statistics that compare the misfit of each item with the extent of misfit expected under model assumptions. The expected value of each item’s infit statistic is 1.0 if the data conform to Rasch model assumptions. Values above 1.0 indicate that the item discriminates less sharply than the average of all items in the scale. An infit between 0.7 and 1.3 is considered acceptable and indicates that the item discriminates equally well (i.e. it is equally linked to the measure of food insecurity) compared to the rest of the items in the scale.

Table 2: Estimated severity parameters for the FIES items and corresponding infit statistics

| | Module FIES Standard | |
|-------------|--------------------------|------------------|
| | Item Severity parameters | Infit statistics |
| Q1. WORRIED | -3.41 | 1.12 |
| Q2. HEALTHY | -0.35 | 1.28 |
| Q3. FEWFOOD | -1.62 | 0.89 |
| Q4. SKIPPED | 0.57 | 0.86 |
| Q5. ATELESS | -1.02 | 0.88 |
| Q6. RUNOUT | 0.47 | 1.04 |
| Q7. HUNGRY | 1.71 | 0.80 |
| Q8. WHLDAY | 3.65 | 0.98 |

Source: Computed by FAO using SIB LFS data

Table 3 below reports the estimated respondent parameters and corresponding standard error. Respondent severity parameters and standard errors, estimated for Belize using the FIES data collected by SIB are used to derive the probabilities of being food insecure at moderate or severe, and severe levels (P1 and P2).

Alignment of the scale estimated in Belize with the FIES global standard was satisfactory: using the 2021 SIB LFS data combined in one single dataset and estimating the Rasch model on it, the severe levels associated with 6 items were found to be aligned with the corresponding levels on the global reference scale.

Table 3: Estimated severity parameters for each raw score

| Raw score | Severity parameter | Standard Error | P ₁ | P ₂ |
|-----------|--------------------|----------------|----------------|----------------|
| 0 | -4.10 | 1.62 | 0.00000000 | 0.00000000 |
| 1 | -3.09 | 1.28 | 0.06361225 | 2.235101e-08 |
| 2 | -1.81 | 1.03 | 0.25735950 | 1.332467e-08 |
| 3 | -0.86 | 0.93 | 0.61745256 | 1.369704e-07 |
| 4 | -0.04 | 0.90 | 0.88816008 | 6.189606e-06 |
| 5 | 0.80 | 0.94 | 0.98078835 | 4.696636e-04 |
| 6 | 1.78 | 1.06 | 0.99713449 | 2.242055e-02 |
| 7 | 3.14 | 1.32 | 0.99938374 | 2.828286e-01 |
| 8 | 4.48 | 1.62 | 0.99973393 | 6.390723e-01 |

P₁ = probability to be moderately or severely food insecure

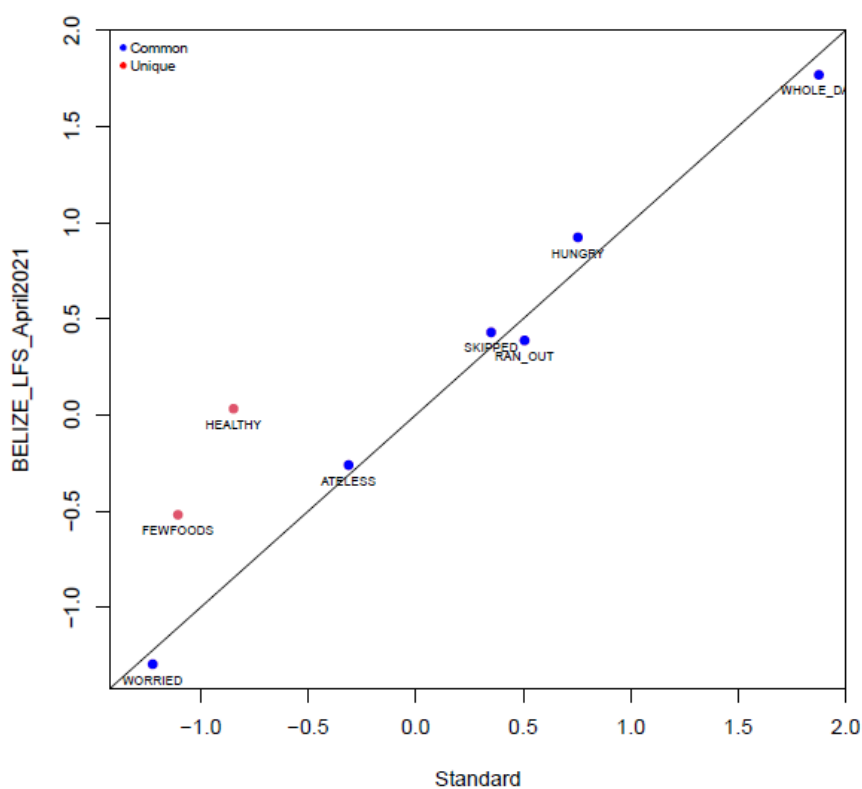
P₂ = probability to be severely food insecure

Source: Computed by FAO using SIB LFS data

Figure 3 shows the item severity parameters as estimated in Belize, plotted against the global FIES scale and adjusted to the same mean and standard deviation of common items.

