

Access to food in 2021: filling data gaps Results of twenty national surveys using the Food Insecurity Experience Scale (FIES)





REQUIRED CITATION

Cafiero, C., Gheri, F., Kepple, A.W., Rosero Moncayo, J. and Viviani, S. 2022. *Access to food in 2021: Filling data gaps. Results of twenty national surveys using the Food Insecurity Experience Scale (FIES).* Rome. https://doi.org/10.4060/cc0721en

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISBN 978-92-5-136549-6 © FAO, 2022



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original English edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization http://www.wipo.int/amc/en/mediation/rules and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through <u>publications-sales@fao.org</u>. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of FAO and do not necessarily reflect the views of the European Union.

Cover photo: © FAO/Yasuyoshi Chiba

Key messages

- Among the 20 countries surveyed, countries surveyed in Africa present the highest prevalence of moderate or severe food insecurity - ranging from 49 percent in Djibouti to almost 80 percent in the Comoros. With the exception of Haiti (82 percent), the Caribbean Island states present lower prevalence, ranging from 17 percent in the Bahamas to 55 percent in Sao Tome and Principe.
- For about half the countries surveyed, the prevalence of recent food insecurity (experienced during the 30 days preceding the survey) was approximately half compared to the annual prevalence (experienced during the 12-month period preceding the survey), or somewhere between 40 and 60 percent. In the Democratic Republic of the Congo and Haiti, however, about 80 percent the people who were moderately or severely food insecure at some point during the year were food insecure during the month preceding the survey. The percentages were also high for Guinea-Bissau, the Niger and Sao Tome and Principe (71 percent, 74 percent and 70 percent, respectively).
- Results at the subnational level reveal marked inequalities within countries. In many cases, the country-level estimates of food insecurity provide a distorted view because they mask large differences among provinces or regions more than a 20 percentage point difference for more than half the countries surveyed, and as much as a 67 point difference. Large ranges are also observed in the prevalence of severe food insecurity at the subnational level for the same countries. Such detailed information is essential to guide policies and actions at the country level.



Contents

Key messages	. II I
Figures	vii
Abbreviations and acronyms	x
Acknowledgements	ix
Introduction	
Filling data gaps about access to food in 2021	1
Description of the study	
Coverage and data collection	
The FIES measurement systemPost-hoc adjustments to correct for potential sampling bias	
Indicators producedIndicators produced	
Summary of the main results	
Country results	9
Antigua and Barbuda	11
The Bahamas	12
Barbados	13
The Comoros	15
Djibouti	17
Democratic Republic of the Congo (the)	20
Dominica	23
Eswatini	24
Guinea-Bissau	27
Haiti	30
Lao People's Democratic Republic (the)	33
Madagascar	35
Maldives	38
Niger (the)	39
Rwanda	42
Saint Kitts and Nevis	44
Sao Tome and Principe	45
Suriname	47
Trinidad and Tobago	49
Zambia	51
Annex 1. FIES survey module	54
Annex 2. Comparing FIES-based estimates of the prevalence of recent food insecurity with	
IPC-based assessments	56
Notes	58

Tables

Table 1	Survey profile for each country	4
Table 2	Post-hoc adjustment information	6
Table 3	Prevalence of annual and recent moderate or severe food insecurity, and severe	
	only, in the 20 countries surveyed	7
Table 4	FIES-based measures of the prevalence of food insecurity in Antigua and Barbuda	
	in 2021 (margins of error are in parentheses)	. 11
Table 5	FIES-based measures of the prevalence of food insecurity in the Bahamas in 2021	
	(margins of error are in parentheses)	. 12
Table 6	FIES-based measures of the prevalence of food insecurity in Barbados in 2021	
		. 13
Table 7	FIES-based measures of the prevalence of food insecurity in the Comoros in 2021	
	(margins of error are in parentheses)	. 15
Table 8	FIES-based measures of the prevalence of food insecurity in Djibouti in 2021	
	(margins of error are in parentheses)	. 17
Table 9	FIES-based measures of the prevalence of food insecurity in the Democratic	
	Republic of the Congo in 2021 (margins of error are in parentheses)	20
Table 10	FIES-based measures of the prevalence of food insecurity in Dominica in 2021	
Table 11	FIES-based measures of the prevalence of food insecurity in Eswatini in 2021	
14616 11	(margins of error are in parentheses)	. 24
Table 12	FIES-based measures of the prevalence of food insecurity in Guinea-Bissau in 2021	
TUDIC 12	(margins of error are in parentheses)	. 27
Table 13	FIES-based measures of the prevalence of food insecurity in Haiti in 2021 (margins	/
Tubic 10	of error are in parentheses)	. 30
Table 14	FIES-based measures of the prevalence of food insecurity in the Lao People's	. 00
10010 11	Democratic Republic in 2021 (margins of error are in parentheses)	. 33
Table 15	FIES-based measures of the prevalence of food insecurity in Madagascar in 2021	. 00
Tubic 15	(margins of error are in parentheses)	. 35
Table 16	FIES-based measures of the prevalence of food insecurity in Maldives in 2021	. 00
10010 10	(margins of error are in parentheses)	. 38
Table 17	FIES-based measures of the prevalence of food insecurity in the Niger in 2021	
10010 17	(margins of error are in parentheses)	. 39
Table 18	FIES-based measures of the prevalence of food insecurity in Rwanda in 2021	. 0 /
14510 10	(margins of error are in parentheses)	. 42
Table 19	FIES-based measures of the prevalence of food insecurity in Saint Kitts and Nevis	
14616 17	in 2021 (margins of error are in parentheses)	44
Table 20	FIES-based measures of the prevalence of food insecurity in Sao Tome and	
10010 20	Principe in 2021 (margins of error are in parentheses)	45
Table 21	FIES-based measures of the prevalence of food insecurity in Suriname in 2021	
10010 21	(margins of error are in parentheses)	47
Table 22	FIES-based measures of the prevalence of food insecurity in Trinidad and Tobago	. т/
I UDIC ZZ	in 2021 (margins of error are in parentheses)	<u> 1</u> 9
Table 23	FIES-based measures of the prevalence of food insecurity in Zambia in 2021	. т/
10015 23	(margins of error are in parentheses)	5 1
	(margins of ontol are in parentineses)	. J I

Figures

Figure 1	Explanation of food-insecurity severity levels measured by the FIES	5
Figure 2	Prevalence of moderate or severe food insecurity and severe food insecurity only	
	(12-month) in Antigua and Barbuda, by parish/dependency	11
Figure 3	Prevalence of moderate or severe food insecurity (12-month) in the Bahamas, by region	12
Figure 4	Prevalence of moderate or severe food insecurity, and severe food insecurity only (12-month) in Barbados, by parish	14
Figure 5	Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in the Comoros, by island	
Figure 6	Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Djibouti, by region	
Figure 7	Comparing FIES-based estimates with the result of a recent IPC acute food	19
Figure 8	Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month), in the Democratic Republic of the Congo, by province	
Figure 9	Comparing FIES-based estimates with the result of a recent IPC analysis in the Democratic Republic of the Congo, by province	
Figure 10	Prevalence of moderate or severe food insecurity (12-month) in Dominica, by	23
Figure 11	Prevalence of moderate or severe food insecurity and severe food insecurity only	25
Figure 12	Comparing FIES-based estimates with the result of a recent IPC analysis in	26
Figure 13	Prevalence of moderate or severe food insecurity, and severe food insecurity only (12-month) in Guinea-Bissau, by region and autonomous sector	
Figure 14	Comparing FIES-based estimates with the result of a recent CH analysis in Guinea-	29
Figure 15	Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Haiti, by department	
Figure 16	Comparing FIES-based estimates with the result of a recent IPC acute food	32
Figure 17	Prevalence of moderate or severe food insecurity (12-month) in the Lao People's Democratic Republic, by province and prefecture (Vientiane)	
Figure 18	Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Madagascar, by region	
Figure 19	Comparing FIES-based estimates with the result of a recent IPC acute food insecurity analysis in Madagascar, by region	
Figure 20	Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Maldives, by atoll or city	
Figure 21	Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in the Niger, by region	
Figure 22	Comparing FIES-based estimates with the result of a recent CH acute food insecurity analysis in the Niger, by region	
Figure 23	Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Rwanda, by province	
Figure 24	Prevalence of moderate or severe food insecurity (12-month) in Saint Kitts and	44

Figure 25	Prevalence of moderate or severe food insecurity (12-month) in Sao Tome and	
	Principe, by district and autonomous region	. 46
Figure 26	Prevalence of moderate or severe food insecurity and severe food insecurity only	
	(12-month) in Suriname, by district	. 48
Figure 27	Prevalence of moderate or severe food insecurity and severe food insecurity only	
	(12-month) in Trinidad and Tobago, by region/city/ward	. 50
Figure 28	Prevalence of moderate or severe food insecurity and severe food insecurity only	
	(12-month) in Zambia, by province	. 52
Figure 29	Comparing FIES-based estimates with the result of a recent IPC acute food	
	insecurity analysis in Zambia, by province	. 53
Figure 30	Severity thresholds used for FIES-based assessments of the prevalence of food	
	insecurity	. 57

Acknowledgements

The authors are grateful to Olivier Lavagne d'Ortigue for support with data visualization, the creation of maps and valuable inputs as a reviewer.

This work was co-funded by the European Union.

Abbreviations and acronyms

CAPI Computer-assisted personal interviewing
CATI Computer-assisted telephone interviewing

CH Cadre Harmonisé

COVID-19 Coronavirus disease 2019

FAO Food and Agriculture Organization of the United Nations

FIES Food Insecurity Experience Scale

GIEWS Global Information and Early Warning System

GRFC Global Report on Food Crises

GWP Gallup World Poll

IFAD International Fund for Agricultural Development

IPC Integrated Food Security Phase Classification

LDC Least developed countries

LLDC Landlocked developing countries

SDG Sustainable Development Goals

SIDS Small Island Developing States

SOFI State of Food Security and Nutrition in the World

UNICEF United Nations Children's Fund

WFP World Food Programme
WHO World Health Organization

Introduction

Filling data gaps about access to food in 2021

The surveys described in this report were conducted to provide accurate and timely food insecurity assessments in 20 least developed countries (LDCs), landlocked developing countries (LLDCs) and Small Island Developing States (SIDS) for which food security data are scarce. The detailed results, presented at the subnational level, can support country-level decision-making and will also inform the monitoring of the Sustainable Development Goals (SDGs) and targets, specifically 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. The assessment was conducted using a modified version of the Food Insecurity Experience Scale (FIES), described below, which is the basis for compiling SDG Indicator 2.1.2: Prevalence of moderate or severe food insecurity in the population.

The FIES is a theoretically sound and empirically validated set of tools and analytic protocols for measuring access to food at the household or individual level.¹ As custodian agency of SDG Indicator 2.1.2, the Food and Agriculture Organization of the United Nations (FAO) has collected FIES data annually through the Gallup World Poll (GWP) since 2014. The estimates are reported annually in *The State of Food Security and Nutrition in the World* and in the United Nations SDG indicator database for global SDG monitoring. Two of the distinct advantages of the FIES are that data can be collected quickly, including via telephone or other remote data-collection vehicles, and analysed in a way that ensures comparability across countries and over time.

Most importantly, the FIES measurement system makes it possible to produce assessments of the food insecurity of households or individuals over a range of severity levels that can be compared across countries. This is especially relevant in the context of the still ongoing COVID-19 pandemic, which has had varying impacts not only across countries but also across subpopulations within countries. Furthermore, when focusing on the experiences reported with reference to the last 4 weeks, the FIES makes it possible to measure the extent of recent food insecurity.

This report presents the results of assessments based on FIES data collected by FAO in twenty countries (LDCs, LLDCs and SIDS), between November 2021 and February 2022. For nine of the countries (including eight SIDS), this was the first time FIES data had been collected.

An individually referenced FIES module was used to collect data on conditions experienced over the last 12 months (for assessment of annual food insecurity) and over the last 4 weeks (for recent food insecurity) (see FIES survey module, Annex 1. FIES survey module). The reference to the last 4 weeks also makes it possible to use the FIES data in the context of Integrated Food Security Phase Classification (IPC) and Cadre Harmonisé (CH) analyses – approaches to food insecurity assessment that many policymakers in the countries surveyed are familiar with and that have been conducted over the same period in some of these countries. The results of the surveys described in this report serve as a bridge between the FIES methodology and these other approaches to assessing food security (see Annex 2. Comparing FIES-based estimates of the prevalence of recent food insecurity with IPC-based assessments).

This report begins with a description of the methodology of the national surveys, after which it presents the detailed results for each country.

Description of the study

This section presents details of the study methodology, including a description of the FIES module applied in the surveys, sampling and weighting. A description is provided of the indicators produced to assess food insecurity at different levels of severity and using different reference periods, including SDG Indicator 2.1.2 and food security estimates that are relevant when comparing FIES-based assessments to those based on the IPC/CH frameworks.

Coverage and data collection

The study covered 20 countries among LLDCs, SIDS) and LDCs. The surveys were designed to be representative at the national as well as the Administration 1 (admin-1) level, the largest subnational administrative unit of a country.

Data were collected by FAO through two data collection service providers (GeoPoll and Kantar), between November 2021 and January 2022. Whenever possible, computer-assisted personal interviewing (CAPI) was used (in approximately half of the countries surveyed) while computer-assisted telephone interviewing (CATI) via mobile telephone was used in the others (see **Table 1**). To ensure sufficient coverage of each area, quotas of at least 200 observations were set at the admin-1 level, with few exceptions (detailed in the next section).

In addition to the FIES data, sociodemographic information on the respondent/household, including gender, age, urban or rural area, region, education and composition of the household, was collected.

The survey module was administered to respondents aged 18 or older who answered on behalf of themselves (individually referenced module). The questionnaire was translated into the main languages of each country.

Table 1 Survey profile for each country

7 T	•			
Country	Data collected from-to	Number of observations	Percentage of the sample obtained by random digit dialling (percent)	Collection method
Antigua and Barbuda	Nov-Dec 2021	1 600	61.6	CATI
Bahamas	Nov-Dec 2021	1 100	16.2	CATI
Barbados	Nov-Dec 2021	2 200	81.6	CATI
Comoros	Nov 2021	902	-	CAPI
Democratic Republic of the Congo	Nov-Dec 2021	5 489	-	CAPI
Djibouti	Nov 2021	1 200	-	CAPI
Dominica	Nov 2021-Jan 2022	2 000	45.9	CATI
Eswatini	Nov-Dec 2021	1 000	-	CAPI
Guinea-Bissau	Nov 2021	1 800	-	CAPI
Haiti	Nov 2021	2 000	90.8	CATI
Lao People's Democratic Republic	Nov-Dec 2021	3 600	92.3	CATI
Madagascar	Nov-Dec 2021	4 400	-	CAPI
Maldives	Nov-Dec 2021	1 650	100.0	CATI
Niger	Nov-Dec 2021	1 652	-	CAPI
Rwanda	Nov-Dec 2021	1 079	-	CAPI
Saint Kitts and Nevis	Nov 2021-Jan 2022	1 003	64.5	CATI
Sao Tome and Principe	Nov 2021	1 400	100.0	CATI
Suriname	Nov-Dec 2021	2 000	87.3	CATI
Trinidad and Tobago	Nov-Dec 2021	3 000	54.8	CATI
Zambia	Nov-Dec 2021	2 114	-	CAPI

Source: Authors' own elaboration.

The 20 LDCs, LLDCs and SIDS that were included in the data collection initiative included ten African countries, seven Caribbean nations, one country in South America and two in Asia. For nine of these countries, it was the first time FIES data had been collected to assess food insecurity: Antigua and Barbuda, Bahamas, Barbados, Djibouti, Dominica, Maldives, Sao Tome and Principe, Suriname and Trinidad and Tobago.

