



Food and Agriculture
Organization of the
United Nations

Haiti

DIEM – Data in Emergencies Monitoring brief, round 4

Results and recommendations
August 2023

Data collection 28 May to 4 July 2023

Key highlights

- > Many households are still experiencing food consumption deficits and 91 percent engaged in some form of coping strategies to prevent even larger deficits. Forty-two percent of households used emergency coping strategies and 35 percent used crisis strategies to cope with lack of access to food and resources.
- > As in the third round, Grand'Anse and Nord-Ouest were the departments with the lowest household dietary diversity score (HDDS) and the highest values on the household hunger scale (HHS).
- > Seventy-eight percent of crop producers experienced production difficulties, an increase from the third round, mostly due to lack of rainfall or irrigation. Additionally, a large portion of produce was lost at the storage and transportation stage.
- > Seventy-three percent of livestock producers experienced production difficulties, mostly related to disease or death of livestock, or malnutrition. Nearly a quarter of producers had difficulty purchasing feed and accessing water.
- > The most frequently reported shocks were climate shocks, sickness or death of a household member, and violence, insecurity or conflict. The south of Haiti (Grand'Anse, Nippes, Sud and Sud-Est) experienced climate shocks most often, in part due to hurricanes, flooding and earthquakes that occurred during first week of June 2023.
- > Ninety percent of all agricultural households reported needing assistance within the three to six months following data collection, mainly in the form of cash transfers, crop inputs and food.
- > These findings suggest that livelihoods need to be supported by solutions that address the production difficulties agricultural households face and that strengthen resilience towards climate shocks, which Haiti is particularly prone to during hurricane season.

Methodology

The Food and Agriculture Organization of the United Nations (FAO) conducted household surveys in Haiti through the Data in Emergencies Monitoring (DIEM-Monitoring) system to monitor agricultural livelihoods and food security. The data was collected via computer-assisted telephone interviews in all ten departments of Haiti: Artibonite, Centre, Grand'Anse, Nippes, Nord, Nord-Est, Nord-Ouest, Ouest, Sud and Sud-Est. This fourth-round survey used a panel approach, reaching 709 households from the third round, in addition to random digital dialing. A total of 2 237 households were surveyed between 28 May and 4 July 2023.

A total of fourteen strata were created from the ten departments to increase responses from rural households, to attempt to reach representativity in certain livelihood zones, and to avoid only reaching the urban centres: Ouest was divided into Ouest Port-au-Prince and Ouest rest (excluding Port-au-Prince), Nord was divided into Nord Cap Haitien and Nord rest (excluding Cap Haitien), Artibonite was divided into the Artibonite HT04 livelihood zone (rice and plantains) and Artibonite rest (the remainder of the department) and Nord-Ouest was divided into Nord-Ouest HT01 livelihood zone (maize) and Nord-Ouest rest (excluding this livelihood zone).

Data were weighted at the department level using education weights to correct for potential bias as a result of the use of phone interviews. Base weights were applied using population counts for each stratum to account for different population sizes and wealth for livelihood zones within the same department. As a quota was not applied to subgroups of interest at the departmental level, the number of observations per indicator for the crop and livestock sections of this brief is not sufficient to be representative at the department level and should be considered purely descriptive.

This fourth-round survey followed the third-round survey conducted from 15 November to 24 December 2022. The third round has been drawn from to make comparisons throughout this brief. The reference period, however, changed from the third round to the fourth round. Instead of asking respondents to compare their situation at the time of data collection to the same period in a normal year without particular challenges, they were asked to compare to the same period the previous year. This was done to allow for more direct comparisons. The difference in reference period should be taken into account when interpreting the results that make reference to the previous year.

Figure 1. Countries with established DIEM-Monitoring Systems



Source of data: FAO. 2022. DIEM-Monitoring. Rome. [Cited 1 July 2023]. <https://data-in-emergencies.fao.org>

Source of map: United Nations. 2022. *Map of the World*. [Cited 1 July 2023]. un.org/geospatial/content/map-world

The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The final boundary between the Sudan and South Sudan has not yet been determined. The final status of the Abyei area is not yet determined.

