Food and Agriculture Organization of the United Nations

Yemen

DIEM – Data in Emergencies Monitoring brief, round 4

Results and recommendations
August 2022

Data collection 29 March to 30 April 2022

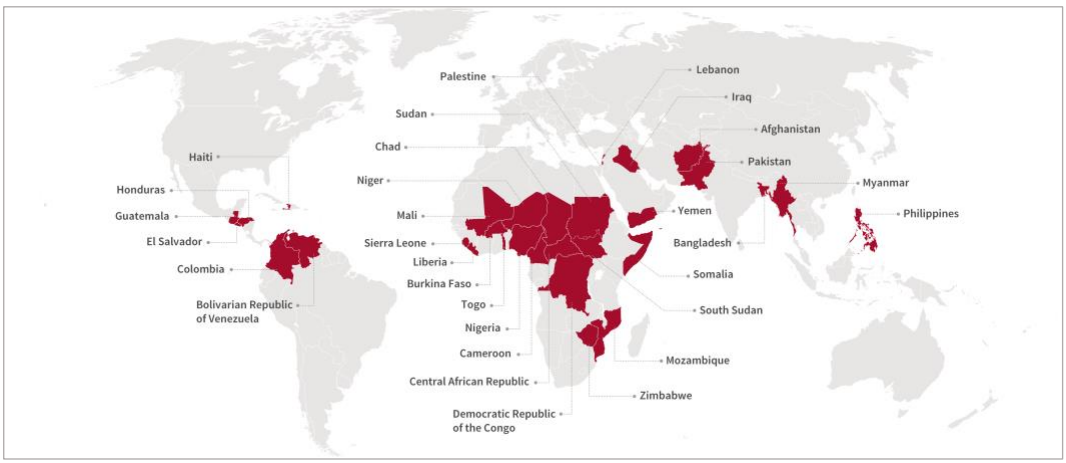
Methodology

The Food and Agriculture Organization of the United Nations (FAO) launched a household survey in Yemen through the Data in Emergencies Monitoring (DIEM-Monitoring) System to monitor agricultural livelihoods and food security. This fourth-round survey reached 2 452 households through computer-assisted telephone interviews (CATI) conducted from 29 March to 30 April 2022. Households were surveyed across all 22 governorates of Yemen.

A survey targeting 2 420 households was initially designed with 110 households targeted in each of the 22 governorates. The sample was representative of the population of Yemen and of the governorates (Admin 1) with a 95 percent confidence level and a 6 percent margin of error. A total of 2 452 households were interviewed during this fourth round of data collection, 66 percent of which were engaged in agricultural activities (crop, livestock and both), and 2 percent of which were engaged in fish production and sales in the 12 months preceding the survey. This fourth-round survey was the first to be representative at both the national and governorate level in Yemen.

Data were weighted at the analytical stage to ensure that the regional population distribution was adequately represented. Weights were computed based on the population's distribution and highest level of education attained by the head of the household at governorate level, and a wealth proxy (access to potable water) at national level.

Figure 1. Countries with established DIEM-Monitoring Systems



Source of data: FAO. 2022. DIEM-Monitoring. Rome. Cited 6 April 2022. https://data-in-emergencies.fao.org
Source of map: United Nations. 2020. Map of the World. Cited 6 April 2022. un.org/geospatial/content/map-world
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. Final boundary between the Sudan and South Sudan has not yet been determined. 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.