The FIES measurement system

The FIES is currently the only household or individual food security assessment system that ensures global comparability of the resulting statistics, due to the possibility of calibrating the measures obtained in each country against a common global reference standard.² It is the official instrument used by FAO to produce estimates of the prevalence of food insecurity in the context of SDG Target 2.1 monitoring.

The standard FIES survey module contains eight questions focused on food-related behaviours and experiences, associated with difficulties in accessing food due to resource constraints. These are experiences or conditions that can be easily self-reported by individuals reached in a survey, either in person or by telephone. The eight questions are intended to reveal conditions that cover a wide range of severity of food insecurity. This makes it possible to identify population groups facing food insecurity at two levels of severity: severe food insecurity, which refers to people who have run out of food, gone hungry or perhaps not eaten

for entire days; and moderate food insecurity, which refers to people who have been forced to compromise on the quality and/or quantity of the food they consume (Figure 1).

Figure 1 Explanation of food-insecurity severity levels measured by the FIES

FOOD INSECURITY BASED ON THE FIES: WHAT DOES IT MEAN?



Source: FAO, 2022.

The FIES can be easily applied at relatively low cost within any properly designed individual or household survey to produce timely, reliable and meaningful information on the adequacy of access to food at the individual or household level, provided the correct analytic protocol is used to process the information. This is based on Rasch modelling, which makes it possible to transform the information collected (as simple "yes/no" answers) into rigorous quantitative measures, which, in turn, make it possible to classify respondents into different classes of food-insecurity severity.

For the surveys conducted, the FIES module was adapted to serve multiple purposes, while preserving all the desirable properties in terms of food security measurement rigor and reliability. Each FIES question was asked with reference to the previous 12 months to produce an annual food insecurity prevalence rate for SDG monitoring. Questions answered affirmatively were followed up by asking whether the experience occurred over the past 4 weeks, so that the prevalence of recent food insecurity could be determined as well. As these countries are all expected to reveal quite high prevalence of severe food insecurity, the last three questions in the FIES module were expanded to also collect information on the frequency of occurrence, a feature that makes it possible to better assess and potentially discriminate further within the severe food insecurity classification. This is particularly relevant when a high prevalence of severe food insecurity is expected and has the important advantage of being better suited to inform crisis/humanitarian assessments based on the Cadre Harmonisé (CH) and the Integrated Food Security Phase Classification (IPC), as described in Annex 2. Comparing FIES-based estimates of the prevalence of recent food insecurity with IPC-based assessments.

Post-hoc adjustments to correct for potential sampling bias

Post-hoc adjustments are performed to **control for potential sampling biases** and produce results that are representative of the entire population. Telephone surveys are biased by design because they target only those with access to mobile telephones. Face-to-face surveys may also suffer from sampling bias, especially in countries where specific areas or target populations are more difficult to reach. In both cases, the people omitted from the sample are likely to differ from the rest of the population with respect to their access to food.

FAO provides technical guidance on how to process FIES data. See http://www.fao.org/in-action/voices-of-the-hungry/using-fies/en/

For all countries, base sampling weights were built in order to replicate the distribution of the population at the admin-1 level. Additional demographic characteristics were considered in the post-adjustment at the national and admin-1 level, as described in Table 2.

Table 2 Post-hoc adjustment information

Country	Mobile-cellular subscriptions per 100 inhabitants ⁱⁱ	Variables used in the post-stra	tification adjustment
-		At the admin-1 level	At the national level
Antigua and Barbuda	188	Gender and age	Education
Bahamas	119	Gender	Education
Barbados	103	Gender and age	Education
Comoros	-	Gender and age	Education
Democratic Republic of the Congo	-	Gender, age, urbanity, education	-
Djibouti	-	-	Education
Dominica	106	Gender	Education
Eswatini	-	Gender and age	Education
Guinea-Bissau	-	-	Education
Haiti	64	Gender and age	Education
Lao People's Democratic Republic	56	Gender and age	Education
Madagascar	-	-	Education
Maldives	133	Gender	Education
Niger	-	Gender, age, urbanity, education	-
Rwanda	-	Gender, age, urbanity, education	-
Saint Kitts and Nevis	147	Gender and age	Education
Sao Tome and Principe	79	Gender and age	Education
Suriname	153	Gender and age	Education
Trinidad and Tobago	142	-	Education, gender and age
Zambia	-	Gender, age, urbanity, education	-

Source: Authors' own elaboration.

Indicators produced

Through an application of the Rasch measurement model,³ FIES data were used to obtain a quantitative measure of the severity of the food insecurity condition (defined as the household's or individual's inability to access food) and the associated residual uncertainty (the "measurement error"), for each respondent in a sample. These measures were then used to estimate the prevalence of food insecurity, at different levels of severity, in the reference population. (Note that the information provided in this section was published previously in the *Access to Food in 2020* report.)⁴

With the FIES module used in these surveys, it was possible to produce several different indicators, depending on the combination of the reference period and of the severity thresholds chosen for classification.

- **(A)** When the questions refer to the past **12 months** and the thresholds used are the ones defined in the context of global monitoring of the SDGs, it is possible to compute indicators of the prevalence of *annual* food insecurity:
 - The "Prevalence of moderate or severe food insecurity (**Fl**_{mod+sev}) in the population, based on the Food Insecurity Experience Scale" (SDG Indicator 2.1.2).
 - The "Prevalence of severe food insecurity (**Fl**_{sev}) in the population, based on the Food Insecurity Experience Scale".

FI_{mod+sev} is the proportion of the population affected by moderate food insecurity *plus* the proportion classified as severely food insecure. As a separate indicator, **FI**_{sev} includes only those in the severe food insecurity class.⁵

(B) When the reference is to the 4 weeks preceding the survey, the data allows for estimation of *recent* food insecurity. Provided they refer to the same severity thresholds, annual and recent food insecurity can be

Data available from International Telecommunication Union (ITU) Statistics webpage https://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2021/December/MobileCellularSubscriptions 2000-2020.xlsx. The latest publicly available year is 2020. Data are reported only for CATI countries.

compared to highlight how problematic the month preceding the survey was in terms of access to food. Intuitively, the prevalence of annual food insecurity is expected to be always higher than that of recent food insecurity. A high ratio between the rates of recent and annual food insecurity can be found where food insecurity is a persistent phenomenon, with no marked seasonal fluctuations or when the survey happens to be conducted at or immediately after the peak of the worst food insecurity period of the year. Ideally, recent food insecurity should be assessed quarterly or monthly, whenever seasonal fluctuations are expected to be significant.

(C) Still with reference to **recent food insecurity** (experienced in the 4 weeks preceding the survey), but setting severity thresholds that align with definitions adopted in the **Integrated Food Security Phase Classification (IPC)** and the **Cadre Harmonisé (CH)**, additional indicators can be produced, which may be directly compared to existing IPC/CH assessment (see **Annex** 2. Comparing FIES-based estimates of the prevalence of recent food insecurity with IPC-based assessments).

Summary of the main results

Countries surveyed in Africa present the highest prevalence of moderate or severe food insecurity - ranging from 49 percent in Djibouti to almost 80 percent in the Comoros. All African countries surveyed, except Djibouti, have prevalence above 60 percent. With the exception of Haiti (82 percent), the Caribbean Island states present lower prevalence, ranging from 17 percent in the Bahamas to 43 percent in Trinidad and Tobago.

For about half of the countries surveyed, the prevalence of recent food insecurity (experienced during the 30 days preceding the survey) was approximately half the annual prevalence (experienced during the 12-month period preceding the survey), or somewhere between 40 and 60 percent. In the Democratic Republic of the Congo and Haiti, however, about 80 percent the people who were moderately or severely food insecure at some point during the year were food insecure during the month preceding the survey. The percentages were also high for Guinea-Bissau, the Niger and Sao Tome and Principe (71 percent, 74 percent and 70 percent, respectively).

Table 3 Prevalence of annual and recent moderate or severe food insecurity, and severe only, in the 20 countries surveyed

Country	Number of	Over the last	12 months	Over the last 4 weeks	
	Observations (N)	Mod. + Sev.	Severe	Mod. + Sev.	Severe
Antigua and Barbuda	1 600	33.0 (±3.5)	7.1 (±1.7)	16.7 (±2.7)	3.3 (±1.1)
Bahamas	1 100	17.2 (±3.9)	3.4 (±1.6)	7.1 (±2.6)	2.0 (±1.2)
Barbados	2 200	31.1 (±4.5)	7.4 (±2.3)	15.2 (±3.5)	3.4 (±1.5)
Comoros	902	79.7 (±5.0)	27.4 (±5.9)	36.0 (±6.5)	6.3 (±3.0)
Democratic Republic of the Congo	5 489	78.1 (±2.1)	40.5 (±2.3)	60.7 (±2.5)	20.4 (±1.9)
Djibouti	1 200	49.2 (±6.0)	16.5 (±4.1)	20.6 (±4.7)	6.0 (±2.7)
Dominica	2 000	34.4 (±3.9)	5.8 (±1.6)	19.7 (±3.1)	2.2 (±1.0)
Eswatini	1 000	67.0 (±4.9)	18.3 (±3.5)	44.4 (±4.9)	7.5 (±2.3)
Guinea-Bissau	1 800	77.6 (±3.1)	33.3 (±3.7)	54.9 (±3.7)	18.6 (±2.8)
Haiti	2 000	82.0 (±8.5)	38.1 (±6.5)	71.5 (±9.7)	22.5 (±5.0)
Lao People's Democratic Republic	3 600	36.5 (±2.8)	7.1 (±1.4)	18.4 (±2.1)	3.9 (±1.0)
Madagascar	4 400	62.6 (±2.4)	10.7 (±1.4)	37.0 (±2.3)	1.5 (±0.3)
Maldives	1 650	13.4 (±2.6)	2.2 (±1.1)	2.5 (±1.2)	1.4 (±1.0)
Niger	1 652	73.9 (±4.9)	31.7 (±4.4)	54.9 (±5.1)	14.6 (±3.2)
Rwanda	1 079	66.9 (±4.9)	23.9 (±4.4)	30.3 (±4.9)	6.3 (±2.5)
Saint Kitts and Nevis	1 003	29.9 (±4.9)	5.6 (±2.0)	16.7 (±3.8)	2.7 (±1.3)
Sao Tome and Principe	1 400	54.6 (±4.2)	14.1 (±2.7)	38.5 (±3.9)	6.6 (±1.8)
Suriname	2 000	35.9 (±5.3)	7.2 (±2.3)	21.9 (±4.1)	2.7 (±1.2)
Trinidad and Tobago	3 000	43.3 (±3.7)	10.2 (±2.0)	23.0 (±3.0)	4.8 (±1.5)
Zambia	2 114	78.2 (±3.2)	36.1 (±3.4)	51.0 (±3.8)	15.7 (±2.6)

Source: Authors' own elaboration.

Results at the subnational level, presented in the country reports that follow, reveal marked inequalities within countries. In many cases, the country-level estimates of food insecurity provide a distorted view because they mask large differences among provinces or regions. For eight countries (the Comoros, Djibouti, Guinea-Bissau, Maldives, Rwanda, Suriname, Trinidad and Tobago, Zambia), the difference between the provinces with the highest and the lowest prevalence of moderate or severe food insecurity is greater than 20 percentage points. For Madagascar and the Democratic Republic of the Congo, the differences are even more pronounced – about 49 and 67 percentage points, respectively. Large ranges are

also observed in the prevalence of severe food insecurity at the subnational level for the same countries. Such detailed information is essential to guide policies and actions at the country level.

Country results

This section presents results for each country surveyed, beginning with the national-level estimates of the annual prevalence of moderate or severe food insecurity, and severe-only food insecurity. Whenever a previous food insecurity assessment is available, the time trend is discussed.

The prevalence of recent food insecurity (experienced over the 4 weeks preceding the survey) at the national level is also presented for each country.

Subnational estimates (admin-1 level) of food insecurity, experienced over the 12 months, as well as the 4 weeks, preceding the surveys, are then shown. For countries where poststratification weights are adjusted by distribution by urbanicity, results disaggregated at that level are also included.

Finally, for those countries where an IPC or CH assessment has been conducted recently, FIES-based indicators that can be compared to the results of those assessments are also presented, using a specific threshold to compute the prevalence of food insecurity at severity levels that are equivalent to IPC Phase 3 or more, also used as a reference for CH assessments.



Antigua and Barbuda

This was the first time FIES data was collected in Antigua and Barbuda. It was found that one-third (33 percent) of the national population was affected by moderate or severe food insecurity at some point during 2021, including 7.1 percent who were suffering from severe food insecurity. During the four weeks preceding the survey (December 2021), the rates were estimated to be 16.7 and 3.3 percent, respectively or approximately half the annual rates (Table 4 and Figure 2).

Both annual and recent food insecurity were highest in Saint John and Saint Mary and lowest in Saint Philip. There is large uncertainty around the estimate for Barbuda, as reflected in the large margins of error due to the small sample size (Table 4).

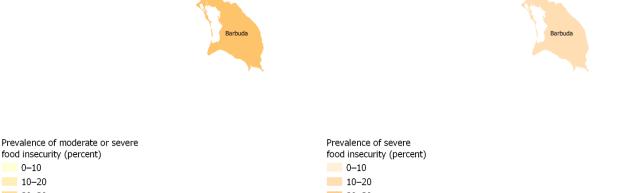
Table 4 FIES-based measures of the prevalence of food insecurity in Antigua and Barbuda in 2021 (margins of error are in parentheses)

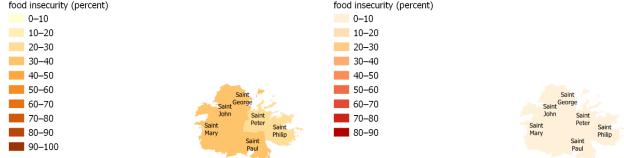
	N —	Over the last 12 months		Over the last 4	weeks
		Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 600	33.0 (±3.5)	7.1 (±1.7)	16.7 (±2.7)	3.3 (±1.1)
By parish/dependency					
Barbuda	43	39.0 (±22.7)	10.2 (±12.5)	19.8 (±18.0)	5.3 (±8.4)
Saint George	221	30.1 (±9.2)	5.4 (±4.1)	14.4 (±6.8)	2.6 (±2.5)
Saint John	467	38.5 (±6.7)	8.9 (±3.6)	20.9 (±5.5)	4.3 (±2.3)
Saint Mary	222	37.7 (±9.7)	8.3 (±5.0)	18.1 (±7.3)	3.5 (±2.9)
Saint Paul	216	34.1 (±9.9)	6.6 (±4.6)	17.4 (±7.5)	2.8 (±2.7)
Saint Peter	221	26.1 (±9.1)	6.4 (±4.5)	12.9 (±6.6)	2.5 (±2.7)
Saint Philip	208	23.4 (±8.8)	4.3 (±3.8)	11.2 (±6.2)	2.5 (±2.8)

Note: Information on the parish/dependency is missing for two observations.

Source: Authors' own elaboration.

Figure 2 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Antigua and Barbuda, by parish/dependency





Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on Hijmans, R. 2012. DIVA-GIS [shapefiles]. In: DIVA-GIS. Cited June 2022. https://www.diva-gis.org/.

The Bahamas

This was the first time FIES data was collected in the Bahamas. It was found that 17.2 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 3.4 percent who were suffering from severe food insecurity. During the 4 weeks preceding the survey (December 2021), the rates were estimated to be 7.1 and 2.0 percent, respectively. A comparison of annual with recent food insecurity shows that the proportion of those facing food insecurity during the year who experienced it during the 4 weeks preceding the survey (December 2021) was about 40 percent for moderate or severe food insecurity and 60 percent for severe food insecurity (Table 5 and Figure 3).