About DIEM-Monitoring

FAO established the DIEM-Monitoring System to collect, analyse and disseminate data on shocks and livelihoods in countries prone to multiple shocks. DIEM-Monitoring aims to inform decision making by providing regularly updated information on how different shocks are affecting the livelihoods and food security of agricultural populations.

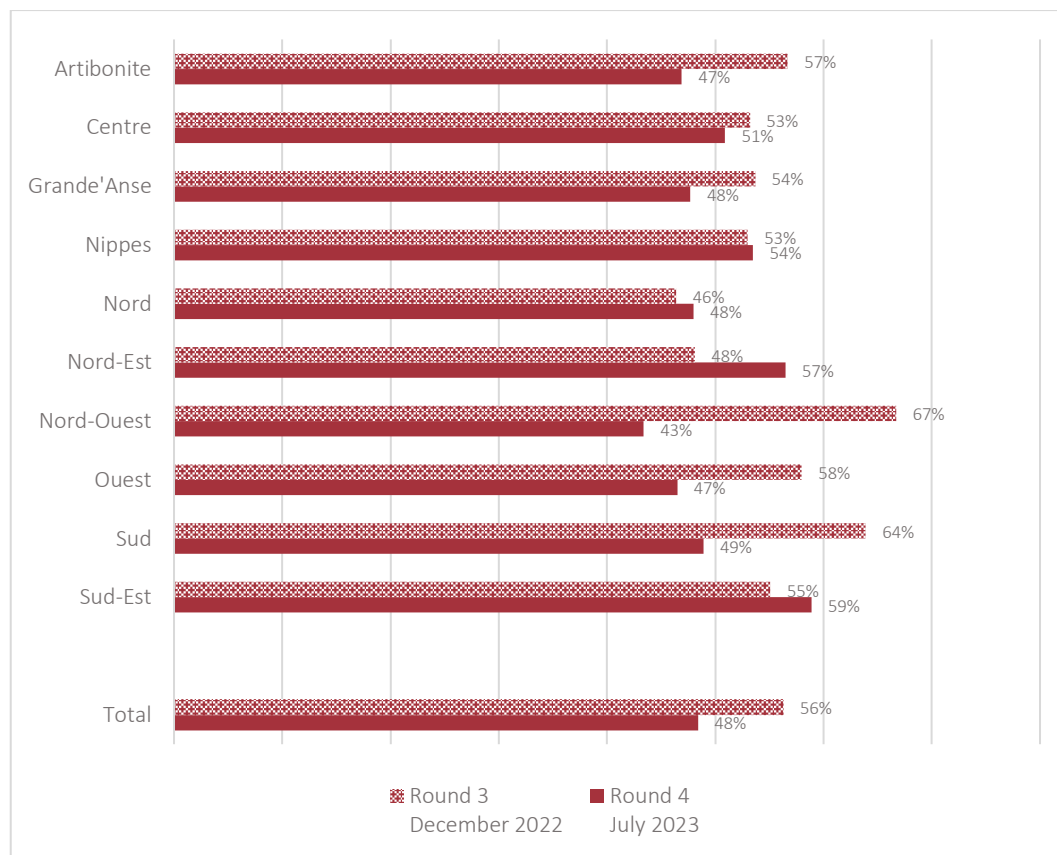
At the core of the DIEM-Monitoring System are country-level dashboards. Readers are encouraged to explore these dashboards to gain more insight into the context of Haiti and other countries.

> Learn more at <https://data-in-emergencies.fao.org/pages/monitoring>

Income and shocks

Nearly half of all households (48 percent) reported a decrease in the main source of income in the three months preceding the survey (Figure 2). This is a smaller portion than the third round (56 percent). The most affected departments were Sud-Est (59 percent) and Nord-Est (57 percent). Agricultural households (52 percent) – in particular, those engaged in crop activities only (55 percent) – and male-headed households (51 percent) were the groups that most frequently reported a decrease in the main source of income. Twenty-three percent of all households reported a large decrease, meaning they had less than 50 percent of what they had the previous year. The areas that reported this most frequently were Nord-Ouest HT01 (27 percent), Ouest Port-au-Prince (27 percent) and Sud-Est (26 percent). Approximately half of all households reported receiving remittances, mostly in Artibonite (56 percent) and Ouest (56 percent).