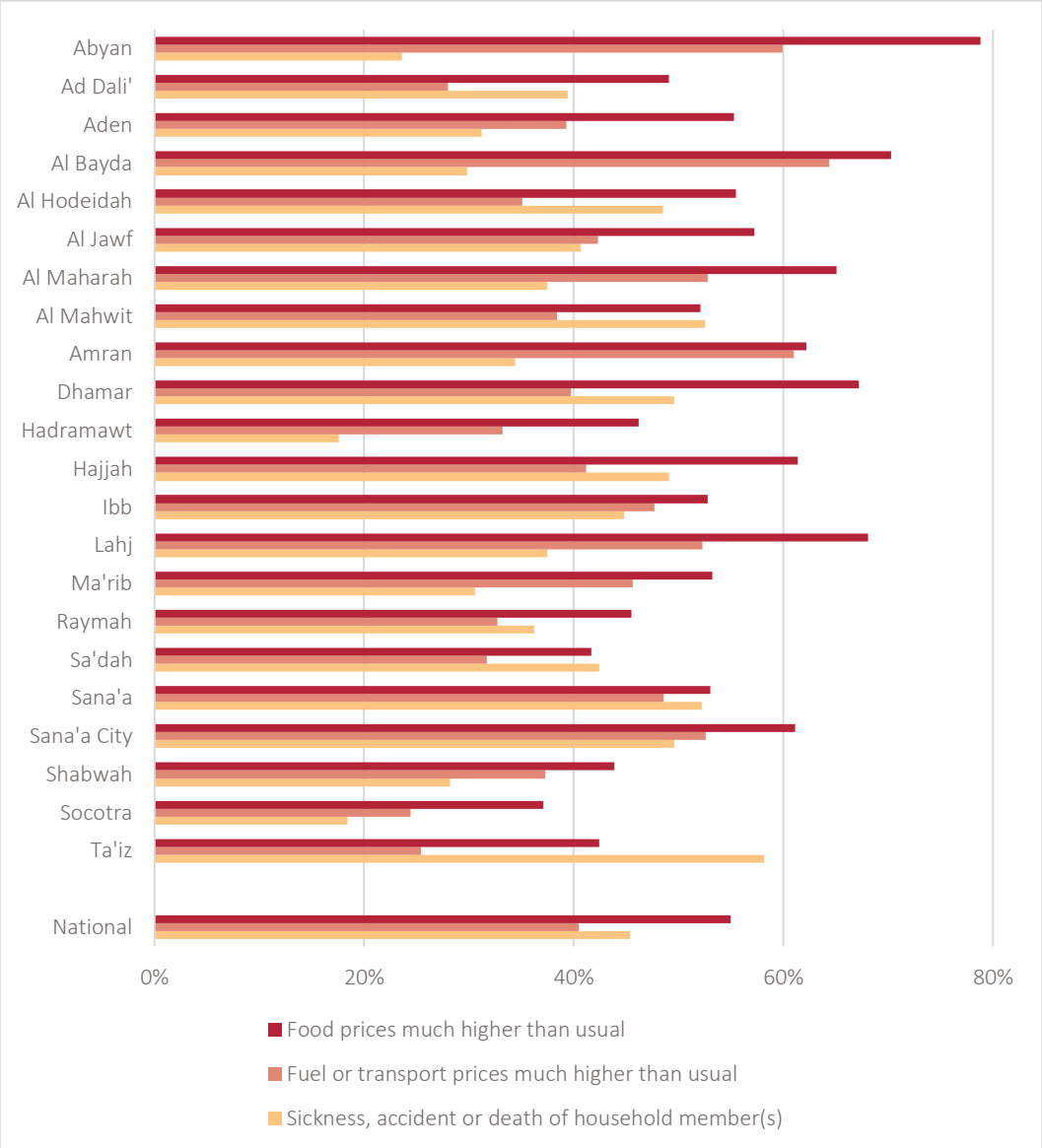
At the core of the DIEM-Monitoring System are country-level dashboards. Readers are encouraged to explore these dashboards to gain more insight into the context of Yemen and other countries.

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

Income and shocks

Approximately 82 percent of the surveyed households faced shocks in the three months preceding the survey. Unusually high prices of food (55 percent), sickness or death of household members (45 percent), and higher than usual fuel prices (41 percent) were the most frequently reported shocks (Figure 2). Due to the prolonged conflict, the weaning economy keeps the Yemeni Rial volatile and prices of imported food and fuel high. This has been further exacerbated in recent months by global food inflation, mostly due to the Russia-Ukraine war.