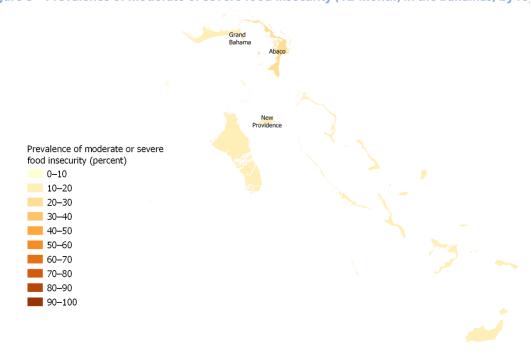
Annual food insecurity was highest in Abaco, especially at the most severe level, whereas New Providence was the most affected in December 2021 (recent food insecurity) (Table 5). Grand Bahama was the region with the lowest prevalence of food insecurity.

Table 5 FIES-based measures of the prevalence of food insecurity in the Bahamas in 2021 (margins of error are in parentheses)

	N	Over the last 12	months	Over the last 4 weeks	
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 100	17.2 (±3.9)	3.4 (±1.6)	7.1 (±2.6)	2.0 (±1.2)
By region					
Abaco	200	22.1 (±8.8)	6.2 (±4.8)	5.6 (±4.8)	2.7 (±3.5)
Grand Bahama	200	12.5 (±7.0)	1.9 (±2.4)	4.3 (±4.2)	0.8 (±1.6)
New Providence	500	18.3 (±5.2)	3.5 (±2.2)	7.8 (±3.5)	2.2 (±1.7)
Others	200	14.3 (±7.7)	3.8 (±3.8)	6.9 (±5.5)	2.3 (±3.0)

Source: Authors' own elaboration.

Figure 3 Prevalence of moderate or severe food insecurity (12-month) in the Bahamas, by region



Note: Prevalence of severe food insecurity is not shown as all regions belong to the same category (0-10 percent).

Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, United Nations (UN).

Barbados

This was the first time FIES data was collected in Barbados. It was found that 31.1 percent of the national population was affected by moderate or severe food insecurity during 2021, including 7.4 percent who faced severe food insecurity. During the 4 weeks preceding the survey (December 2021), the rates were estimated to be 15.2 percent and 3.4 percent, respectively – roughly half of the annual prevalence rates (Table 6 and Figure 4).

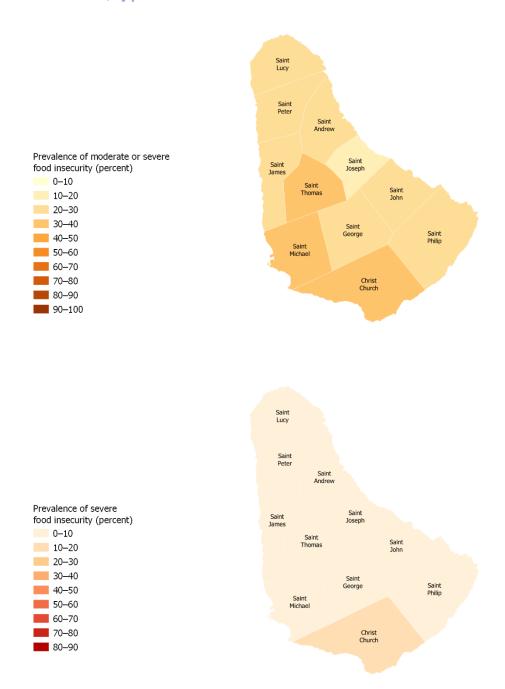
At the subnational level, the most affected parish is Saint Michael, followed by Christ Church. The differences are noteworthy, with the prevalence of annual food insecurity in Saint Michael being about double that of Saint Joseph and Saint James at both levels of severity. Saint Michael also had the highest prevalence of recent food insecurity (21.1 percent for moderate and severe, and 5.2 percent for severe only). Other parishes with somewhat higher levels of food insecurity compared to the others were Saint Thomas, Saint Andrew and Saint John.

Table 6 FIES-based measures of the prevalence of food insecurity in Barbados in 2021 (margins of error are in parentheses)

		Over the last 12	months	Over the last 4	weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	2 200	31.1 (±4.5)	7.4 (±2.3)	15.2 (±3.5)	3.4 (±1.5)
By parish					
Christ Church	200	33 (±10.7)	11.3 (±6.4)	16.0 (±7.6)	2.8 (±2.7)
Saint Andrew	200	28.1 (±11.7)	9.3 (±6.8)	14.4 (±8.9)	4.9 (±4.5)
Saint George	200	27.1 (±10.0)	7.0 (±5.2)	12.5 (±6.9)	2.5 (±2.7)
Saint James	200	20.3 (±9.3)	2.9 (±3.0)	6.8 (±4.8)	1.3 (±1.9)
Saint John	200	29 (±12.3)	5.7 (±4.6)	14.1 (±9.6)	2.8 (±2.7)
Saint Joseph	200	19.7 (±9.6)	4.3 (±4.5)	9.7 (±6.7)	2.3 (±3.3)
Saint Lucy	200	23.2 (±10.1)	$5.4 (\pm 5.4)$	13.5 (±8.3)	3.4 (±4.1)
Saint Michael	200	39.6 (±11.5)	8.6 (±5.9)	21.1 (±9.3)	5.2 (±4.2)
Saint Peter	200	23.6 (±9.8)	4.4 (±4.0)	10.4 (±7.2)	2.5 (±2.7)
Saint Philip	200	25.4 (±9.4)	4.6 (±4.3)	11.9 (±6.9)	2.7 (±3.3)
Saint Thomas	200	30 (±10.6)	6.1 (±4.8)	13.7 (±7.4)	3.5 (±3.8)

Source: Authors' own elaboration.

Figure 4 Prevalence of moderate or severe food insecurity, and severe food insecurity only (12-month) in Barbados, by parish



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on Hijmans, R. 2012. DIVA-GIS [Shapefiles]. In: DIVA-GIS. Cited June 2022. https://www.diva-gis.org/.

The Comoros

The prevalence of severe food insecurity in the national population of the Comoros during 2021 was 27.4 percent, while the combined prevalence of moderate and severe food insecurity reached 79.7 percent. The situation during the 4 weeks preceding the survey appeared to be considerably better, based on a comparison with the annual prevalence, with 6 percent of the population facing severe food insecurity during November 2021, and a combined prevalence of moderate and severe food insecurity of 36 percent (Table 7).

This was the first FIES assessment in the country, thus no other estimates are available for comparison to assess the trends. Despite the limited available data for the Comoros, most up-to-date information indicates that poverty and inequality are still relatively widespread, although living conditions are slowly improving.⁶

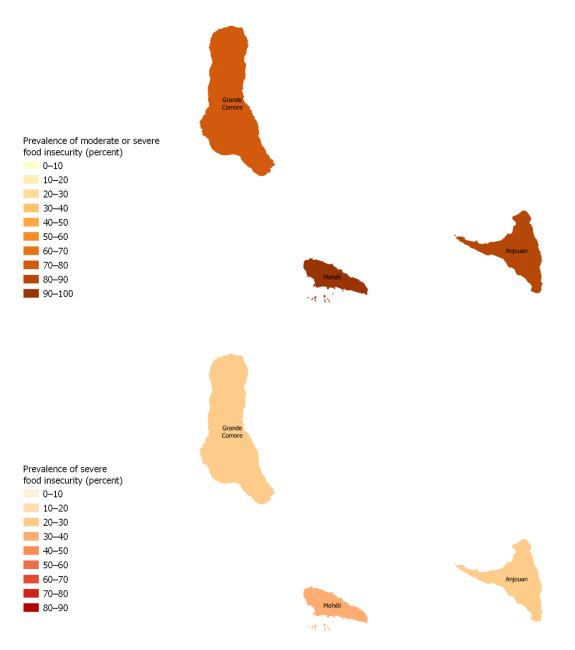
The prevalence of moderate or severe food insecurity was high in all subregions, ranging from 72.5 percent in Anjouan to 93.7 percent in Mohéli. The prevalence of severe food insecurity ranged from about 27 percent in Anjouan and Grande Comore to 33.2 percent in Mohéli (Table 7 and Figure 5).

Table 7 FIES-based measures of the prevalence of food insecurity in the Comoros in 2021 (margins of error are in parentheses)

	N —	Over the last 12 months		Over the last 4 weeks	
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	902	79.7 (±5.0)	27.4 (±5.9)	36.0 (±6.5)	6.3 (±3.0)
By island					
Ānjouan	300	87.6 (±5.8)	26.9 (±9.6)	50.9 (±9.5)	8.6 (±5.8)
Grande Comore	300	72.5 (±8.0)	27.1 (±8.5)	22.6 (±8.6)	4.7 (±3.4)
Mohéli	302	93.7 (±3.3)	33.2 (±10.1)	60.3 (±10.3)	4.7 (±2.3)

Source: Authors' own elaboration.

Figure 5 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in the Comoros, by island



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: *FAO*. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Djibouti

This was the first time FIES data was collected in Djibouti. It was found that 49.2 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 16.4 percent who faced severe food insecurity. During the 4 weeks preceding the survey (November 2021), the proportion of the population experiencing food insecurity was significantly smaller compared to the annual prevalence – 20.6 percent were moderately or severely food insecure, and 6.0 percent were severely food insecure (Table 8).

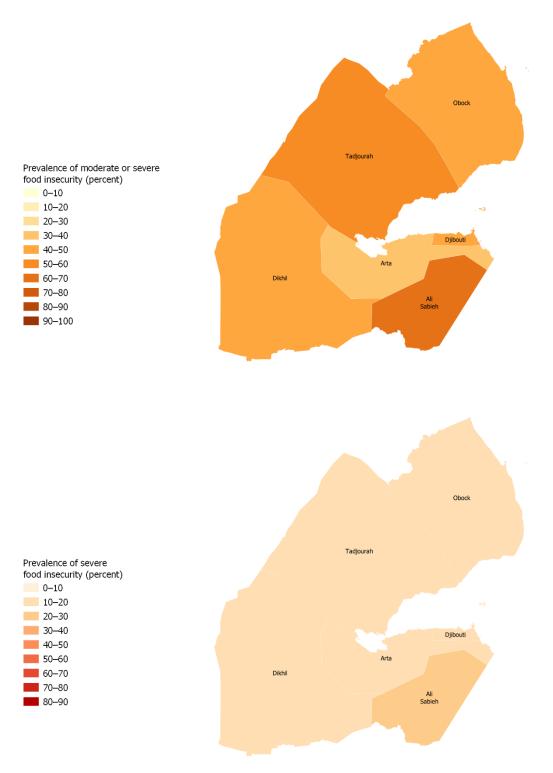
The results at the subnational level reveal notable inequalities among the regions. In 2021, in Ali Sabieh, 62.5 percent of the population was moderately or severely food insecure, including 24 percent facing severe food insecurity, compared to 38.1 and 13.3 percent of the population (respectively), in Arta (Figure 6). Recent food insecurity estimates show a similar pattern.

Table 8 FIES-based measures of the prevalence of food insecurity in Djibouti in 2021 (margins of error are in parentheses)

	N —	Over the last 12 months		Over the last 4 weeks	
		Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 200	49.2 (±6.0)	16.5 (±4.1)	20.6 (±4.7)	6.0 (±2.7)
By region					
Ali Sabieh	200	62.5 (±9.6)	23.9 (±8.2)	38.6 (±9.6)	16.1 (±7.0)
Arta	200	38.1 (±9.8)	13.3 (±6.8)	9.8 (±5.2)	2.1 (±2.4)
Dikhil	200	45.7 (±10.4)	18.6 (±7.3)	17.7 (±6.7)	2.4 (±1.8)
Djibouti	200	48.1 (±10.2)	16.4 (±7.1)	20.2 (±7.7)	6.3 (±4.3)
Obock	200	46.0 (±9.0)	10.9 (±5.9)	15.4 (±5.7)	2.1 (±2.2)
Tadjourah	200	52.7 (±9.4)	11.7 (±5.8)	15.3 (±5.8)	1.2 (±0.9)

Source: Authors' own elaboration.

Figure 6 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Djibouti, by region



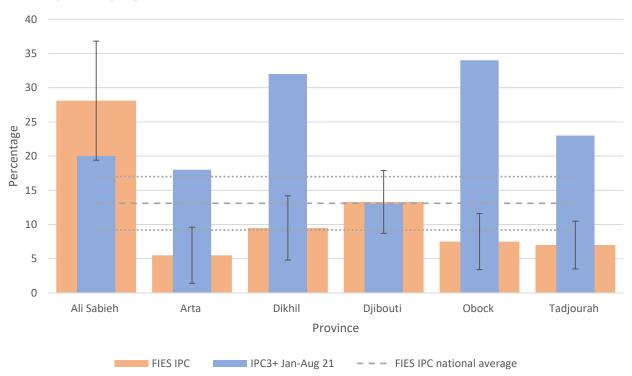
Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

As discussed in Annex 2. Comparing FIES-based estimates of the prevalence of recent food insecurity with IPC-based assessments, to allow for a proper comparison of the FIES-based estimates presented in this report with the results of recent IPC assessments conducted in the country, an additional threshold was used

to compute FIES-based prevalence rates of recent food insecurity that more closely correspond to severity levels equivalent to IPC Phase 3 or more.

Figure 7 presents these comparisons. At the national level, if we consider the uncertainty around the estimates, the FIES-based estimates of the prevalence of population in IPC 3+ and the assessment done by the IPC group are quite aligned, at $13 (\pm 3.9)$ and 17 percent, respectively. At the subnational level, however, there are notable discrepancies. In Ali Sabieh and Djibouti, FIES-based estimates are higher, although always within the margin of error. On the other hand, the IPC estimates for Arta, Dikhil, Obock and Tadjourah are statistically significantly higher than the FIES prevalence rates.

Figure 7 Comparing FIES-based estimates with the result of a recent IPC acute food insecurity analysis in Djibouti, by region



Source: Authors' own elaboration based on FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog and IPC. 2022. IPC analysis portal. In: IPC. Rome. Cited June 2022. https://www.ipcinfo.org/ipc-country-analysis/en/.

Democratic Republic of the Congo (the)

In the Democratic Republic of the Congo, 78.1 percent of the national population was affected by moderate or severe food insecurity at some point during 2021, including 40.5 percent facing severe food insecurity. The percentages were smaller during the 4 weeks preceding the survey (December 2021): 60.7 and 20.4 percent, respectively. At severe levels, recent food insecurity was half the annual prevalence (Table 9).

Moderate or severe food insecurity in the Democratic Republic of the Congo appears to have increased significantly in 2021 compared to 2020,⁷ from 69.2 percent (±2.3) to 78.1 percent (±2.1), while severe food insecurity remained virtually stable, at around 40 percent. The increasing trend is possibly driven by a combination of conflict/insecurity, economic decline, high food prices, weather extremes and the COVID-19 pandemic.⁸

Of the 26 provinces, 18 have prevalence of moderate or severe food insecurity above 80 percent. **Table 9** and **Figure 8** show that some provinces are in a better situation than others. More than 95 percent of the population of Équateur, Kasaï and Sud-Ubangi faced moderate or severe food insecurity at some time during 2021, compared with 32 percent in Haut-Lomami. The situation in Lualaba and Kinshasa is also somewhat better compared to the other provinces. Kasaï appears to be one of the most affected provinces, with the highest prevalence of severe food insecurity – notably higher during the 4 weeks preceding the survey compared with the other provinces.