Figure 2. Households reporting a drop in their main source of income (by department)



Source: FAO. 2023. Haiti: DIEM-Monitoring assessments results (December 2022 and July 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 17 August 2023]. <https://data-in-emergencies.fao.org>

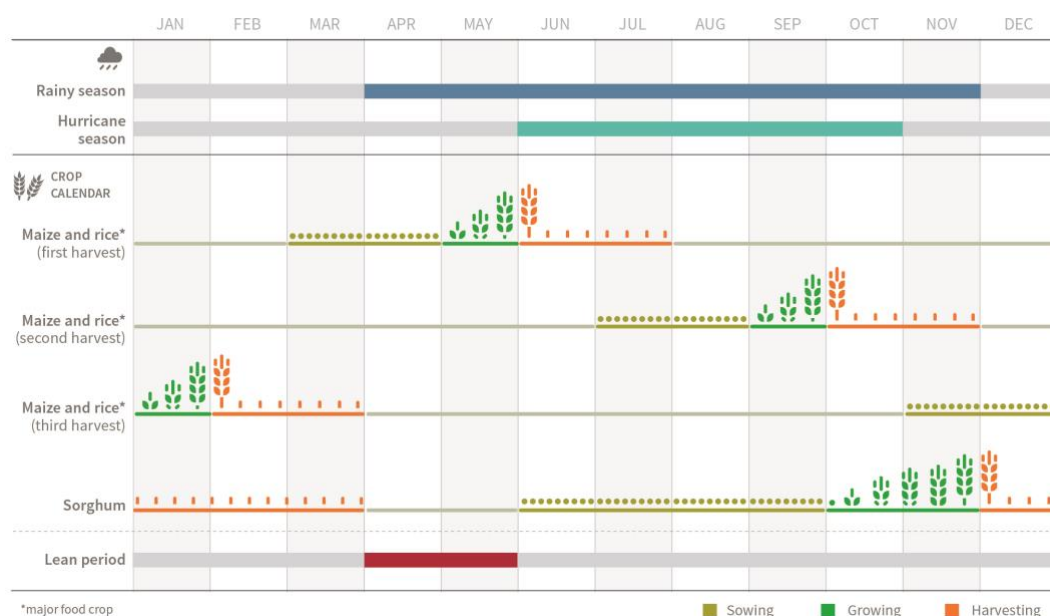
Fifty-nine percent of all households experienced a shock. Climate shocks (31 percent), violence (11 percent) and sickness or death of a household member (10 percent) were the most frequently reported shocks. Southern Haiti was most affected by climate shocks, in particular Grand'Anse (63 percent), Sud (61 percent), Sud-Est (47 percent) and Nippes (47 percent).

These observations are reflective of the heavy rains, flooding and earthquakes that hit the southern part of the country in early June 2023, at the beginning of data collection. In Grand'Anse, where a 5.5 magnitude earthquake occurred on 6 June 2023, 31 percent of households reported that the earthquake affected their livelihoods and 16 percent reported this shock in the adjacent department, Sud. Flooding was most often reported in Nord-Ouest (11 percent) and Sud-Est (10 percent), consistent with reports from the Civil Protection Bureau of Haiti (Protection Civile, 2023). Drought most frequently occurred in the south of Haiti, in Sud (27 percent), Grand'Anse (25 percent) and Nippes (23 percent).

Reported violence, which slightly increased from the previous round, occurred mostly in the departments Ouest (19 percent) and Artibonite (12 percent). When disaggregating by strata, we see that the violence in the Ouest Port-au-Prince strata is higher than in the rest of the department (21 percent compared to 17 percent). The remaining departments had a much smaller portion of respondents reporting violence (around 3 to 5 percent per department). The Ouest and Artibonite departments had the highest frequency of reported violence in the third round as well.