After adjustment of the global standard to the national metric for Belize, thresholds for moderate or severe, and severe food insecurity are -1.40 and 3.90, respectively.

Figure 3: FIES scale estimated in Belize, against the global standard, after adjustment



Source: Computed by FAO using SIB LFS data

Table 4: Weighted proportion of cases for each raw score and the corresponding number of respondents in Belize in 2021

| Raw score | N cases | W cases |
|-----------|---------|------------|
| 0 | 744 | 43786.2408 |
| 1 | 280 | 15336.3128 |
| 2 | 187 | 10013.7197 |
| 3 | 202 | 10261.5434 |
| 4 | 206 | 10312.0136 |
| 5 | 184 | 8840.47863 |
| 6 | 168 | 8014.81393 |
| 7 | 157 | 8001.91439 |
| 8 | 127 | 6397.75956 |
| Total | 2255 | 120964.797 |

Source: Computed by FAO using SIB LFS data

6.2 Prevalence rates

The FIES module has been applied at the household level in Belize. Therefore, most of the results have been reported at household level, except in **Table 5** that shows the estimated prevalence of food insecurity at individual level in Belize in 2021, in comparison to the average prevalence of the World and the region Latin America and the Caribbean in 2020. The sampling weighted provided by SIB was used to expand the results to the general population of Belize. The results indicate that 45.5 % of the population in Belize was affected by moderate or severe food insecurity in 2021, compared to 40.9% in Latin America and the Caribbean. This prevalence corresponds to individuals who were most likely forced, at certain times of the year, to reduce the quality of the diet, for lack of money or other resources, and had at least a fifty percent probability reduction of the quantity of food consumed.

Table 5 also shows that the prevalence of severe food insecurity in 2021 is estimated at 5.9 % in Belize and 14.2 % on average in Latin America and the Caribbean. This represents individuals who had almost surely reduced the quantity of food consumed and had at least a fifty percent probability of having gone for an entire day without eating, because of lack of means to get food.

Table 5: Estimated prevalence of food insecurity in Belize, in comparison with the World and the region Latin America and the Caribbean

| | Moderate or severe (FI _{mod+sev}) | Severe (FI _{sev}) |
|---------------------------------|--|--------------------------------|
| | 2020/2021 | 2020/2021 |
| World | 30.4 | 11.9 |
| Latin America and the Caribbean | 40.9 | 14.2 |
| Belize | 45.5 | 5.9 |

Notes: The estimates for the World and Latin America and the Caribbean are from FAO (2021) and the estimates for Belize are from the SIB.

Source: FAO and SIB

Table 6: Estimated prevalence of food insecurity by District in Belize

| | Moderate + Severe | Severe only |
|---------------------|--------------------|-------------------|
| Total sample | 41.4 (±3.5) | 5.4 (±1.2) |
| Corozal | 51.07 (±7.51) | 4.56 (±2.31) |
| Orange Walk | 46.37 (±7.17) | 4.73 (±2.29) |
| Belize | 29.44 (±7.29) | 5.26 (±2.74) |
| Cayo | 48.56 (±7.27) | 4.7 (±2.36) |
| Stann Creek | 40.47 (±7.28) | 7.65 (±3.25) |
| Toledo | 52.08 (±8.18) | 7.05 (±3.3) |

Source: Computed by FAO using SIB LFS data

Food insecurity is higher in rural areas compared to urban areas. **Table 7** shows that almost half of rural households experienced moderate or severe food insecurity in 2021. In contrast, a third of urban households are affected by moderate or severe food insecurity. The gap is narrower for severe food insecurity only, with a prevalence of 6.46 % in rural areas and 4.26 % in urban areas.