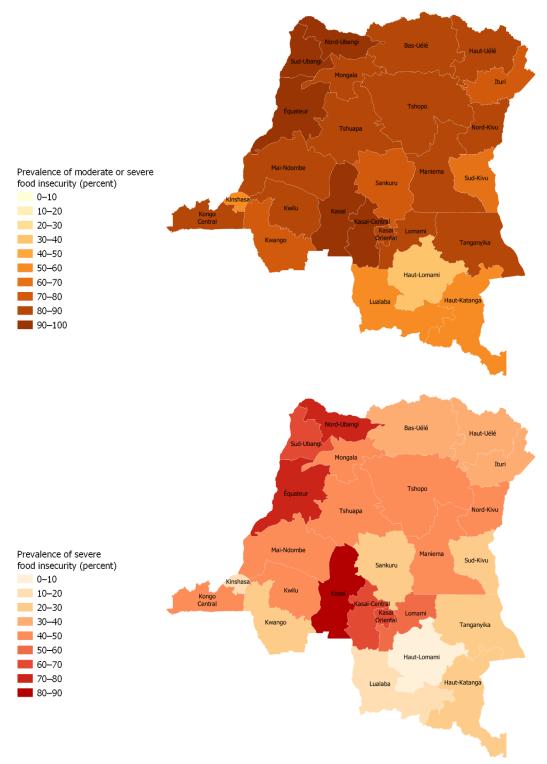
There appears to be no difference in food insecurity between rural and urban areas as the differences are within margins of error.

Table 9 FIES-based measures of the prevalence of food insecurity in the Democratic Republic of the Congo in 2021 (margins of error are in parentheses)

	N —	Over the last 12 months		Over the last 4 weeks	
		Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	5 489	78.1 (±2.1)	40.5 (±2.3)	60.7 (±2.5)	20.4 (±1.9)
By province					
Bas-Uélé	202	85.4 (±6.5)	39.4 (±9.2)	72.0 (±8.6)	18.9 (±6.7)
Équateur	228	97.7 (±2.2)	76 (±7.6)	90.1 (±6.8)	36.2 (±8.5)
Haut-Katanga	214	56.7 (±11.3)	20.6 (±9.7)	34.2 (±11.0)	8.4 (±6.6)
Haut-Lomami	204	31.9 (±11.3)	8 (±6.9)	9.4 (±6.0)	1.7 (±2.5)
Haut-Uélé	247	84.1 (±7.7)	39.6 (±9.1)	63.6 (±9.2)	14.3 (±6.5)
lturi	206	75.1 (±10.2)	35.8 (±10.5)	60.0 (±11.6)	20.2 (±8.7)
Kasaï	202	98.6 (±1.9)	82.4 (±6.0)	95.5 (±4.5)	76.3 (±8.0)
Kasaï-Central	204	95.0 (±4.0)	64.7 (±9.7)	85.6 (±7.8)	42.1 (±11.1)
Kasaï Oriental	215	90.0 (±7.8)	63.8 (±11.5)	73.5 (±11.9)	27.2 (±10.8)
Kinshasa	211	54.4 (±10.2)	18.5 (±7.9)	31.6 (±9.3)	5.2 (±3.7)
Kongo Central	202	88.9 (±5.8)	41.7 (±9.9)	67.7 (±11.4)	16.4 (±9.7)
Kwango	203	73.3 (±9.4)	28.1 (±9.9)	44.0 (±11.0)	9.6 (±5.9)
Kwilu	204	87.2 (±7.2)	44.8 (±11.1)	83.0 (±7.1)	21.8 (±8.4)
Lomami	203	85.8 (±8.7)	56.7 (±13.7)	72.0 (±12.8)	26.5 (±13.5)
Lualaba	225	53.2 (±13.8)	15.2 (±9.6)	23.7 (±14.4)	5.4 (±9.6)
Mai-Ndombe	211	84.3 (±6.5)	49.5 (±11.3)	76.5 (±8.5)	46.0 (±11.6)
Maniema	229	88.1 (±6.6)	45 (±11.2)	66.9 (±9.1)	15.1 (±7.9)
Mongala	202	89.3 (±5.6)	46.2 (±9.8)	74.0 (±9.3)	25.6 (±9.6)
Nord-Kivu	203	81.3 (±8.9)	41.9 (±10.6)	60.2 (±11.8)	30.9 (±10.6)
Nord-Ubangi	206	96.5 (±3.5)	73.5 (±8.0)	93.8 (±4.4)	22.0 (±5.1)
Sankuru	216	75.6 (±9.1)	24 (±10.5)	44.9 (±12.3)	9.6 (±7.2)
Sud-Kivu	200	63.9 (±10.8)	20.6 (±8.9)	43.9 (±11.0)	10.8 (±7.6)
Sud-Ubangi	224	93.0 (±5.1)	62.6 (±9.7)	73.1 (±8.0)	15.3 (±6.5)
Tanganyika	203	83.9 (±5.8)	29.5 (±11.3)	65.6 (±8.1)	3.7 (±2.1)
Tshopo	223	86.8 (±7.5)	45.9 (±10.5)	62.9 (±11.7)	18.6 (±9.2)
Tshuapa	202	88.8 (±6.1)	43.4 (±10.5)	84.5 (±7.1)	27.2 (±9.5)
By urbanicity					
Rural	3 026	79 (±2.7)	40.8 (±3.1)	61.2 (±3.3)	20.3 (±2.7)
Urban	2 463	77.5 (±3.0)	40.3 (±3.3)	60.4 (±3.6)	20.4 (±2.8)

Source: Authors' own elaboration.

Figure 8 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month), in the Democratic Republic of the Congo, by province

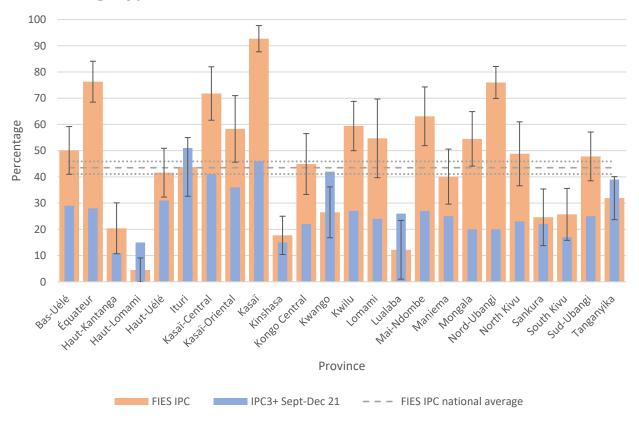


Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Figure 9 shows the percentage of the population at IPC 3+ according to the FIES analysis and according to the results of a recent IPC analysis. At the national level, the IPC reports a prevalence of population in Phase 3 or more of 26 percent, while the FIES-based estimate of the proportion of population in IPC 3+ is 43.5 percent. At the subnational level, there are some important differences. In some cases, the differences in levels are within the margin of error, thus not statistically different. This is the case for Haut-Lomami, Ituri,

Kinshasa, Sankura, Sud-Kivu and Tanganyika. In many areas (Bas-Uélé, Equateur, Haut-Uélé, Kasaï-Central, Kasaï-Oriental, Kasaï-Oriental, Kasaï-Oriental, Kwilu, Lomami, Mai-Ndombe, Maniema, Mongala, Nord-Ubangi, Nord-Kivu and Sud-Ubangi), the prevalence estimated with the FIES is higher with respect to the IPC assessment, while in fewer cases it is lower (Haut-Lomami, Kwango and Lualaba).

Figure 9 Comparing FIES-based estimates with the result of a recent IPC analysis in the Democratic Republic of the Congo, by province



Source: Authors' own elaboration based on FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog and IPC. 2022. IPC analysis portal. In: IPC. Rome. Cited June 2022. https://www.ipcinfo.org/ipc-country-analysis/en/.

Dominica

This was the first time FIES data was collected in Dominica. It was found that 34.4 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 5.8 percent who faced severe food insecurity. During the 4 weeks preceding the survey (December 2021), the rates were estimated to be 19.7 and 2.2 percent, respectively (Table 10). The prevalence of recent food insecurity was about 57 percent of the annual prevalence for moderate or severe food insecurity and 37 percent for severe food insecurity.

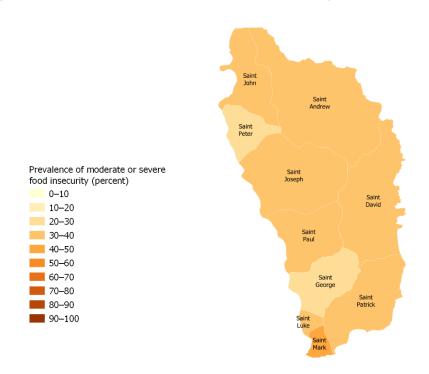
Figure 10 shows that the differences at the subnational level are relatively small, ranging from about 27.8 percent moderate or severe food insecurity in Saint Peter to 43.3 percent in Saint Mark. Saint Mark, Saint Patrick and Saint Andrew are estimated to be among the areas most affected by food insecurity.

Table 10 FIES-based measures of the prevalence of food insecurity in Dominica in 2021

	N —	Over the last 12 months		Over the last 4 weeks	
		Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	2 000	34.4 (±3.9)	5.8 (±1.6)	19.7 (±3.1)	2.2 (±1.0)
By parish					
Saint Andrew	200	38.2 (±10.1)	6.1 (±4.3)	23.9 (±8.6)	3.0 (±2.9)
Saint David	200	37.2 (±10.1)	5.7 (±4.3)	25.0 (±8.9)	2.1 (±2.1)
Saint George	200	29.6 (±9.5)	5 (±4.1)	13.8 (±6.8)	1.7 (±2.5)
Saint John	200	36.6 (±10.1)	7.8 (±5.1)	21.0 (±8.1)	3.1 (±3.2)
Saint Joseph	200	33.2 (±9.7)	4.8 (±4.0)	20.3 (±7.7)	2.1 (±2.7)
Saint Luke	200	36 (±10.1)	6 (±4.4)	20.5 (±8.2)	3.0 (±3.1)
Saint Mark	200	43.3 (±10.3)	7.3 (±5.0)	25.1 (±8.9)	5.0 (±4.2)
Saint Patrick	200	39.1 (±10.3)	7.6 (±4.9)	25.5 (±9.1)	3.1 (±2.7)
Saint Paul	200	34.4 (±10.0)	5.2 (±4.0)	18.8 (±8.0)	$0.9(\pm 0.9)$
Saint Peter	200	27.8 (±9.6)	4.4 (±3.8)	15.9 (±7.7)	2.2 (±2.6)

Source: Authors' own elaboration.

Figure 10 Prevalence of moderate or severe food insecurity (12-month) in Dominica, by parish



Note: Prevalence of severe food insecurity is not shown as all regions belong to the same category (0-10 percent).

Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Eswatini

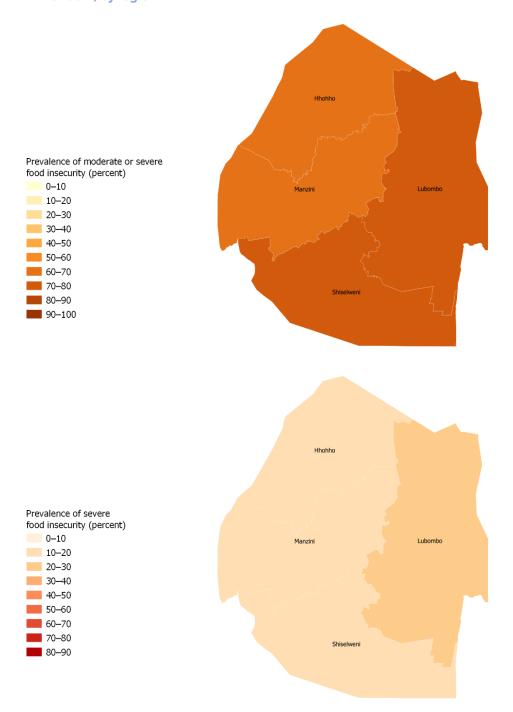
In Eswatini, 67 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 18.3 percent who faced severe food insecurity. During the 4 weeks preceding the survey (December 2021), the rates were estimated to be 44.4 and 7.5 percent, respectively. The prevalence of recent food insecurity was about 66 percent of the annual prevalence for moderate or severe food insecurity and 41 percent for severe food insecurity (**Table 11**). Approximately two-thirds of those who faced moderate or severe food insecurity at some time during the year, and 40 percent of those facing severe food insecurity, were affected in the month preceding the survey.

Figure 11 shows small differences among the regions. The most affected region is Lubombo, but differences are within margins of error.

Table 11 FIES-based measures of the prevalence of food insecurity in Eswatini in 2021 (margins of error are in parentheses)

	N —	Over the last 12	months	Over the last 4	weeks
	N	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 000	67.0 (±4.9)	18.3 (±3.5)	44.4 (±4.9)	7.5 (±2.3)
By region					
Hhohho	250	61.7 (±10.3)	16 (±6.7)	43.5 (±9.8)	6.5 (±3.8)
Lubombo	250	70.3 (±9.7)	20.5 (±7.5)	47.3 (±10.1)	8.2 (±5.1)
Manzini	250	67.8 (±8.5)	18.5 (±6.6)	44.9 (±8.7)	9.2 (±4.9)
Shiselweni	250	71.1 (±9.0)	19.8 (±7.2)	42.0 (±9.4)	5.3 (±3.8)

Figure 11 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Eswatini, by region



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Figure 12 shows the percentage of the population at IPC 3+ according to the FIES analysis and according to the results of a recent IPC analysis. At the national level, the FIES-based estimates of the proportion of population in IPC 3 or worse (26 percent ±4.1) is very close to estimates from the latest round of IPC Acute Food Insecurity Analysis (29 percent). At the subnational level, the provinces of Hhohho and Manzini are perfectly aligned, while Lubombo and Shiselweni show FIES-based estimates below the level registered by the IPC assessment.

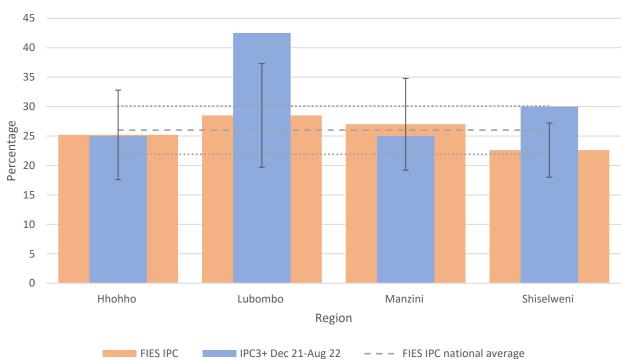


Figure 12 Comparing FIES-based estimates with the result of a recent IPC analysis in Eswatini, by region

Source: Authors' own elaboration based on FAO. 2022. Food and Agriculture Microdata Catalogue. In: *FAO*. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog and IPC. 2022. IPC analysis portal. In: *IPC*. Rome. Cited June 2022. https://www.ipcinfo.org/ipc-country-analysis/en/.

Guinea-Bissau

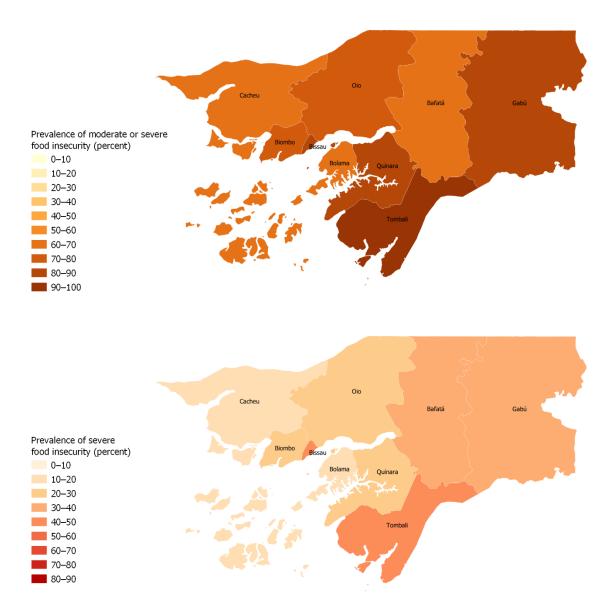
In Guinea-Bissau, more than three-fourths of the national population (77.6 percent) was affected by moderate or severe food insecurity at some time during 2021, including 33.3 percent who faced severe food insecurity. During the 4 weeks preceding the survey (November 2021), the rates were 54.9 and 18.6 percent, respectively. This means that approximately 71 percent of those who experienced moderate or severe food insecurity at some time during the year, and 56 percent of those facing severe food insecurity, faced serious difficulties in accessing food in November 2021 (Table 12).