Crops

Figure 3. Haiti agricultural calendar

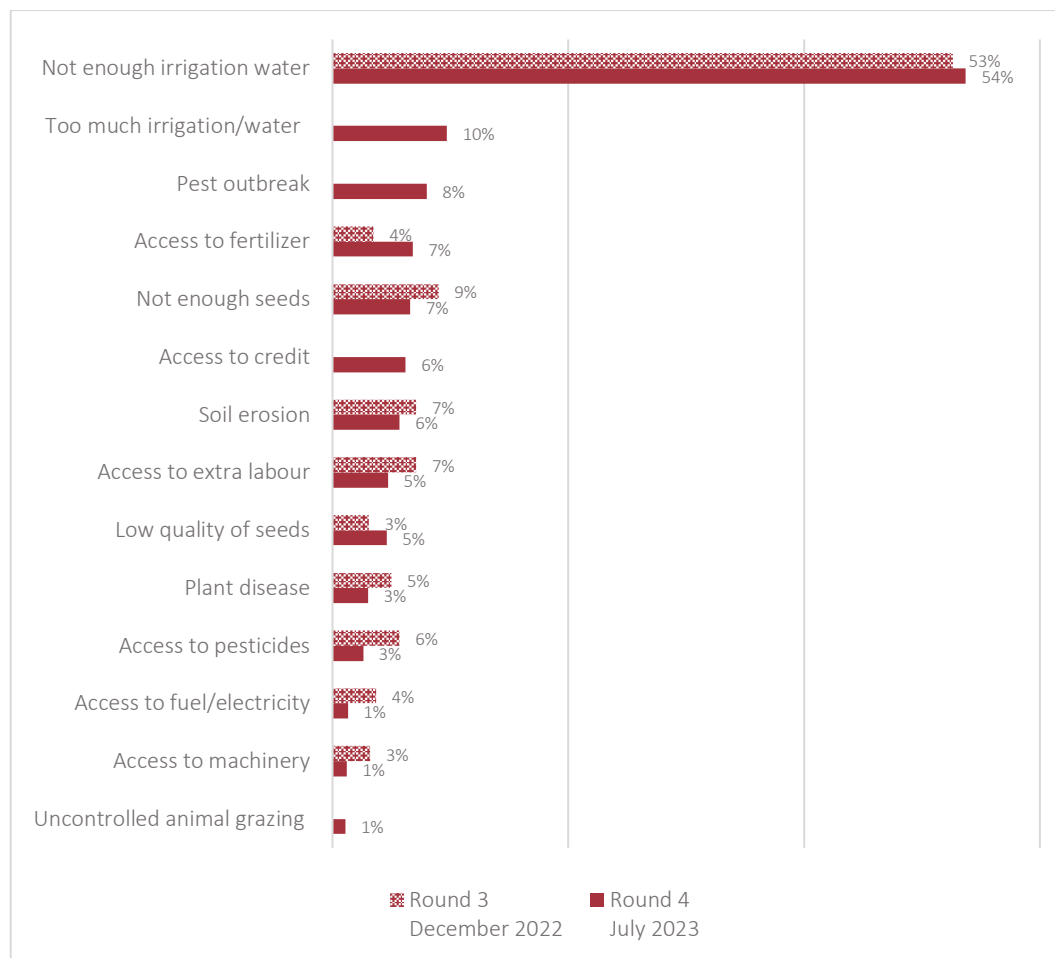


Source: FAO. 2023. GIEWS – Global Information and Early Warning System on Food and Agriculture – Haiti. Rome. [Cited 22 May 2023].
fao.org/giews/countrybrief/country.jsp?code=HTI&lang=en

The main crops produced were maize (34 percent), plantains (16 percent), beans (11 percent),¹ rice (8 percent) and yams (6 percent), as in the third round. These were also the most sold crops reported. Most crop producers relied on rain (69 percent) or natural sources (14 percent) for irrigation. Seventy-eight percent had production difficulties (an increase from 69 percent in the third round), with Nord-Est (83 percent, same as the third round) and Nord-Ouest (83 percent) reporting the most difficulties. Of these, lack of irrigation was the most common production issue (54 percent) (Figure 4). Lack of access to fertilizer was cited most frequently in Artibonite (18 percent), while insufficient seed quantity was reported in Nord-Ouest. The insufficient seed quantity indicator was made markedly higher by Nord-Ouest HT01 (16 percent). Soil erosion affected 10–12 percent of producers in southern Haiti (Grand’Anse, Sud and Sud-Est).

¹ The term “peas” has been replaced by the term “beans” as beans are significantly more common in Haiti, but the word for beans in Creole is very similar to the word for peas in French (pois) and might have generated confusion.