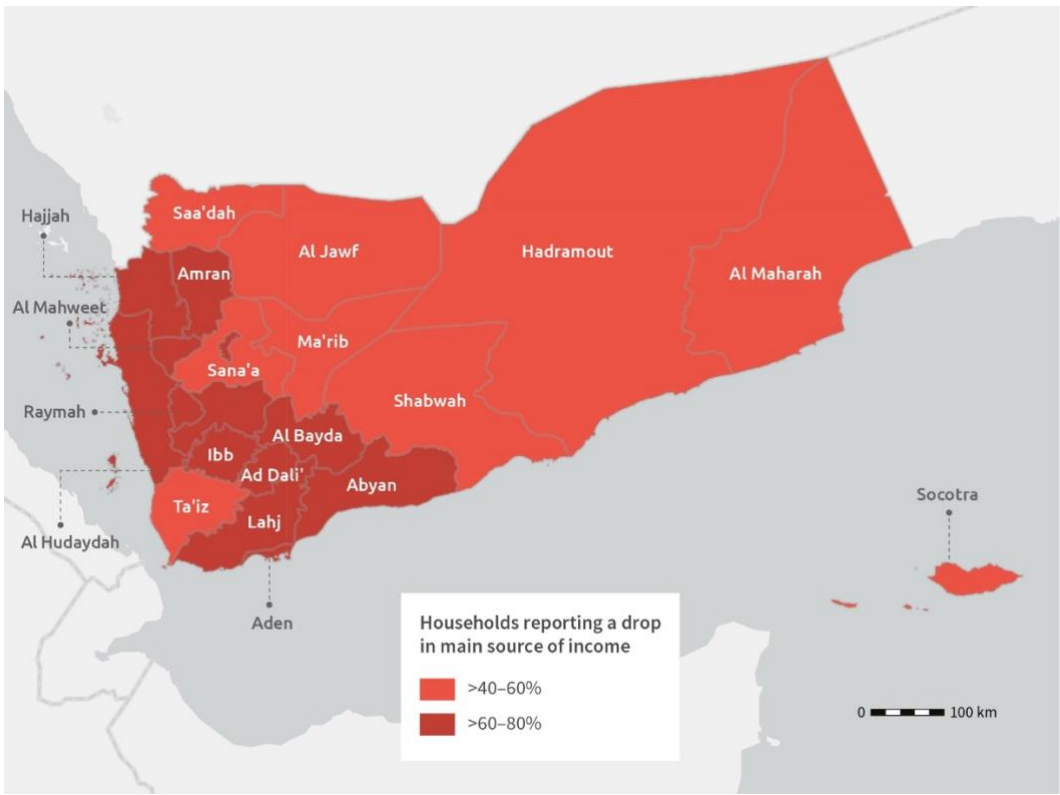
Figure 2. Top three major shocks reported by the surveyed households (by location)



Source of data: FAO. 2022. Yemen: DIEM-Monitoring assessment results (March–April 2022). Rome. Cited 8 August 2022. https://data-in-emergencies.fao.org

Nearly 66 percent of the households reported a decrease in income, of which 32 percent reported that the decrease was less than half when compared to the same period in a typical year. In Abyan, Ad Dali', Aden, Al Bayda, Al Hodeidah, Al Mahwit, Amran, Dhamar, Haijah, Ibb, Lahj, Raymah and Sana'a city, over 60 percent of the households reported a decrease in income (Figure 3). Agricultural producers experienced a decrease in income at a larger proportion than non-agricultural households. Sickness of household members was reported more in governorates with insufficient health facilities.

Figure 3. Decrease in main source of income (percentage of households)