Figure 13 shows that Tombali is the most affected province at the moderate or severe level (90.7 percent), while Bissau is the most affected province at the severe level (46.6 percent). The region with the lowest prevalence at both levels of severity is Bolama (66.2 and 10.7 percent, respectively).

Table 12 FIES-based measures of the prevalence of food insecurity in Guinea-Bissau in 2021 (margins of error are in parentheses)

	N —	Over the last 1	2 months	Over the last	4 weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 800	77.6 (±3.1)	33.3 (±3.7)	54.9 (±3.7)	18.6 (±2.8)
By region and autonomous sector	r				
Bafatá	200	67.6 (±9.9)	34.4 (±9.7)	46.5 (±10.0)	21.2 (±8.2)
Biombo	200	71.6 (±8.7)	22.7 (±8.0)	47.8 (±9.3)	12.3 (±5.4)
Bissau	200	83.5 (±7.6)	46.6 (±9.7)	61.2 (±10.0)	27.0 (±8.0)
Bolama	200	66.2 (±8.9)	10.7 (±5.4)	39.9 (±8.2)	4.5 (±2.8)
Cacheu	200	70.0 (±8.3)	12.4 (±6.4)	49.8 (±8.4)	6.4 (±3.1)
Gabú	200	83.0 (±7.1)	39.7 (±9.3)	60.8 (±9.0)	22.6 (±7.5)
Oio	200	75.2 (±8.5)	28.5 (±9.0)	47.1 (±9.0)	12.0 (±5.5)
Quinara	200	82.8 (±7.2)	24.4 (±7.4)	67.6 (±9.7)	22.4 (±7.0)
Tombali	200	90.7 (±5.0)	40.4 (±8.9)	68.5 (±8.0)	19.1 (±5.9)

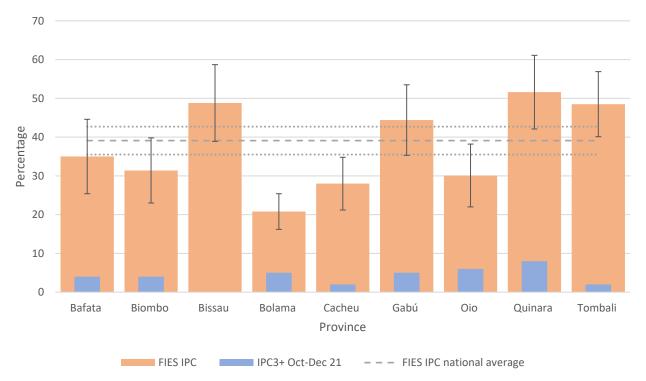
Figure 13 Prevalence of moderate or severe food insecurity, and severe food insecurity only (12-month) in Guinea-Bissau, by region and autonomous sector



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Figure 14 shows the percentage of the population at IPC 3+ according to the FIES analysis and according to the results of a recent IPC analysis. At the national level, the FIES-based estimates of the proportion of population in IPC 3 or worse is larger compared to the latest round of IPC Acute Food Insecurity Analysis. At the subnational level, the region of Quinara has the highest levels of food insecurity for both assessments.

Figure 14 Comparing FIES-based estimates with the result of a recent CH analysis in Guinea-Bissau, by region and autonomous sector



Source: Authors' own elaboration based on FAO. 2022. Food and Agriculture Microdata Catalogue. In: *FAO*. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog and IPC. 2022. IPC analysis portal. In: *IPC*. Rome. Cited June 2022. https://www.ipcinfo.org/ipc-country-analysis/en/.

Haiti

In Haiti, 82 percent of the national population was affected by moderate or severe food insecurity over 2021, including 38.1 percent who faced severe food insecurity. During the 4 weeks preceding the survey (November 2021), 71.5 percent of the population was moderately or severely food insecure and 22.5 percent was severely food insecure (Table 13).

Severe food insecurity in Haiti appears to have decreased, iii from 48.8 percent (± 8.5) in 2020 to 38.1 percent (± 6.5) in 2021, while moderate or severe food insecurity remained virtually unchanged at about 82 percent.

There is some evidence of an improved situation in Haiti between 2020 and 2021 (especially in the first part of 2021), including a decrease in food inflation between 2020 and October 2021, which then increased towards the end of 2021. This may explain the decrease in annual severe food insecurity. Furthermore, most of the food insecurity was estimated to be concentrated towards the end of 2021, possibly as a consequence of the earthquake, the tropical storm and the presidential assassination, all of which occurred between July and August 2021 and which had a major impact on people's lives.

Figure 15 shows little variation across departments in terms of food insecurity levels. The department least affected by annual food insecurity is Ouest (75.9 percent), while all other departments have prevalence between 80 and 90 percent. In 2021, severe food insecurity ranged from 32.1 percent in the Ouest region to 47.4 percent in Artibonite. Recent food insecurity is more predominant in the Nord-Ouest and Artibonite.

Table 13 FIES-based measures of the prevalence of food insecurity in Haiti in 2021 (margins of error are in parentheses)

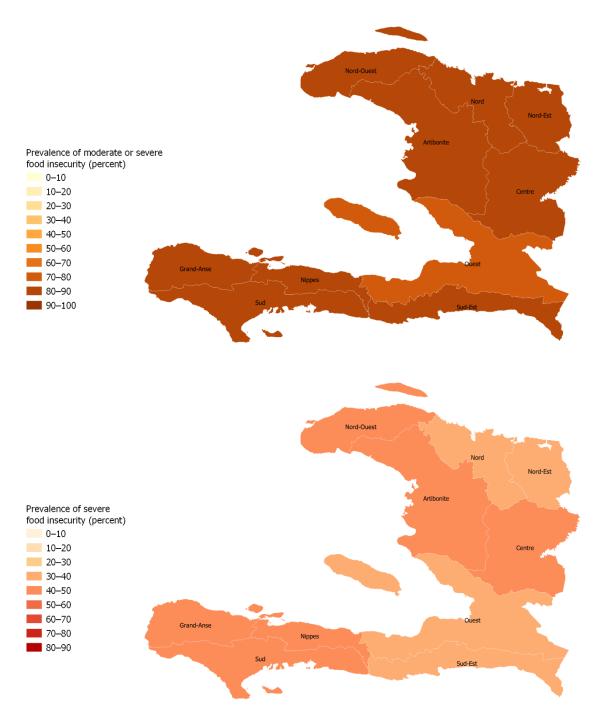
	N.	Over the last 12	months	Over the last 4	weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	2 000	82.0 (±8.5)	38.1 (±6.5)	71.5 (±9.7)	22.5 (±5.0)
By department					
Artibonite	200	87.9 (±7.1)	47.4 (±11.2)	79.6 (±9.3)	31.5 (±11.9)
Centre	200	88.5 (±6.3)	42.6 (±10.5)	78.6 (±8.8)	25.5 (±8.8)
Grand'Anse	200	88.0 (±7.5)	42.1 (±10.7)	79.8 (±9.0)	26.7 (±9.5)
Nippes	200	87.3 (±7.0)	43.0 (±11.9)	75.9 (±12.6)	26.1 (±12.1)
Nord	200	84.0 (±8.2)	36.7 (±10.3)	72.3 (±10.6)	18.1 (±7.9)
Nord-Est	200	85.3 (±8.0)	35.6 (±10.0)	76.5 (±9.6)	20.2 (±8.4)
Nord-Ouest	200	88.2 (±7.4)	45.7 (±10.5)	80.0 (±9.5)	29.8 (±10.2)
Ouest	200	75.9 (±18.8)	32.1 (±13.3)	64.3 (±19.8)	18.1 (±9.3)
Sud	200	83.9 (±8.4)	41.2 (±10.7)	73.0 (±10.9)	24.0 (±9.2)
Sud-Est	200	83.9 (±7.9)	38.3 (±11.4)	76.3 (±9.5)	22.4 (±9.5)

Source: Authors' own elaboration.

_

iii Even though the variability of the estimates is quite high and the decrease is not statistically significant, it is quite large in magnitude.

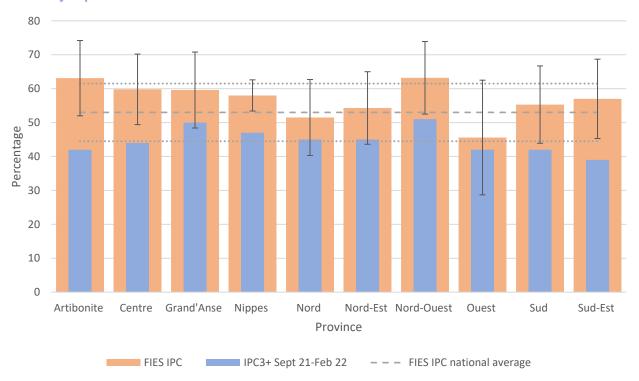
Figure 15 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Haiti, by department



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

The overall worrisome food insecurity situation in Haiti is confirmed by a comparison of FIES-based measures of food insecurity at IPC level 3 or above with the IPC analysis, as shown in **Figure 16**. At the national level, considering the uncertainty around the values, the FIES estimates are slightly higher with respect to the IPC assessment conducted in the closest period. This is also true at the subnational level, although the estimates for Grand'Anse, Nord, Nord-Est and Ouest are within the margins of error.

Figure 16 Comparing FIES-based estimates with the result of a recent IPC acute food insecurity analysis in Haiti, by department



Source: Authors' own elaboration based on FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog and IPC. 2022. IPC analysis portal. In: IPC. Rome. Cited June 2022. https://www.ipcinfo.org/ipc-country-analysis/en/.

Lao People's Democratic Republic (the)

In the Lao People's Democratic Republic, 36.5 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 7.1 percent who faced severe food insecurity. During the 4 weeks preceding the survey (November 2021), the prevalence of moderate or severe food insecurity was 18.4 and of severe food insecurity 3.9 percent - or approximately half the annual rates (Table 14).

It appears that moderate or severe food insecurity in the Lao People's Democratic Republic has increased in one year, from 29.4 percent (\pm 3.6) in 2020 to 36.5 percent (\pm 2.8) in 2021, while severe food insecurity remained relatively stable, at 8.9 percent (\pm 2.0) in 2020 compared with 7.1 percent (\pm 1.4) in 2021.

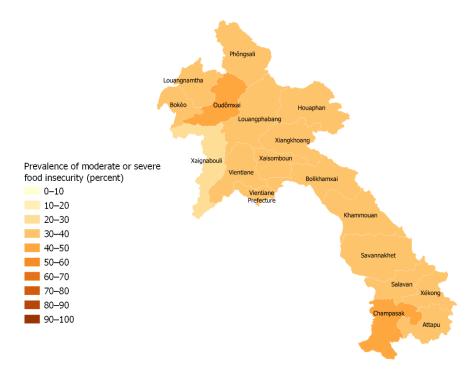
Gross domestic product growth was 3.6 percent in 2021 compared with 0.5 percent in 2020, driven by agriculture and industry sector; moreover, electricity, mining and manufacturing exports have rebounded from the trade slowdown last year. However, employment declined during the same period, which may explain why access to food seems to be worsening.^{11, 12}

Figure 17 shows relatively little variation in moderate or severe food insecurity (both annual and recent), although there are some indications that severe food insecurity was worse in some regions than others. For example, in both annual and recent results, the prevalence of food insecurity in Bolikhamxai was twice that of Xaignabouli, the region with the lowest levels of food insecurity.

Table 14 FIES-based measures of the prevalence of food insecurity in the Lao People's Democratic Republic in 2021 (margins of error are in parentheses)

	N.I	Over the last 12	months	Over the last 4 v	weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	3 600	36.5 (±2.8)	7.1 (±1.4)	18.4 (±2.1)	3.9 (±1.0)
By region					
Attapu	200	33.8 (±9.5)	6.0 (±4.6)	15.5 (±6.6)	2.8 (±3.0)
Bokèo	200	34.8 (±10.0)	6.4 (±4.9)	16.3 (±7.5)	4.1 (±3.8)
Bolikhamxai	200	37.2 (±10.5)	10 (±6.8)	22.0 (±9.0)	5.3 (±4.3)
Champasak	200	41.0 (±10.9)	7.0 (±5.1)	18.9 (±7.4)	3.7 (±3.9)
Houaphan	200	34.8 (±10.3)	7.5 (±5.8)	19.4 (±7.8)	4.1 (±4.3)
Khammouan	200	37.6 (±9.8)	8.1 (±5.6)	17.8 (±7.3)	4.7 (±4.2)
Louangphabang	200	38.2 (±10.1)	6.5 (±4.6)	19.1 (±7.2)	3.5 (±2.9)
Louangnamtha	200	37.1 (±10.0)	7.3 (±5.1)	20.3 (±7.5)	4.5 (±3.9)
Oudômxai	200	42.5 (±10.8)	9.4 (±6.0)	23.4 (±9.1)	5.8 (±4.5)
Phôngsali	200	36.8 (±10.2)	7.4 (±5.8)	19.8 (±8.7)	5.4 (±4.7)
Salavan	200	32.4 (±9.1)	4.7 (±4.1)	15.6 (±6.3)	3.0 (±2.9)
Savannakhet	200	38.2 (±9.8)	7.6 (±5.1)	19.5 (±7.3)	3.7 (±3.0)
Vientiane	200	34.1 (±9.9)	5.8 (±4.8)	15.4 (±6.9)	3.2 (±3.2)
Vientiane Prefecture	200	34.3 (±10.1)	7.2 (±5.1)	18.8 (±7.5)	4.2 (±3.1)
Xaignabouli	200	29.6 (±8.9)	5.0 (±4.2)	12.8 (±5.8)	2.5 (±2.7)
Xaisomboun	200	32.8 (±9.6)	5.5 (±4.1)	13.8 (±6.2)	2.6 (±2.6)
Xékong	200	39.7 (±10.1)	7.9 (±5.0)	21.3 (±8.2)	6.0 (±4.1)
Xiangkhoang	200	37.1 (±10.3)	8.4 (±5.9)	20.2 (±8.3)	4.3 (±3.7)

Figure 17 Prevalence of moderate or severe food insecurity (12-month) in the Lao People's Democratic Republic, by province and prefecture (Vientiane)



Note: Prevalence of severe food insecurity is not shown as all regions belong to the same category (0-10 percent).

Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Madagascar

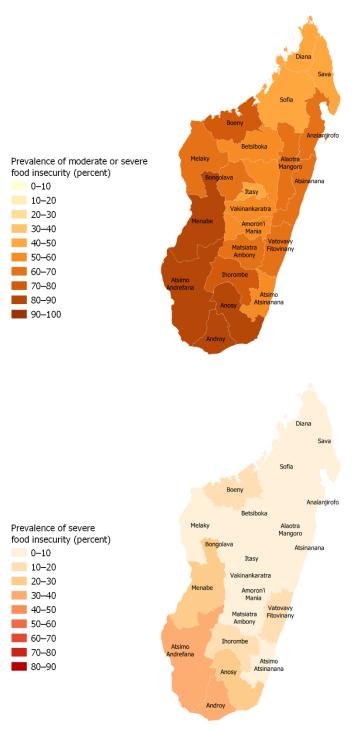
In Madagascar, 62.6 percent of the national population was affected by moderate or severe food insecurity during 2021, including 10.7 percent who faced severe food insecurity. A smaller proportion faced food insecurity during the 4 weeks preceding the survey (November 2021) – 37.0 and 1.5 percent, respectively – suggesting that food insecurity was a more serious problem during other times of the year (Table 15).

The results at the subnational level indicate that the national estimates mask inequalities among the regions (Figure 18). The annual prevalence of moderate or severe food insecurity in Sava and Sofia (about 41 percent) was less than half the prevalence in Androy, Anosy, Atsimo Andrefana and Menabe. A notably large proportion of the populations of Androy, Anosy and Atsimo Andrefana were affected by moderate or severe food insecurity in the 4 weeks preceding the survey.