Figure 4. Crop production difficulties (percentage of crop producers)



Source: FAO. 2023. Haiti: DIEM-Monitoring assessments results (December 2022 and July 2023). In: *FAO Data in Emergencies Hub*, Rome. [Cited 17 August 2023]. <https://data-in-emergencies.fao.org>

Changes to the response options in the fourth-round questionnaire make it impossible to compare certain data with round three.

During the post-harvest storage, most crop producers lost a portion of their produce due to rotting or pests. Only 16 percent of 1 143 surveyed crop producers reported no loss. Twenty-four percent lost a little, 15 percent some but less than half, 25 percent lost half or more, 8 percent lost almost everything and 5 percent lost everything.

Of those selling crops, 56 percent had sales difficulties, mostly due to challenges accessing markets and damage during transportation (34 percent), low sale prices (25 percent), low demand (23 percent) and saturated markets creating too much competition (11 percent).

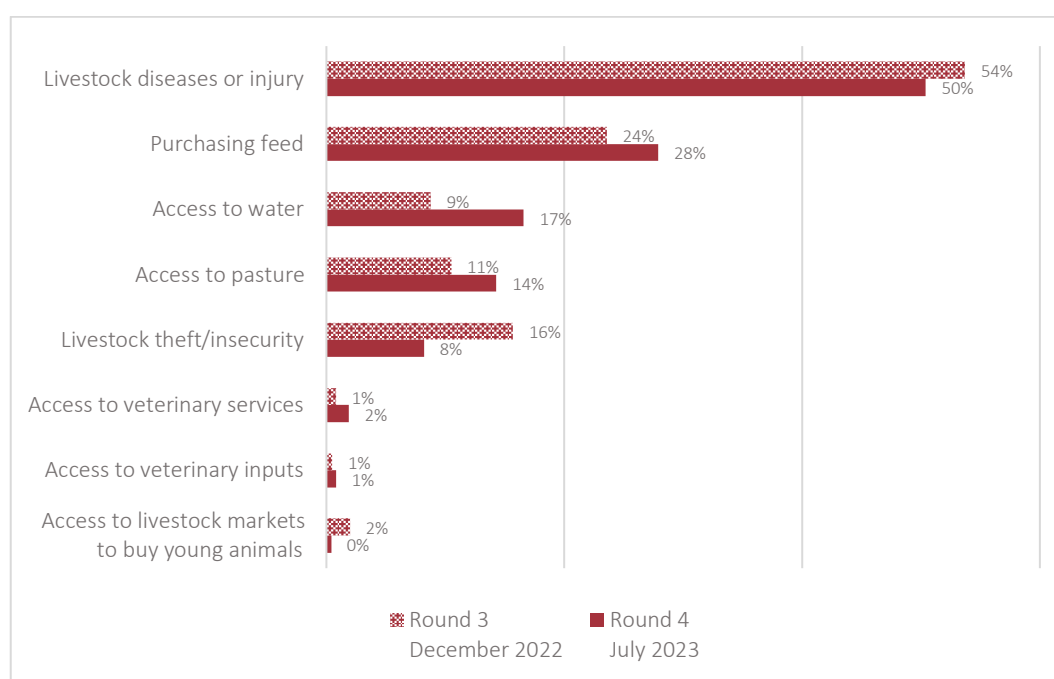
By the time the survey was conducted, 62 percent of crop producers had not yet started harvesting, 23 percent had started but not finished and 14 percent had finished. A positive correlation is observed between the harvesting stage and food security outcomes, and the variable reflecting the point of harvest can be used to control for varying outcomes.

Livestock

Goats were the most frequently kept livestock for food and income for about half of all households engaged in livestock activities (49 percent), followed by poultry (23 percent), cattle (14 percent) and swine (9 percent). Goats were the main livestock kept in all departments, except for Ouest where poultry was the main livestock. This is reflective of the more urban context of Ouest.

Seventy-three percent of all livestock producers faced production difficulties in the three months preceding the survey, an increase from the third round (64 percent). Of these, half reported livestock disease or death as a production difficulty and just over a quarter had difficulty purchasing feed (Figure 5). These results are similar to the ones that emerged from the third round. Additionally, those with production difficulties cited lack of water (17 percent) and lack of access to pasture (14 percent) as production difficulties. Eight percent reported having livestock stolen, mostly in Artibonite. By department, Nippes (80 percent), Grand'Anse (79 percent) and Artibonite (78 percent) most frequently reported livestock production difficulties.