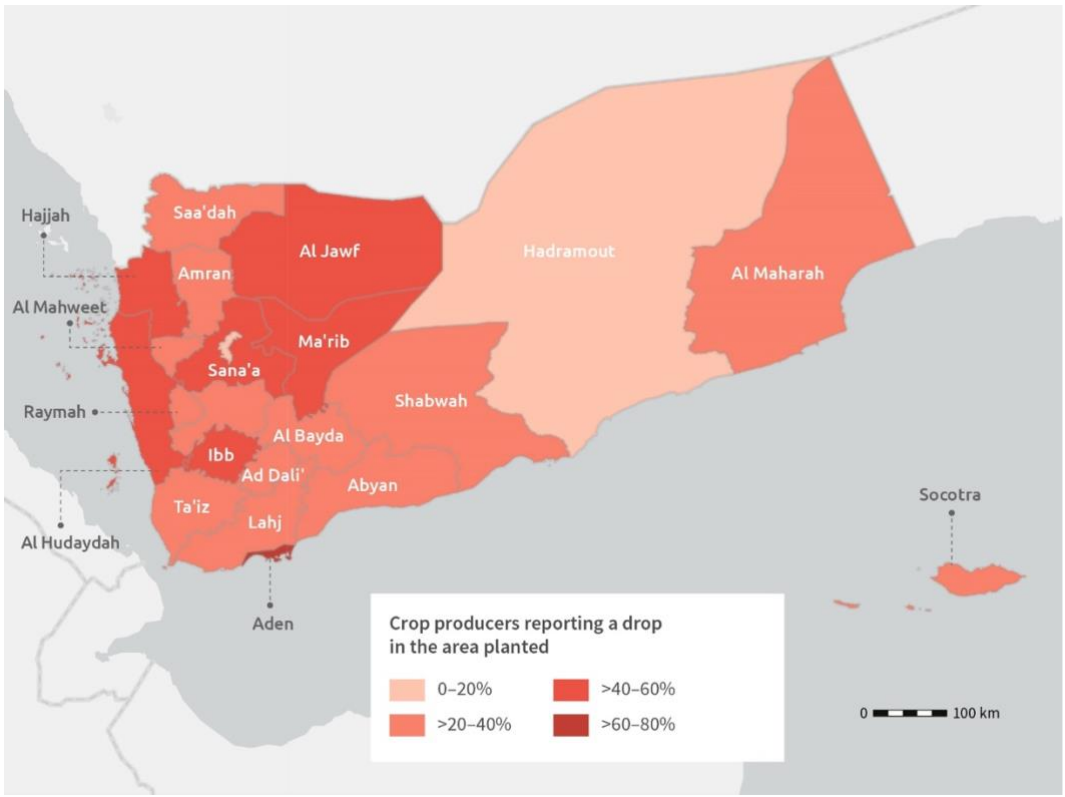


Source of data: FAO. 2022. Yemen: DIEM-Monitoring assessment results (March–April 2022). Rome. Cited 8 August 2022. https://data-in-emergencies.fao.org
Source of map: Esri, HERE, Garmin, FAO, NOAA, USGS. 2018. Map of Yemen. Cited 8 August 2022. https://data-in-emergencies.fao.org/pages/explore

Crops

Seventy-six percent of crop producers faced difficulties during crop production. Of those who reported difficulties, 59 percent cited insufficient irrigation or rainwater and one-fourth cited crop damage by pests as the main difficulties. In March and April – the planting and growing season – low rainfall caused water scarcity for rainfed farmers, who represented the majority. This situation may have led to a reduction in the crop plantation area. Of the crop producers who planted crops, 37 percent reported a decrease in the area planted, and 55 percent expected a reduced harvest compared to a typical year. In Aden Hajjah, Al Hudaydah, Al Jawf, Ibb, Marib, and Sana'a, the reduction in the area planted was higher than the national average (Figure 4). Crop sales were limited to cash crops like *Qat*, some food crops and vegetables. Fifty-three percent of the crop sellers faced difficulties, with lower crop prices the most cited difficulty.

Figure 4. Percentage of crop producers reporting a reduction in the area planted



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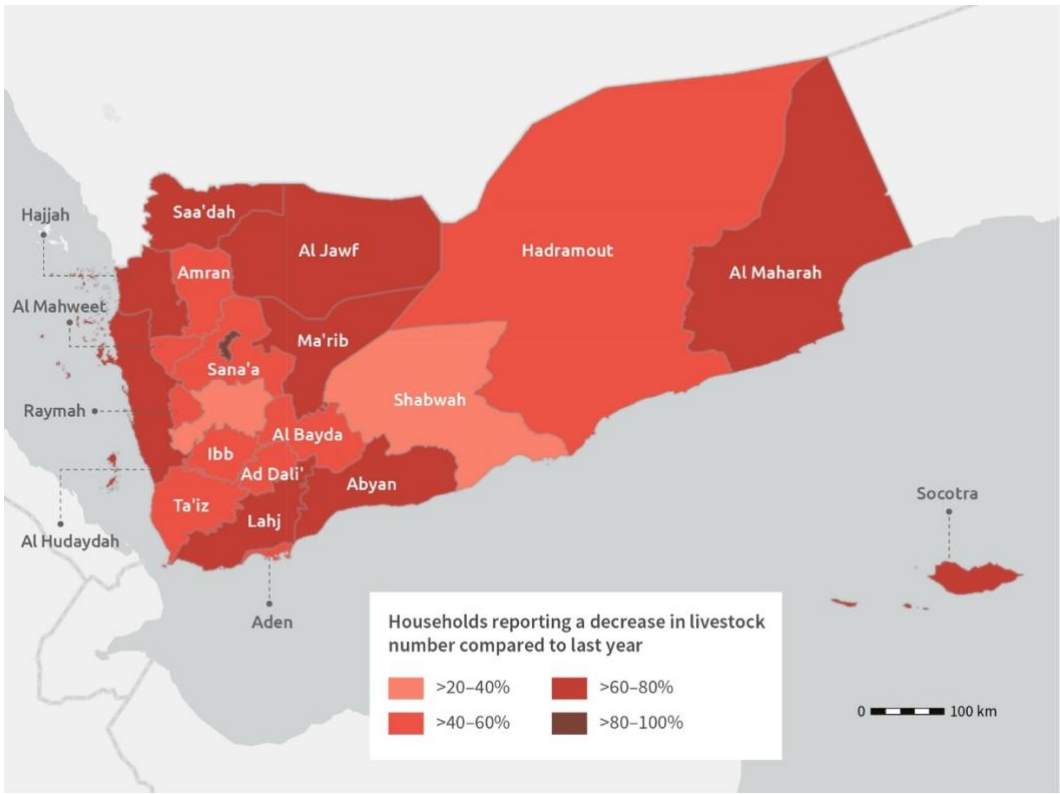
Livestock