Table 15 FIES-based measures of the prevalence of food insecurity in Madagascar in 2021 (margins of error are in parentheses)

	N —	Over the last 12	months	Over the last 4	weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	4 400	62.6 (±2.4)	10.7 (±1.4)	37.0 (±2.3)	1.5 (±0.3)
By region					
Alaotra Mangoro	200	61.7 (±9.5)	4.9 (±3.5)	28.1 (±8.3)	$0.1(\pm 0.2)$
Amoron'i Mania	200	58.9 (±9.1)	4.6 (±3.8)	33.2 (±8.3)	0.7 (±0.8)
Analamanga	200	56.0 (±10.0)	9.1 (±5.4)	23.4 (±8.2)	$0.8(\pm 0.8)$
Analanjirofo	200	62.7 (±9.0)	2.5 (±2.7)	37.6 (±8.2)	0.1 (±0.1)
Androy	200	89.7 (±6.0)	37.0 (±8.3)	79.0 (±8.0)	7.2 (±2.6)
Anosy	200	81.3 (±8.0)	26.6 (±7.8)	71.0 (±8.8)	5.4 (±2.2)
Atsimo Andrefana	200	89.4 (±6.2)	37.7 (±8.3)	76.9 (±8.4)	7.5 (±2.6)
Atsimo Atsinanana	200	58.8 (±9.8)	10.0 (±5.4)	35.3 (±9.5)	1.0 (±0.9)
Atsinanana	200	63.8 (±9.2)	3.5 (±3.1)	35.9 (±8.5)	$0.3(\pm0.4)$
Betsiboka	200	50.6 (±10.0)	3.5 (±3.2)	17.4 (±7.2)	$0.4(\pm 0.6)$
Boeny	200	75.6 (±8.4)	11.6 (±5.5)	40.0 (±9.6)	1.1 (±0.9)
Bongolava	200	63.5 (±9.3)	7.3 (±4.7)	34.6 (±8.7)	0.7 (±0.7)
Diana	200	45.5 (±9.7)	6.2 (±4.6)	23.6 (±8.1)	$0.8(\pm 0.8)$
Matsiatra Ambony	200	67.7 (±9.2)	8.2 (±4.8)	43.8 (±9.2)	$0.8(\pm 0.7)$
Ihorombe	200	78.6 (±7.7)	17.9 (±7.0)	61.2 (±9.1)	3.2 (±1.7)
Itasy	200	48.6 (±9.8)	4.7 (±4.0)	23.6 (±7.6)	0.5 (±0.7)
Melaky	200	66.8 (±9.0)	5.9 (±4.0)	33.1 (±8.8)	$0.4(\pm 0.5)$
Menabe	200	81.0 (±7.6)	21.5 (±7.5)	59.0 (±9.5)	3.6 (±1.8)
Sava	200	41.1 (±9.0)	3.3 (±3.4)	13.8 (±6.1)	$0.4(\pm 0.6)$
Sofia	200	41.9 (±9.8)	2 (±2.3)	16.3 (±6.9)	0.2 (±0.4)
Vakinankaratra	200	57.9 (±9.7)	3.2 (±3.1)	29.3 (±8.3)	0.2 (±0.4)
Vatovavy Fitovinany	200	66.9 (±9.4)	14.5 (±6.5)	45.8 (±9.7)	1.9 (±1.3)

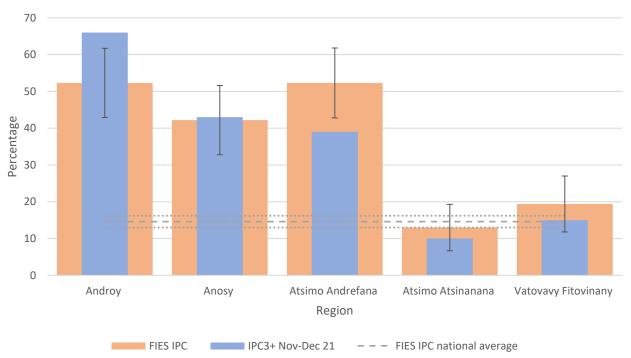
Figure 18 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Madagascar, by region



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

The results of the FIES-based assessment of food insecurity in Madagascar at IPC Phase 3 or worse are contrasted, in **Figure 19**, with those of a recent update of the IPC analysis conducted in November-December 2021 for the available areas. It is quite evident that, taking into account the margin of error, the results are very aligned. The FIES estimates for Anosy, Atsimo Atsinanana and Vatovavy Fitovinany are exactly in the same range as the IPC assessment, slightly higher for Atsimo Andrefana, and slightly lower for Androy.

Figure 19 Comparing FIES-based estimates with the result of a recent IPC acute food insecurity analysis in Madagascar, by region



Source: Authors' own elaboration based on FAO. 2022. Food and Agriculture Microdata Catalogue. In: *FAO*. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog and IPC. 2022. IPC analysis portal. In: *IPC*. Rome. Cited June 2022. https://www.ipcinfo.org/ipc-country-analysis/en/.

Maldives

This was the first time FIES data was collected in Maldives. It was found that 13.4 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 2.2 percent who faced severe food insecurity. During the 4 weeks preceding the survey (November 2021), the rates were considerably lower – 2.5 and 1.4 percent, respectively – indicating that food access was a larger problem earlier in the year (Table 16).

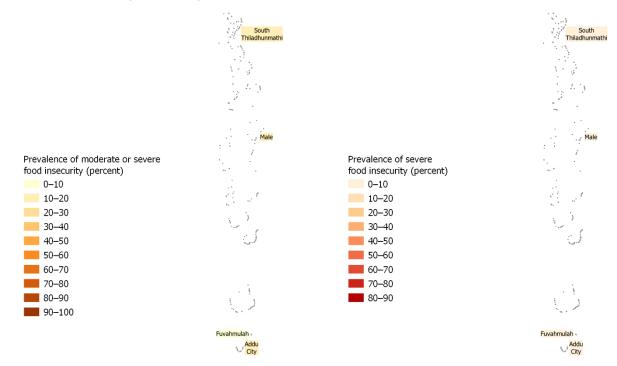
Some differences were observed at the subnational level (**Figure 20**), with the annual prevalence of moderate or severe food insecurity ranging from 7.9 percent in Fuvammulah to 16.8 percent in South Thiladhunmathi. Addu City also had comparatively high levels of food insecurity, including the highest level of severe food insecurity in the country (annual as well as recent). The proportion of those affected by moderate or severe food insecurity at some time during the year who reported that this occurred in the 4 weeks preceding the survey (November-December 2021) was relatively small in most of the atolls (**Table 16**), suggesting that the worst food access problems occurred at some time earlier in the year.

Table 16 FIES-based measures of the prevalence of food insecurity in Maldives in 2021 (margins of error are in parentheses)

	N —	Over the last 12	2 months	Over the last 4	weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 650	13.4 (±2.6)	2.2 (±1.1)	2.5 (±1.2)	1.4 (±1.0)
By atoll or city					
Addu City	200	15.7 (±7.6)	5.0 (±4.7)	2.1 (±3.1)	1.5 (±2.8)
Fuvammulah	200	7.9 (±4.8)	0.5 (±1.5)	0.1 (±0.2)	$0.0(\pm 0.0)$
Male	500	11.9 (±4.1)	3.2 (±2.3)	4.3 (±2.6)	3.0 (±2.3)
South Thiladhunmathi	200	16.8 (±7.1)	$0.4(\pm 0.8)$	1.3 (±1.0)	0.1 (±0.1)
Other	550	14.3 (±4.2)	1.2 (±1.2)	1.2 (±0.8)	0.2 (±0.2)

Source: Authors' own elaboration.

Figure 20 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Maldives, by atoll or city



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Niger (the)

In the Niger, 73.9 percent of the national population^{iv} was affected by moderate or severe food insecurity at some time during 2021, including 31.7 percent who faced severe food insecurity. During the 4 weeks preceding the survey (November 2021), the rates were 54.9 and 14.6 percent, respectively (Table 17).

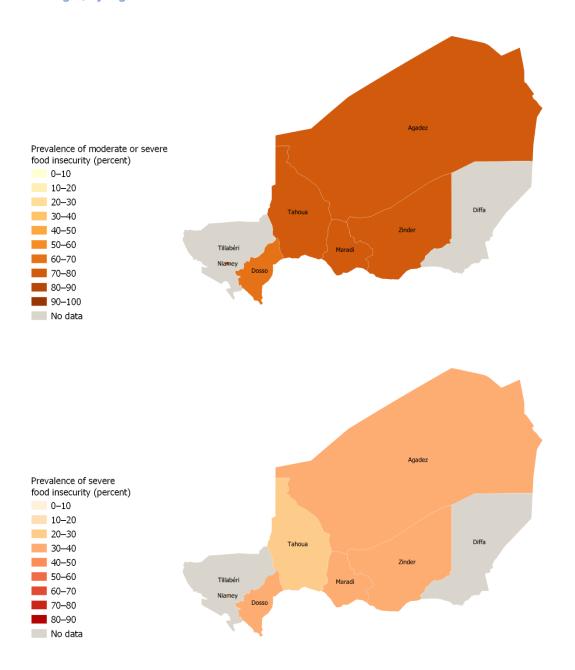
Table 17 presents prevalence rates of food insecurity by region and urbanicity in 2021. There were some differences in annual moderate or severe food insecurity among regions (**Figure 21**), ranging from 69.0 percent in Dosso to 77.3 percent in Zinder. In the 4 weeks preceding the survey, the situation was more similar across regions. With the exception of Dosso (35.0 percent), the prevalence of recent moderate or severe food insecurity ranged from 54.0 percent in Niamey to 61.5 percent in Maradi. Annual food insecurity was more prevalent in rural areas compared to urban areas, although this difference is not observed in the 4 weeks preceding the survey.

Table 17 FIES-based measures of the prevalence of food insecurity in the Niger in 2021 (margins of error are in parentheses)

	N.	Over the last 12	months	Over the last 4	weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 652	73.9 (±4.9)	31.7 (±4.4)	54.9 (±5.1)	14.6 (±3.2)
By region					
Agadez	423	71.5 (±13.9)	30.3 (±12.2)	57.1 (±13.7)	16.1 (±9.5)
of which Arlit	214	64.8 (±15.4)	29.1 (±11.9)	57.5 (±14.5)	16.3 (±9.0)
Diffa	n.a.	n.a.	n.a.	n.a.	n.a.
Dosso	203	69.0 (±16)	30.5 (±13.3)	35.0 (±14.6)	8.8 (±9.3)
Maradi	206	76.3 (±14.4)	31.2 (±11.7)	61.5 (±14.9)	16.5 (±8.0)
Niamey	201	72.1 (±10.7)	28.2 (±9.9)	54.0 (±11.4)	14.1 (±6.7)
Tahoua	409	70.2 (±14.9)	28.3 (±13.0)	57.4 (±15.7)	16.3 (±11.6)
of which Birni N'Konni	207	82.9 (±12.5)	42.0 (±12.2)	58.0 (±14.0)	14.3 (±7.9)
Tillabéri	n.a.	n.a.	n.a.	n.a.	n.a.
Zinder	211	77.3 (±13.4)	32.1 (±13.8)	59.7 (±14.9)	13.0 (±8.5)
By urbanicity					
Rural	1 323	77.6 (±4.8)	33.6 (±4.5)	56.7 (±5.1)	15.2 (±2.7)
Urban	329	69.9 (±8.9)	29.6 (±7.9)	53.1 (±9.1)	14.0 (±5.9)

^{iv} The regions of Tillabéri and Diffa were excluded from sampling for safety reasons. The unsampled areas cover approximately 13 percent of the national population.

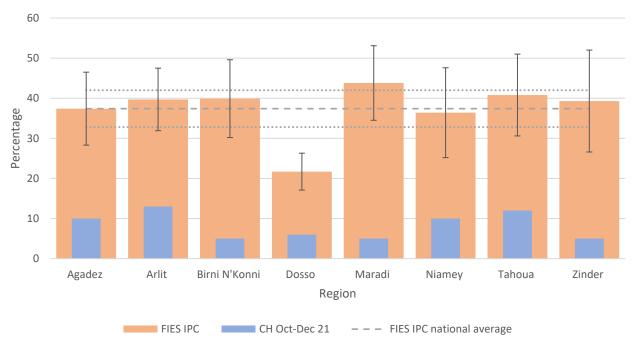
Figure 21 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in the Niger, by region



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

As noted in many other countries where CH analyses are conducted, FIES-based estimates for the Niger point to higher percentages of people classified under IPC Phase 3 ("Crisis") or more (see **Figure 22**) and, generally, align better with percentages of people classified by CH in Phase 2 or more ("Stress"). If taken literally, the low CH estimates of people in "Crisis" condition point to a less problematic situation, which contrasts with the situation depicted by the FIES data and with a recent World Bank overview.¹³

Figure 22 Comparing FIES-based estimates with the result of a recent CH acute food insecurity analysis in the Niger, by region



Source: Authors' own elaboration based on FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog and IPC. 2022. IPC analysis portal. In: IPC. Rome. Cited June 2022. https://www.ipcinfo.org/ipc-country-analysis/en/.

Rwanda

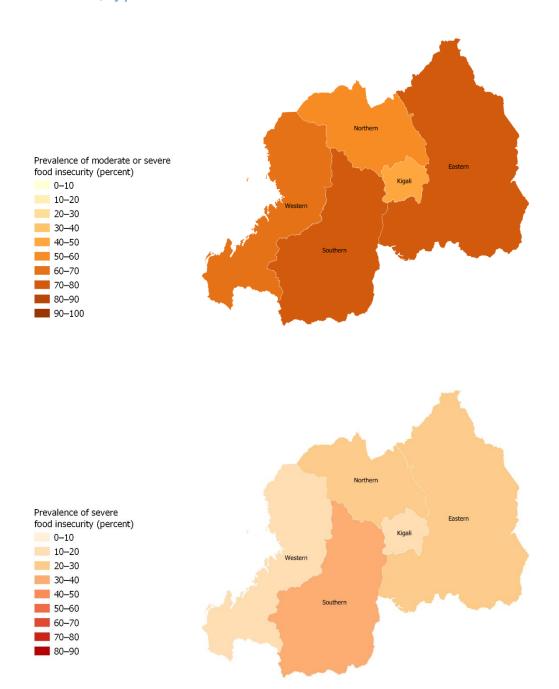
In Rwanda, two-thirds (66.9 percent) of the national population was affected by moderate or severe food insecurity at some time during 2021, including 23.9 percent who faced severe food insecurity. Food access was less of a problem during the 4 weeks before the survey (November 2021), with rates of 30.3 and 6.3 percent, respectively (Table 18). This appears to be true across all the provinces.

Subnational results show differences among the provinces that are not revealed by the national estimates. For instance, annual food security (moderate or severe) was 45.6 in Kigali compared to 79.3 in the Southern Province and 75.3 percent in the Eastern Province, reflecting differences in socioeconomic conditions between these geographic areas (**Figure 23**). Differences in moderate or severe annual food security between urban and rural areas are also notable – 44.5 percent compared to 71.6 percent, respectively.