Figure 5. Livestock production difficulties (percentage of livestock producers)



Source: FAO, 2023. Haiti: DIEM-Monitoring assessments results (December 2022 and July 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 17 August 2023]. <https://data-in-emergencies.fao.org>

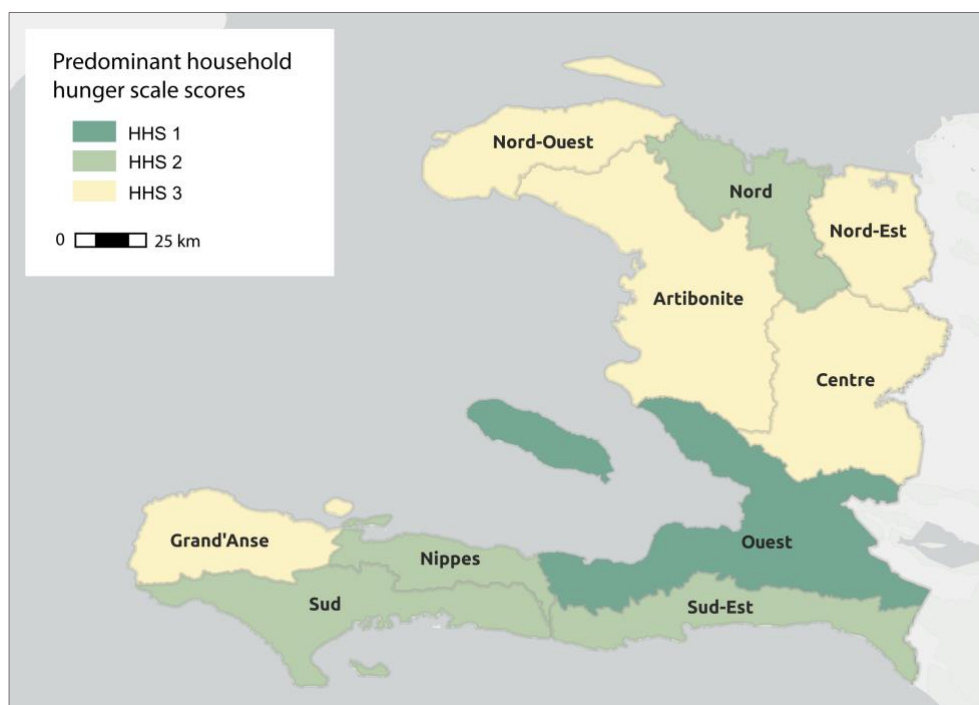
Out of 695 surveyed livestock producers, 72 percent reported a decrease in the number of livestock owned compared to the previous year. Over half attributed the decrease to death because of poor health or nutrition and 17 percent sold their livestock in distress. An increase in the number of livestock owned was owed to an increase in births, as in the third round.

Of the 119 surveyed producers selling livestock, 34 percent had difficulties, mostly due to low sales prices. The most sold livestock were goats (45 percent), followed by poultry (17 percent) and cattle (11 percent).

Food security

As in the previous round, many households experienced food consumption deficits and engaged in emergency coping strategies to prevent larger gaps. Compared to the third round, the HDDS was higher. However, this is not necessarily indicative of improved food security as the increase is largely driven by higher consumption of non-nutritious foods (oil/butter, sugar and condiments). The HHS was slightly lower than the third round (2.56 compared to 2.77), indicating less hunger experienced from May to June 2023 compared to September to November 2022 (a period following several instances of “pays lock” – country shutdowns) (Figure 6). These results still hold when controlling for whether crop households had begun harvesting their produce.