Most livestock producers (55 percent) saw a reduction in their total livestock compared to last year. Distress sales and the death of animals were cited as the main reasons for the decrease in livestock numbers. In Abyan, Al Hodeidah, Al Jawf, Al Mahara, Hajjah, Lahj, Marib, Sa'dah and Socotra, over 60 percent reported a reduction in total livestock (Figure 5).

Figure 5. Percentage of livestock producers reporting a decline in livestock numbers compared to last year



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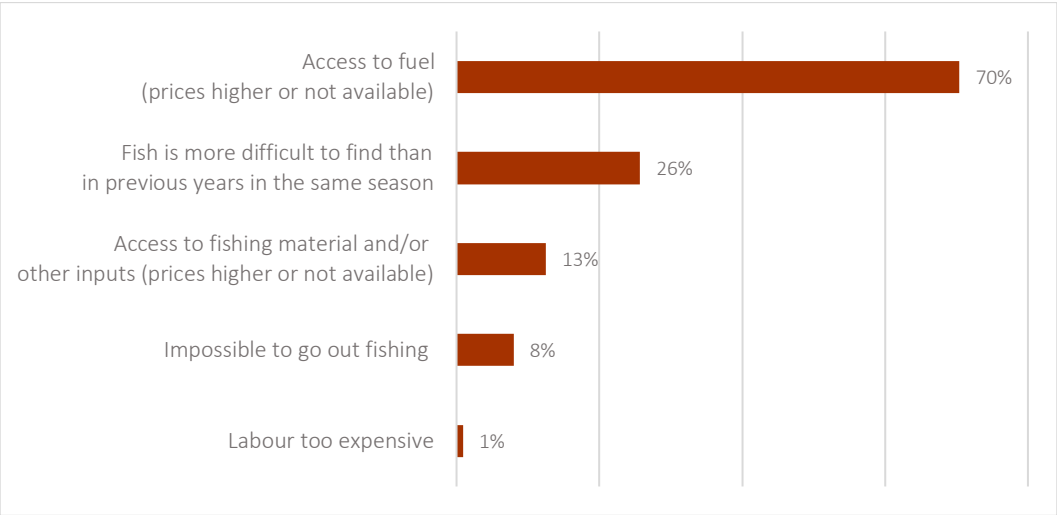
Seventy-five percent of livestock producers reported difficulties. The most frequently reported difficulties were access to feed at the market (67 percent), animal diseases or deaths (35 percent) and access to pasture (30 percent). Inadequate rainfall likely affected the pasture and caused fodder scarcity. Of the producers selling livestock and livestock products, 66 percent faced difficulties. Low selling prices (72 percent) and high marketing costs (31 percent) were cited as major difficulties. While high fuel prices increased marketing costs, surplus livestock in the local markets due to reduced cross-border trade and poor body conditions of the animals in dry weather are possible reasons for the low selling price.

Yemen has significant coastal areas in which around 2 percent of the surveyed households engaged in fish production and sale. Eighty-four percent of the fishery households saw a reduction in fish production in the three months preceding the survey compared to the same period last year. The reduction in fish production was likely caused by restricted movement to open sea fishing grounds due to security reasons and because high fuel prices limit fishing in the favourable season (March-April). Ninety-three percent of fishery households reported difficulties with fishery and aquaculture production.

The most reported difficulty was access to fuel due to its high price (Figure 6). Sale difficulties were also reported by 89 percent of surveyed households. The most cited difficulty for the sale of fish products was smaller profits due to high transportation and marketing costs (58 percent) – a low supply of fish and high marketing costs due to high fuel price incurs less profit. Around 74 percent of the fish producers reported a decrease in fish price compared to a normal year.