Table 18 FIES-based measures of the prevalence of food insecurity in Rwanda in 2021 (margins of error are in parentheses)

	N —	Over the last 1	2 months	Over the last 4	1 weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 079	66.9 (±4.9)	23.9 (±4.4)	30.3 (±4.9)	6.3 (±2.5)
By province					
Eastern	221	75.3 (±8.9)	25 (±9.2)	35.9 (±10.3)	6.5 (±4.4)
Kigali	202	45.9 (±13.9)	16.5 (±10.1)	17.1 (±10.6)	4.2 (±5.2)
Northern	225	59.8 (±12.1)	22.7 (±10.7)	28.9 (±11.3)	8.4 (±8.0)
Southern	224	79.3 (±8.8)	30.7 (±9.9)	37.1 (±11.3)	9.2 (±6.5)
Western	207	60.7 (±11.5)	20 (±8.5)	24.9 (±9.4)	2.5 (±2.1)
By urbanicity					
Rural	831	71.6 (±5.1)	26.0 (±5)	33.2 (±5.6)	7.0 (±2.9)
Urban	248	44.5 (±12.9)	13.8 (±8.3)	16.6 (±8.7)	3.1 (±3.3)

Figure 23 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Rwanda, by province



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on Hijmans, R. 2012. DIVA-GIS [Shapefiles]. In: DIVA-GIS. Cited June 2022. https://www.diva-gis.org/ and World Bank Group. 2015. Africa - Water Bodies (2015) [Shapefiles]. Cited June 2022. https://purl.stanford.edu/nd124my6773.

Saint Kitts and Nevis

In Saint Kitts and Nevis, 29.9 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 5.6 percent who faced severe food insecurity. During the 4 weeks preceding the survey (December 2021), the rates were 16.7 and 2.7, respectively - roughly half the annual prevalence (Table 19).

It appears that Saint Kitts may be more affected by food insecurity than Nevis, especially at the moderate or severe level, although the differences are within the margins of error (Figure 24).

Table 19 FIES-based measures of the prevalence of food insecurity in Saint Kitts and Nevis in 2021 (margins of error are in parentheses)

	N —	Over the last 12	months	Over the last 4	weeks
	IN	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 003	29.9 (±4.9)	5.6 (±2.0)	16.7 (±3.8)	2.7 (±1.3)
By region					
Nevis	267	24.5 (±8.4)	5.3 (±3.8)	13.0 (±6.2)	2.2 (±2.3)
Saint Kitts	736	31.6 (±5.8)	5.6 (±2.4)	17.9 (±4.5)	2.9 (±1.6)

Source: Authors' own elaboration.

Figure 24 Prevalence of moderate or severe food insecurity (12-month) in Saint Kitts and Nevis, by region



Note: Prevalence of severe food insecurity is not shown as all regions belong to the same category (0-10 percent).

Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Sao Tome and Principe

This was the first time FIES data was collected in Sao Tome and Principe. It was found that 54.6 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 14.1 percent who faced severe food insecurity. During the 4 weeks preceding the survey (November 2021), the rates were 38.5 and 6.6 percent, respectively. The proportions of people who had difficulty accessing food over the year who reported experiencing such difficulty during the month preceding the survey was similar across districts – nearly 70 percent for moderate or severe food insecurity and close to 50 percent for severe food insecurity (Table 20).

Table 20 and **Figure 25** reveal no large differences among the districts, with annual moderate or severe food insecurity ranging from 49.6 percent in Caué to 58.3 percent in Lembá.

Table 20 FIES-based measures of the prevalence of food insecurity in Sao Tome and Principe in 2021 (margins of error are in parentheses)

	N -	Over the last 1	2 months	Over the last	4 weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	1 400	54.6 (±4.2)	14.1 (±2.7)	38.5 (±3.9)	6.6 (±1.8)
By district and autonomous region					
Água Grande	200	54.9 (±10.8)	15.8 (±7.2)	39.5 (±10.4)	8.2 (±5.0)
Cantagalo Cantagalo	200	53.6 (±10.4)	11.9 (±6.2)	37.3 (±9.6)	5.3 (±4.3)
Caué	200	49.6 (±10.7)	13.8 (±6.7)	36.2 (±10.0)	6.2 (±4.3)
Lembá	200	58.3 (±10.2)	14.4 (±6.9)	40.4 (±9.5)	5.7 (±4.2)
Lobata	200	53.9 (±10.9)	14.7 (±7.1)	37.7 (±10.3)	8.4 (±5.3)
Mé-Zóchi	200	58.2 (±10.7)	15.1 (±6.7)	41.2 (±10.1)	6.1 (±3.8)
Príncipe	200	52.8 (±10.2)	11.1 (±5.9)	33.6 (±9.4)	5.7 (±4.1)

Figure 25 Prevalence of moderate or severe food insecurity (12-month) in Sao Tome and Principe, by district and autonomous region



Note: Prevalence of severe food insecurity is not shown as all regions belong to the same category (10-20 percent).

Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on Hijmans, R. 2018. GADM [Shapefiles]. In: GADM. Cited June 2022. https://gadm.org/

Suriname

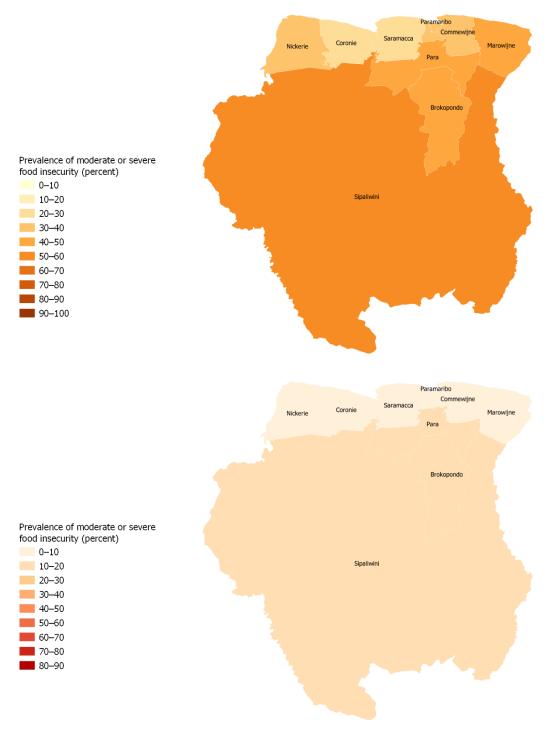
This was the first time FIES data was collected in Suriname. It was found that 35.9 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 7.2 percent who faced severe food insecurity. During the 4 weeks preceding the survey (December 2021), the rates were 21.9 and 2.7 percent, respectively (Table 21). This is equivalent to 61 percent of the annual prevalence for moderate or severe food insecurity and 37 percent for severe food insecurity.

Figure 26 shows some differences in the food insecurity situation among districts. The prevalence of moderate or severe food insecurity ranged from 28.8 percent in Saramacca to 55.2 percent in Sipaliwini. At both levels of severity, and for both annual and recent food insecurity, Sipaliwini stands out as being the district with the highest levels. Saramacca is the district with the lowest levels in all cases except recent severe food insecurity.

Table 21 FIES-based measures of the prevalence of food insecurity in Suriname in 2021 (margins of error are in parentheses)

	N	Over the last 12	months	Over the last 4 v	weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	2 000	35.9 (±5.3)	7.2 (±2.3)	21.9 (±4.1)	2.7 (±1.2)
By district					
Brokopondo	200	47.0 (±11.1)	12.2 (±6.5)	35.7 (±10.4)	5.5 (±3.8)
Commewijne	200	34.5 (±11.1)	7.5 (±6.2)	20.8 (±9.2)	2.4 (±2.4)
Coronie	200	29.7 (±12.4)	7.2 (±8.4)	20.9 (±11.1)	2.2 (±2.2)
Marowijne	200	45.0 (±10.8)	9.0 (±5.6)	25.4 (±8.3)	3.2 (±2.7)
Nickerie	200	35.9 (±10.8)	8.0 (±5.8)	23.6 (±9.1)	2.9 (±2.7)
Para	200	45.2 (±11.2)	11.0 (±6.4)	32.6 (±10.3)	5.8 (±4.3)
Paramaribo	200	33.9 (±10.3)	5.9 (±4.5)	18.3 (±7.4)	1.4 (±1.9)
Saramacca	200	28.8 (±9.4)	5.0 (±4.0)	18.0 (±7.4)	2.5 (±2.5)
Sipaliwini	200	55.2 (±10.6)	13.0 (±6.2)	39.7 (±10.1)	6.7 (±4.0)
Wanica	200	32.5 (±10.0)	6.8 (±4.8)	21.3 (±8.6)	3.6 (±3.1)

Figure 26 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Suriname, by district



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Trinidad and Tobago

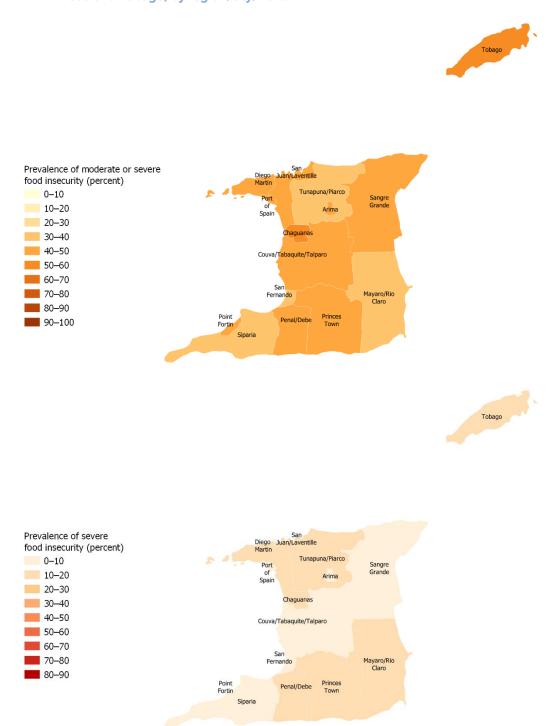
This was the first time FIES data was collected in Trinidad and Tobago. It was found that 43.3 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 10.2 percent who faced severe food insecurity. During the 4 weeks preceding the survey (November 2021), the rates were 23.0 and 4.8 percent, respectively – or approximately half the annual rates (Table 22).

Figure 27 reveals some inequalities at the subnational level. The annual prevalence of moderate or severe food insecurity was lowest in Siparia (34.8 percent) and highest in Chaguanas (54.3 percent). Chaguanas and San Juan/Laventille had the highest rates of both annual and recent severe food insecurity.

Table 22 FIES-based measures of the prevalence of food insecurity in Trinidad and Tobago in 2021 (margins of error are in parentheses)

	NI	Over the last 12	months	Over the last 4	weeks
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	3 000	43.3 (±3.7)	10.2 (±2.0)	23.0 (±3.0)	4.8 (±1.5)
By region/city/ward					
Arima	200	48.3 (±16.9)	8.4 (±5.6)	23.3 (±10.8)	2.3 (±2.2)
Chaguanas	200	54.3 (±15.0)	14.2 (±9.9)	32.4 (±13.1)	$8.8 (\pm 7.8)$
Couva/Tabaquite/Talparo	200	45.6 (±14.5)	8.2 (±7.0)	24.9 (±12.2)	3.5 (±4.9)
Diego Martin	200	45.2 (±13.6)	12.0 (±8.3)	22.7 (±11.8)	6.0 (±7.1)
Mayaro/Rio Claro	200	37.8 (±14.2)	11.2 (±10.3)	24.0 (±13.6)	5.2 (±6.3)
Penal/Debe	200	45.5 (±12.8)	10.2 (±7.9)	22.2 (±10.9)	5.0 (±7.1)
Point Fortin	200	41.3 (±14.1)	7.7 (±5.8)	18.9 (±10.3)	3.3 (±3.7)
Port of Spain	200	41.2 (±14.5)	9.4 (±6.5)	22.5 (±11.1)	3.8 (±3.7)
Princes Town	200	41.2 (±13.7)	10.8 (±8.9)	24.7 (±12.6)	6.4 (±6.0)
San Fernando	200	38.7 (±14.7)	8 (±7.6)	16.7 (±9.2)	2.1 (±2.9)
San Juan/Laventille	200	46.6 (±14.2)	14.8 (±9.6)	27.4 (±13.1)	9.5 (±9.9)
Sangre Grande	200	40.1 (±12.7)	7.5 (±6.1)	21.5 (±10.7)	1.9 (±1.7)
Siparia	200	34.8 (±12.1)	7.7 (±6.2)	14.6 (±9.2)	2.6 (±3.2)
Tobago	200	51.1 (±13.3)	12.1 (±6.9)	26.9 (±11.0)	5.8 (±6.0)
Tunapuna/Piarco	200	39.6 (±14.1)	11.4 (±8.5)	23.3 (±11.9)	6.0 (±6.6)

Figure 27 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Trinidad and Tobago, by region/city/ward



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [Shapefiles]. New York, USA, UN.

Zambia

In Zambia, 78.2 percent of the national population was affected by moderate or severe food insecurity at some time during 2021, including 36.1 percent who faced severe food insecurity. During the 4 weeks preceding the survey (November 2021), the rates were lower - 51.0 and 15.7 percent, respectively (Table 23).

The prevalence of food insecurity in Zambia increased notably in recent years, from 50.7 percent (\pm 1.8) in 2017-19 (three-year average) to 78.2 percent (\pm 3.2) in 2021 at the moderate or severe level, and from 22.8 percent (\pm 1.4) to 36.1 percent (\pm 3.4) at the severe level. ¹⁵

Evidence from other sources points to a worsening situation during this period. Since 2016, Zambia has been severely affected by the fall armyworm outbreak. A worsening of the situation is expected in 2019, while for 2020 no big changes are expected. The beginning of 2021 was characterized by flooding, below-normal rainfall and impacts of COVID-19, which probably increased food insecurity. The situation improved at the end of 2021.

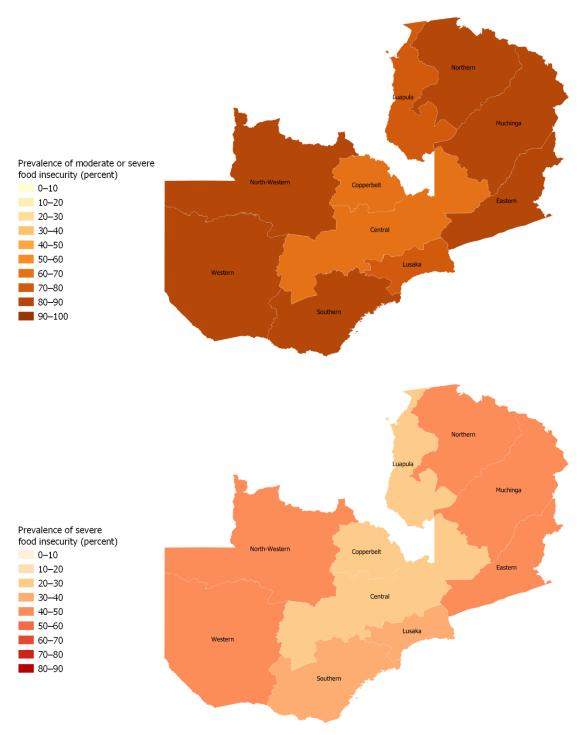
Figure 28 shows a concerning food insecurity situation overall in Zambia, although some provinces are more affected than others. Muchinga and Eastern provinces are the most affected by moderate or severe food insecurity (88.9 and 87.9 percent, respectively), while the situation is comparatively better in Central and Copperbelt provinces (65.0 and 68.4 percent, respectively), which also have the lowest prevalence of severe food insecurity.

However, the estimates of recent food insecurity (referring to November 2021) show patterns that differ from the annual estimates. The lowest levels of moderate or severe food insecurity were still found in Central province, and the highest in Muchinga. However, Southern and Lusaka provinces had the lowest prevalence of severe food insecurity in November 2021, while North-Western and Northern provinces had the highest levels.