Figure 6. Predominant household hunger scale (HHS) scores (by department)



Source: FAO, 2023. Haiti: DIEM-Monitoring assessments results (July 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 17 August 2023]. <https://data-in-emergencies.fao.org>

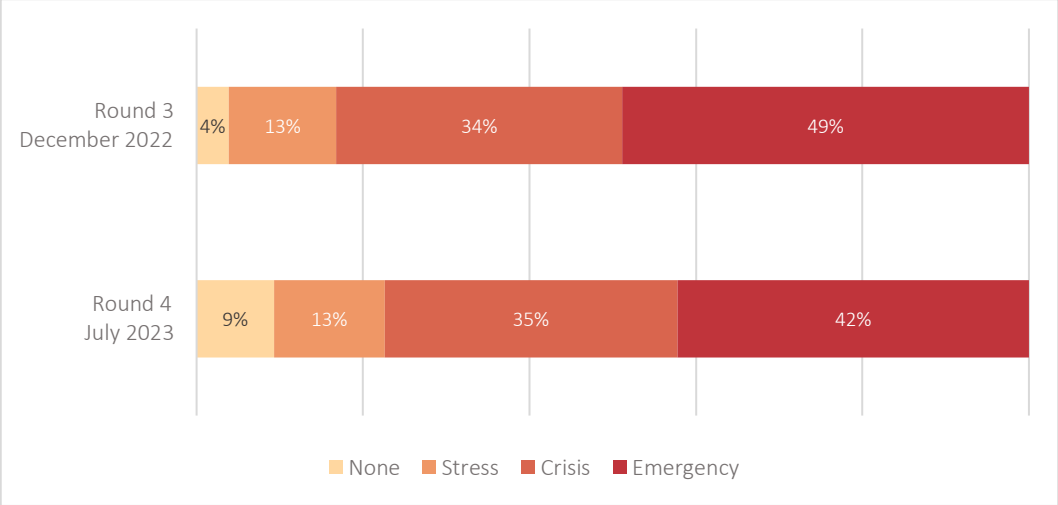
Food security outcomes are still low, and as the survey only reached households in possession of phones, the food insecurity is likely worse for more vulnerable populations as estimated by the latest Integrated Food Security Phase Classification (IPC) analysis which indicates that 49 percent of the population is in IPC Phase 3+ (IPC, 2023).

Several observations show similar results to the third round. The departments with the highest food insecurity were Nord-Ouest and Grand'Anse, female-headed households had worse outcomes than male-headed households and agricultural households had better food security outcomes than non-agricultural households. Those engaged in agricultural activities that include livestock had the best food security outcomes, on average. Those with no main income or income from casual farm labour had the worst food security outcomes. The households that received remittances had better food security outcomes than those without.

The Food Insecurity Experience Scale (FIES)² was computed this round and was used to retroactively calculate FIES for the third round as a means of comparison. The scores show no significant difference in the prevalence of recent moderate or severe household food insecurity. The National Coordination of Food Security (CNSA) in Haiti is currently analysing FIES results from a recently conducted national survey. These data will serve to interpret the FIES results within a larger analytical framework.

Forty-two percent of the households surveyed engaged in emergency coping strategies – a slight decrease from the third round (49 percent) (Figure 7). Crop producing households (44 percent) used emergency coping strategies most often, as in the previous round. A third of all households sold assets and more animals than usual, depleting their ability to offset reducing food consumption in the future. Male-headed households sold assets and animals more often than female-headed households, while female-headed households resorted more frequently to begging and sending household members to eat elsewhere. On average, male-headed households used depleting coping mechanisms more than female-headed households.

Figure 7. Households adopting coping strategies (percentage of households)



Source: FAO. 2023. Haiti: DIEM-Monitoring assessments results (December 2022 and July 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 17 August 2023]. <https://data-in-emergencies.fao.org>

² FIES results are subject to change, until the country scale is established for more consistent comparability across rounds.

Table 1. Coping strategies adopted (percentage of households)

Category		Round 3 December 2022	Round 4 July 2023
Stress coping strategies	Spent savings	77%	-
	Sold household assets/goods	-	33%
	Purchased food on credit or borrowed food	76%	78%
	Sent household members to eat elsewhere	32%	32%
	Sold more animals (non-productive) than usual	-	31%
Crisis coping strategies	Withdrew children from school	32%	35%
	Reduce expenses on health	69%	64%
	Sold productive assets or means of transport	35%	13%
Emergency coping strategies	Begged	38%	37%
	Migrated with the entire household	18%	14%
	Engaged in illegal/degrading income activities	9%	9%