Table7: Estimated prevalence of food insecurity in the urban vs rural population

| | Moderate + Severe | Severe only |
|---------------------|-------------------|--------------|
| Total sample | 41.4 (±3.5) | 5.4 (±1.2) |
| Urban | 33.8 (±5.51) | 4.26 (±1.82) |
| Rural | 48.45 (±4.26) | 6.46 (±1.67) |

Source: Computed by FAO using SIB LFS data

Table 8: Estimated prevalence of food insecurity by Ethnic Group

| | Moderate + Severe | Severe only |
|---------------------|-------------------|--------------|
| Total sample | 41.4 (±3.5) | 5.4 (±1.2) |
| Creole | 35.61 (±8.15) | 7.15 (±3.28) |
| Garifuna | 31.58 (±12.45) | 6.64 (±4.42) |
| Maya | 57.09 (±8.4) | 8.73 (±3.77) |
| Mestizo/Hispanic | 45.63 (±4.83) | 4.36 (±1.52) |
| Mennonite | 21.1 (±9.11) | 1.56 (±1.75) |

Source: Computed by FAO using SIB LFS data

7. Conclusion

This report summarizes key findings from the first round of FIES data collection in Belize. The FIES has provided data with high-level granularity that are adapted well to the socio-economic context of Belize. It offers to SIB and policy makers in the country a great opportunity to build a better understanding of the complex phenomenon of food insecurity, and to design and evaluate future policy interventions. The FIES data were collected at household level and were disaggregated by ethnicity, district and rural versus urban areas. In the future, SIB can also collect the data at individual level in order to propose more targeted options for the analysis of the food insecurity by gender or age group. The SIB has all the means and the potential to collect other rounds of FIES data and to monitor progress towards the SDG Target 2.1: *by 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round*. To do so, it can include the FIES survey module in at least one round of its regular Labour Force Survey or other national household surveys and build new series of food security data. Since the phenomenon of food insecurity encompasses more than the aspect of food access captured by the FIES, it will also be important to collect and analyze data on other aspects such as availability, utilization, stability and nutrition.

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Annex: The FIES Survey Module that was included in the LFS

FOOD SECURITY

I will now ask you a few questions on food-related behaviors and experiences associated with difficulties in accessing food due to lack of money or other resources.

| During the last 12 months, ... 1=Yes 2=No 9=DK/NS | Did this happen in the past 4 weeks? 1=Yes 2=No 9=DK/NS | During the last 12 months, was it mainly due to the COVID-19 situation? 1=Yes 2=No 9=DK/NS | How often did this happen in the past 4 weeks? 1=Rarely [1 or 2 times 2=Sometimes [3-10 times 3=Often [more than 10 times 9=DK/NS | |
|--|--|---|---|----------------|
| IF NO OR DON'T KNOW (A = 2 OR 9), GO TO NEXT ROW | | | | |
| A | B | C | D | |
| FS3.1: Was there a time when you or others in your household were worried you would not have enough food to eat because of a lack of money or other resources? | ①②③ | ①②③ | ①②③ | GO TO NEXT ROW |
| FS3.2: Was there a time when you or others in your household were unable to eat healthy and nutritious food because of a lack of money or other resources? | ①②③ | ①②③ | ①②③ | GO TO NEXT ROW |
| FS3.3: Was there a time when you or others in your household ate only a few kinds of food because of a lack of money or other resources? | ①②③ | ①②③ | ①②③ | GO TO NEXT ROW |
| FS3.4: Was there a time when you or others in your household had to skip a meal because there was not enough money or other resources to get food? | ①②③ | ①②③ | ①②③ | GO TO NEXT ROW |
| FS3.5: Was there a time when you or others in your household ate less than you thought you should because of a lack of money or other resources? | ①②③ | ①②③ | ①②③ | GO TO NEXT ROW |
| FS3.6: Was there a time when your household ran out of food because of a lack of money or other resources? | ①②③ | ①②③ | ①②③ IF B= 2 OR 9, GO TO NEXT ROW | ①②③③ |
| FS3.7: Was there a time when you or others in your household were hungry but did not eat because there was not enough money or other resources for food? | ①②③ | ①②③ | ①②③ IF B= 2 OR 9, GO TO NEXT ROW | ①②③③ |
| FS3.8: Was there a time when you or others in your household went without eating for a whole day because of a lack of money or other resources? | ①②③ | ①②③ | ①②③ IF B= 2 OR 9, GO TO NEXT ROW | ①②③③ |
| FS3.9 During the pandemic, did you or any member of the household lose a source of income? | ①②③ | | | |

INTERVIEWER: IF RESPONSE FOR FS3.N (C) IS 'YES' FOR AT LEAST ONE OF 3.1 TO 3.8 CONTINUE, OTHERWISE GO TO NEXT SECTION.

FS3.10: Besides lack of money or resources, in what way did COVID-19 affect your access to food? Was it because... **[READ OPTIONS]**

- Food was no longer available locally
- You could not move to shop for food
- You had to devote your efforts/resources to other more urgent expenses (e.g. health care)
- Other (specify) _____

RESULT CODE

- ① Complete
- ② Partially Complete
- ④ Refusal
- ⑦ No Contact
- ⑨ Other (specify)