Table 23 FIES-based measures of the prevalence of food insecurity in Zambia in 2021 (margins of error are in parentheses)

	N.	Over the last 12 months		Over the last 4 weeks	
	N —	Mod. + Sev.	Severe	Mod. + Sev.	Severe
National	2 114	78.2 (±3.2)	36.1 (±3.4)	51.0 (±3.8)	15.7 (±2.6)
By province					
Central	211	65.0 (±12.2)	25.7 (±11.9)	39.8 (±13.0)	12.5 (±9.4)
Copperbelt	225	68.4 (±10.4)	27.7 (±9.7)	51.5 (±11.1)	17.0 (±8.3)
Eastern	226	87.9 (±7.1)	49.4 (±9.9)	52.8 (±11.1)	15.5 (±6.7)
Luapula	209	73.6 (±10.4)	29.7 (±9.5)	49.5 (±12.0)	13.0 (±6.7)
Lusaka	203	78.1 (±8.5)	32.9 (±10.6)	44.5 (±11.3)	10.7 (±7.1)
Muchinga	207	88.9 (±7.0)	44.4 (±10.8)	67.9 (±9.3)	16.0 (±7.8)
North-Western	200	83.9 (±8.3)	46.9 (±12.4)	57.6 (±13.2)	26.4 (±12.4)
Northern	200	81.7 (±8.4)	43.1 (±10.1)	57.8 (±10.9)	26.7 (±8.9)
Southern	211	80.6 (±9.6)	32.4 (±9.7)	41.4 (±11.1)	9.0 (±5.2)
Western	222	85.8 (±6.9)	40.8 (±10.6)	60.1 (±10.8)	16.6 (±7.9)
By urbanicity					
Rural	1 484	81 (±3.5)	39.2 (±4.1)	54.2 (±4.5)	17.3 (±3.1)
Urban	630	71.5 (±6.6)	28.4 (±5.9)	43.4 (±7.2)	11.8 (±4.6)

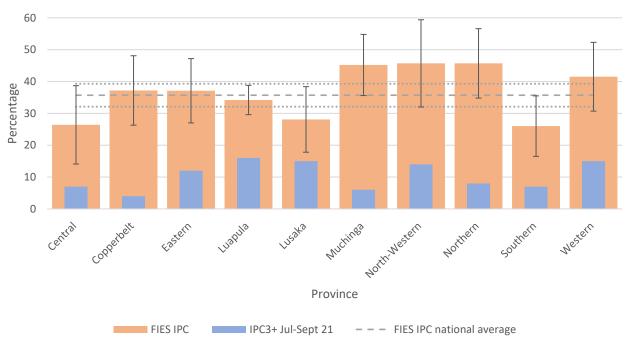
Figure 28 Prevalence of moderate or severe food insecurity and severe food insecurity only (12-month) in Zambia, by province



Source: FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog based on UN Geospatial. 2020. Map geodata [shapefiles]. New York, USA, UN and World Bank Group. 2015. Africa - Water Bodies (2015) [Shapefiles]. Cited June 2022. https://purl.stanford.edu/nd124my6773.

The comparatively high annual food insecurity rates may reflect the constraints in access to food that affected the country especially at the beginning of 2021 (reported also by the IPC assessment), and the lower estimates of recent food insecurity may reflect the improvement of the situation by year end, as reported by IPC and GIEWS.¹⁷ At the subnational level, the higher FIES-based IPC Phase 3+prevalence rates in the Northern and North-western provinces are consistent with the IPC estimates (Figure 29).

Figure 29 Comparing FIES-based estimates with the result of a recent IPC acute food insecurity analysis in Zambia, by province



Source: Authors' own elaboration based on FAO. 2022. Food and Agriculture Microdata Catalogue. In: FAO. Rome. Cited June 2022. https://microdata.fao.org/index.php/catalog and IPC. 2022. IPC analysis portal. In: IPC. Rome. Cited June 2022. https://www.ipcinfo.org/ipc-country-analysis/en/.

Annex 1. FIES survey module

Now I would like to ask you some questions about food.	
Q1. During the last 12 months, was there a time when you were worried you would not have enough food to eat because of a lack of money or other resources? (if "Yes", go to question Q1a, otherwise go to question Q2) Q1a. Did this happen in the past 4 weeks (30 days)?	0 No 1 Yes 98 Don't Know 99 Refused 0 No 1 Yes 98 Don't Know
Q2. Still thinking about the last 12 MONTHS, was there a time when you were unable to eat healthy and nutritious food because of a lack of money or other resources? (if "Yes", go to question Q2a, otherwise go to question Q3) Q2a. Did this happen in the past 4 weeks (30 days)?	99 Refused 0 No 1 Yes 98 Don't Know 99 Refused 0 No
Q3. During the last 12 months, was there a time when you ate only a few kinds of foods because of a lack of money or other resources? (if "Yes", go to question Q3a, otherwise go to question Q4)	1 Yes 98 Don't Know 99 Refused 0 No 1 Yes 98 Don't Know 99 Refused
Q3a. Did this happen in the past 4 weeks (30 days)?	0 No 1 Yes 98 Don't Know 99 Refused
Q4. During the last 12 months, was there a time when you had to skip a meal because there was not enough money or other resources to get food? (if "Yes", go to question Q4a, otherwise go to question Q5)	0 No 1 Yes 98 Don't Know 99 Refused
Q4a. Did this happen in the past 4 weeks (30 days)?	0 No 1 Yes 98 Don't Know 99 Refused
Q5. Still thinking about the last 12 MONTHS, was there a time when you ate less than you thought you should because of a lack of money or other resources? (if "Yes", go to question Q5a, otherwise go to question Q6)	0 No 1 Yes 98 Don't Know 99 Refused
Q5a. Did this happen in the past 4 weeks (30 days)?	0 No 1 Yes 98 Don't Know 99 Refused
Q6. In the past 12 months, was there ever no food to eat of any kind in your house because of lack of resources to get food? (if "Yes", go to question Q6a, otherwise go to question Q7)	0 No 1 Yes 98 Don't Know 99 Refused
Q6a. Did this happen in the past 4 weeks (30 days)? (if "Yes", go to question Q6b, otherwise go to question Q7)	0 No 1 Yes 98 Don't Know 99 Refused
Q6b. How often did this happen in the past 4 weeks (30 days)?	1 Rarely (1 or 2 times) 2 Sometimes (3-10 times) 3 Often (more than 10 times) 98 Don't Know 99 Refused
Q7. In the past 12 months, did you ever go to sleep at night hungry because there was not enough food? (if "Yes", go to question Q7a, otherwise go to question Q8)	0 No 1 Yes 98 Don't Know 99 Refused

Q7a. Did this happen in the past 4 weeks (30 days)? (if "Yes", go to question Q7b, otherwise go to question Q8)	0 No 1 Yes 98 Don't Know 99 Refused
Q7b. How often did this happen in the past 4 weeks (30 days)?	1 Rarely (1 or 2 times) 2 Sometimes (3-10 times) 3 Often (more than 10 times) 98 Don't Know 99 Refused
Q8. During the last 12 months, did you ever go a whole day and night without eating anything at all because there was not enough food? (if "Yes", go to question Q8a, otherwise END)	0 No 1 Yes 98 Don't Know 99 Refused
Q8a. Did this happen in the past 4 weeks (30 days)? (if "Yes", go to question Q8b, otherwise END)	0 No 1 Yes 98 Don't Know 99 Refused
Q8b. How often did this happen in the past 4 weeks (30 days)? (END)	1 Rarely (1 or 2 times) 2 Sometimes (3-10 times) 3 Often (more than 10 times) 98 Don't Know 99 Refused

Annex 2. Comparing FIES-based estimates of the prevalence of recent food insecurity with IPC-based assessments

Since the Global Network Against Food Crises and the Food Security Information Network started publishing the series Global Report on Food Crises (GRFC), many readers have been tempted to directly compare the number of people facing acute food insecurity as indicated in the GRFC reports with the number of people experiencing moderate or severe food insecurity as reported by FAO, the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the World Health Organization (WHO) and the World Food Programme (WFP) in The State of Food Security and Nutrition in the World (SOFI) reports.

A direct comparison of GRFC and SOFI figures, even for the same country and year, however, would be incorrect because of three characteristics of these statistics. Those presented in the GRFC: (a) refer to the number of people in "Crisis or worse (IPC Phase 3 or more)" levels of food insecurity, (b) are assessed with reference to a specific moment of the year, based on evidence that covers the recent past (usually, the last month before the assessment), and (c) cover only a number of subnational analysis areas in each country (mostly rural food insecurity "hotspots"). On the other hand, the food insecurity statistics reported in SOFI: (a) refer to the annual food insecurity (that is, food insecurity experienced at any time in the course of the year), (b) consider the entire national population in each country, and (c) are based on the conventional threshold established by FAO to inform SDG Indicator 2.1.2, which implicitly defines the class of "moderate or severe food insecurity", which has no correspondence with any of the five IPC acute food insecurity phases.

In contrasting the results from FIES-based assessments with IPC assessments, a fundamental methodological aspect must also be considered. While FIES-based statistics, as presented in SOFI, derive from an inference process that allows for quantification of confidence intervals around the point estimates, IPC figures are to be considered largely indicative, due to the very nature of the assessments (a qualitative process of convergence of evidence conducted by a group of national analysts who consider and discuss all available evidence). It would thus be unwise to expect a perfect match between the results of such different processes. Nevertheless, as confirmed by a recent deliberation of the IPC Technical Advisory Group, the information provided by FIES-based assessments conducted with reference to the same time-horizon and for the same analysis area can contribute to IPC acute food insecurity assessments, as is done with other indicators.

To allow for a proper comparison, this report presents an additional set of FIES-based estimates of the prevalence of recent food insecurity computed using severity thresholds set to correspond as closely as possible to the severity levels that identify the five IPC acute food security phases (see **Figure 30**).

Definition of IPC-compatible thresholds to be used for classification of households with FIES data was possible thanks to an extensive analysis of the data collected between August 2020 and January 2021, in samples that were representative of the population at the subnational (admin-1) level.¹

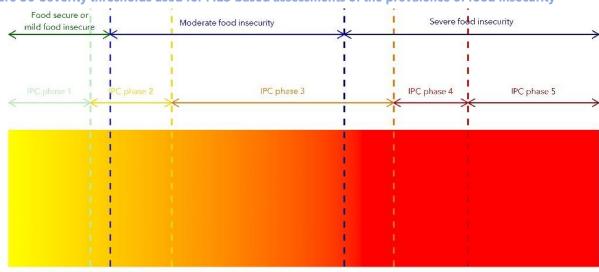


Figure 30 Severity thresholds used for FIES-based assessments of the prevalence of food insecurity

Source: Boero, V., Cafiero, C., Gheri, F., Kepple, A.W., Rosero Moncayo, J. & Viviani, S. 2021. *Access to food in 2020. Results of twenty national surveys using the Food Insecurity Experience Scale (FIES).* Rome. https://doi.org/10.4060/cb5623en.

Figure 30 clearly illustrates how the category labelled "moderate food insecurity" for SDG monitoring purposes would include some of the households classified in IPC Phase 2 and would not cover some of those included in IPC Phase 3.

In some of these countries, IPC/CH acute food insecurity (AFI) classifications conducted with reference to periods that overlap with those covered by the FIES data collection reported on in this document are available, thus allowing for a comparison between the FIES-based prevalence of recent food insecurity and the percentage of people in IPC Phase 3 or more at the subnational level. The set of results in this report demonstrate how, when available, FIES data collected with a 4-week reference period may greatly contribute to IPC/CH acute food insecurity analyses.¹⁸

Notes

- ¹ **Cafiero, C., Viviani, S. & Nord, M.** 2018. Food security measurement in a global context: The food insecurity experience scale. *Measurement*, 116:146-152. https://www.sciencedirect.com/science/article/abs/pii/S0263224117307005
- ² **Cafiero, C., Viviani, S. & Nord, M.** 2018. Food security measurement in a global context: The food insecurity experience scale. *Measurement,* 116:146-152. https://www.sciencedirect.com/science/article/abs/pii/S0263224117307005
- ³ **Nord, M.** 2014. *Introduction to Item Response Theory applied to Food Security Measurement: Basic Concepts, Parameters, and Statistics*. Technical Paper. Rome, FAO. http://www.fao.org/economic/ess/ess-fs/voices/en
- ⁴ Boero, V., Cafiero, C., Gheri, F., Kepple, A.W., Rosero Moncayo, J. & Viviani, S. 2021. Access to food in 2020. Results of twenty national surveys using the Food Insecurity Experience Scale (FIES). Rome. https://doi.org/10.4060/cb5623en
- ⁵ **FAO, IFAD, UNICEF, WFP and WHO.** 2019. The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns. Rome, FAO. https://www.fao.org/3/ca5162en/ca5162en.pdf
- ⁶ **World Bank.** 2018. *Comoros Poverty Assessment* (English). Washington, DC. https://documentdetail/342321528113131924/comoros-poverty-assessment
- ⁷ Boero, V., Cafiero, C., Gheri, F., Kepple, A.W., Rosero Moncayo, J. & Viviani, S. 2021. Access to food in 2020. Results of twenty national surveys using the Food Insecurity Experience Scale (FIES). Rome. https://doi.org/10.4060/cb5623en
- ⁸ IPC. 2022. IPC. Rome. Cited June 2022. https://www.ipcinfo.org/
- ⁹ Boero, V., Cafiero, C., Gheri, F., Kepple, A.W., Rosero Moncayo, J. & Viviani, S. 2021. Access to food in 2020. Results of twenty national surveys using the Food Insecurity Experience Scale (FIES). Rome. https://doi.org/10.4060/cb5623en
- ¹⁰ **Trading Economics.** 2022. Haiti Food Inflation. In: *Trading Economics*. New York, USA. Cited June 2022. https://tradingeconomics.com/haiti/food-inflation
- "World Bank. 2021. Monitoring COVID-19 impacts on households in Lao PDR: Report No. 2: Results Snapshot from a Rapid Monitoring Phone Survey (Round 2). Washington, D.C. http://documents.worldbank.org/curated/en/919881620195621152/Monitoring-COVID-19-Impacts-on-Households-in-Lao-PDR-Results-Snapshot-from-a-Rapid-Monitoring-Phone-Survey-Round-Two
- ¹² **World Bank.** 2021. Lao PDR: Economy Recovers then Falters Again under COVID-19. In: *The World Bank.* Cited June 2022. https://www.worldbank.org/en/news/press-release/2021/08/19/lao-pdr-economy-recovers-then-falters-again-under-covid-19
- World Bank. 2022. The World Bank in Niger. Overview. April 2022. https://www.worldbank.org/en/country/niger/overview
- ¹⁴ **United Nations Development Programme.** 2019. *Rwanda National Human Development Report 2018 Policy Innovations and Human Development: Rwanda's home-grown solutions.* New York, USA. http://hdr.undp.org/sites/default/files/nhdr2020 ruwanda.pdf
- ¹⁵ FAO, IFAD (International Fund for Agricultural Development), UNICEF (United Nations Children's Fund), WFP (World Food Programme) & WHO (World Health Organization). 2021. *The State of Food Security and Nutrition in the World 2021. Transforming food systems for food security, improved nutrition and affordable healthy diets for all.* Rome, FAO. https://doi.org/10.4060/cb4474en

https://www.fao.org/giews/countrybrief/country.jsp?code=ZMB&lang=en

¹⁶ **FAO.** 2022. GIEWS - Global Information and Early Warning System on Food and Agriculture - Zambia Country Brief. In: *FAO*. Rome. Cited June 2022.

¹⁷ **FAO.** 2022. GIEWS - Global Information and Early Warning System on Food and Agriculture - Zambia Country Brief. In: *FAO*. Rome. Cited June 2022. https://www.fao.org/giews/countrybrief/country.jsp?code=ZMB&lang=en

¹⁸ Boero, V., Cafiero, C., Gheri, F., Kepple, A.W., Rosero Moncayo, J. & Viviani, S. 2021. Access to food in 2020. Results of twenty national surveys using the Food Insecurity Experience Scale (FIES). Rome. https://doi.org/10.4060/cb5623en

Contact:

Statistics Division - Economic and Social Development

FAO-statistics@fao.org

www.fao.org/food-agriculture-statistics/en/

Food and Agriculture Organization of the United Nations

Rome, Italy