Source: FAO. 2023. Haiti: DIEM-Monitoring assessments results (December 2022 and July 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 17 August 2023]. <https://data-in-emergencies.fao.org>

Needs

Ninety percent of the agricultural households reported needing assistance for agricultural activities. Of these, 57 percent reported needing cash, with Grand'Anse most frequently reporting this need (71 percent). The second most reported need was crop inputs (42 percent). The need for crop inputs was most often reported in Ouest rest, Sud-Est, Artibonite and Sud. A quarter reported needing food. On average, female-headed households reported needing food more frequently than male-headed households (33 percent compared to 23 percent). Fifteen percent of households reported needing infrastructure for crop production, with Artibonite HT04, Centre and Nord-Est reporting this need most frequently. However, observations are not sufficient to be representative at the departmental level.

Overall, Nord most frequently reported needing assistance followed by Nord-Ouest. Producers of livestock only reported relatively less need for assistance (73 percent).

Most agricultural households had not received any assistance in the three months preceding the survey, except for 2 percent that received food assistance and 3 percent who received cash.

Recommendations

The limited number of observations for certain indicators at the department level does not allow us to determine a priority department for each of the recommendations listed below. Overall, we recommend targeting the departments with the highest food insecurity and vulnerability to shocks and production difficulties. Long-term assistance should address the difficulties households face in carrying out their economic activities and must be designed to reduce the impact of climate shocks.

Short-term recommendations (1-6 months)

- > Provide better access to veterinary care and feed, in combination with animal distribution.
- > Protect livelihoods and prevent depletion of the households' capacity to cope with food insecurity with cash transfers. Assistance in the form of cash or crop inputs is important to support agricultural households' livelihoods. The large need for food assistance equally reflects the importance of emergency relief to avoid exacerbating the food insecurity crisis in Haiti.

Long-term recommendations (6 months and more)

- > Develop early warning systems to reduce the impacts of climatic shocks, as well as climate-resilient approaches in agriculture. During hurricane season, Haiti is particularly vulnerable to climatic shocks.
- > Build alternative and improve management of water sources and basins. In addition, to mitigate effects of drought, analyse soil quality and research climate resistant varieties that can be cultivated instead.
- > Establish proper storage facilities and suitable and sustainable packaging practices to reduce damages to the produce after harvest and during distribution.

References

- FEWS NET (Famine Early Warning Systems Network).** 2015. *Haiti – Livelihood Zones*. Washington. https://fews.net/sites/default/files/documents/reports/HT_Livelihoods_2015.pdf
- IPC.** 2023. Haiti: Acute Food Insecurity Projection Update for March – June 2023. In: *IPC*. Rome. ipcinform.org/ipc-country-analysis/details-map/en/c/1156263/
- OCHA (Office for the Coordination of Humanitarian Affairs).** 2023. *Haiti: Severe Climate Events – Flash Update #3 (as of 20 June 2023)*. New York, USA. <https://reliefweb.int/report/haiti/haiti-severe-climate-events-flash-update-3-20-june-2023>
- Protection Civile.** 2023. Rapport de Situation-3. In: *Protection Civile*. Haiti. <https://protectioncivile.gouv.ht/2896-2>



USAID
FROM THE AMERICAN PEOPLE

This brief is made possible by the support of the American People through the United States Agency for International Development (USAID). The contents of this report are the sole responsibility of FAO and do not necessarily reflect the views of USAID or the United States of America Government.

Contact

FAO Representation in Haiti

FAO-HT@fao.org
fao.org/haiti/fr | @FAOHaiti
Port-au-Prince, Haiti

Office of Emergencies and Resilience

Data-in-emergencies@fao.org
data-in-emergencies.fao.org | @FAOEmergencies
Rome, Italy

Food and Agriculture Organization of the United Nations

The boundaries and names shown and the designations used on the map(s) in this information product do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on the map represent approximate border lines for which there may not yet be full agreement.

FAO. 2023. *Haiti: DIEM – Data in Emergencies Monitoring brief, round 4 – Results and recommendations, August 2023*. Rome.
<https://doi.org/10.4060/cc7562en>



Some rights reserved. This work is available under a CC BY-NC-SA 3.0 IGO licence.