Figure 6. Difficulties faced by the fish producers



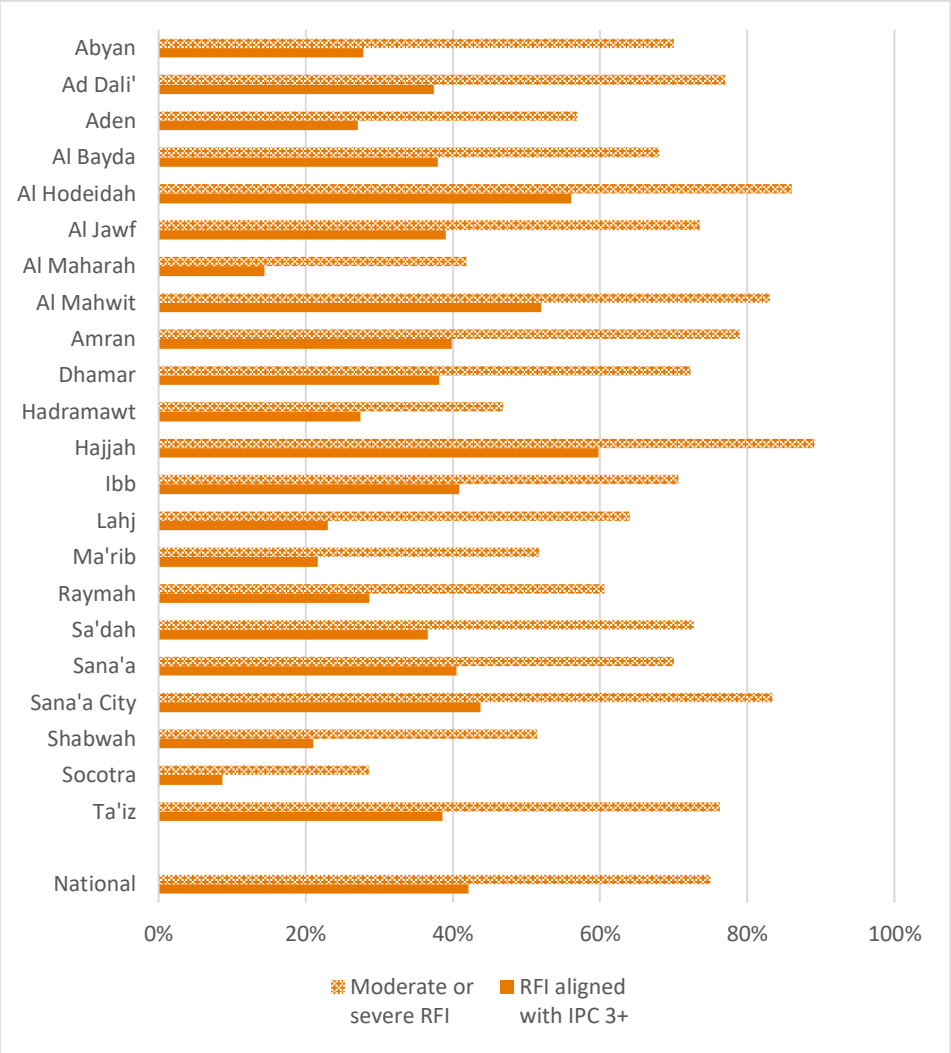
Source of data: FAO. 2022. Yemen: DIEM-Monitoring assessment results (March–April 2022). Rome. Cited 8 August 2022. https://data-in-emergencies.fao.org

Food security

Based on the Food Insecurity Experience Scale (FIES)[1] threshold, the prevalence of moderate to severe recent food insecurity (RFI) was 75 percent, and the prevalence of RFI at IPC Phase 3 and above was 42 percent (Figure 7). It is worth noting that RFI at IPC Phase 3 and above is a more severe condition than the prevalence of moderate to severe RFI. Compared to the previous rounds, the FIES scale reported the highest prevalence of food insecurity in this fourth-round survey.

Agricultural wage labourers reported the highest prevalence of RFI as demonstrated by the FIES. A higher proportion of livestock producers and sellers experienced RFI compared to the fish and crop producers.

Figure 7. Prevalence of recent food insecurity at different severity levels based on FIES (by location)

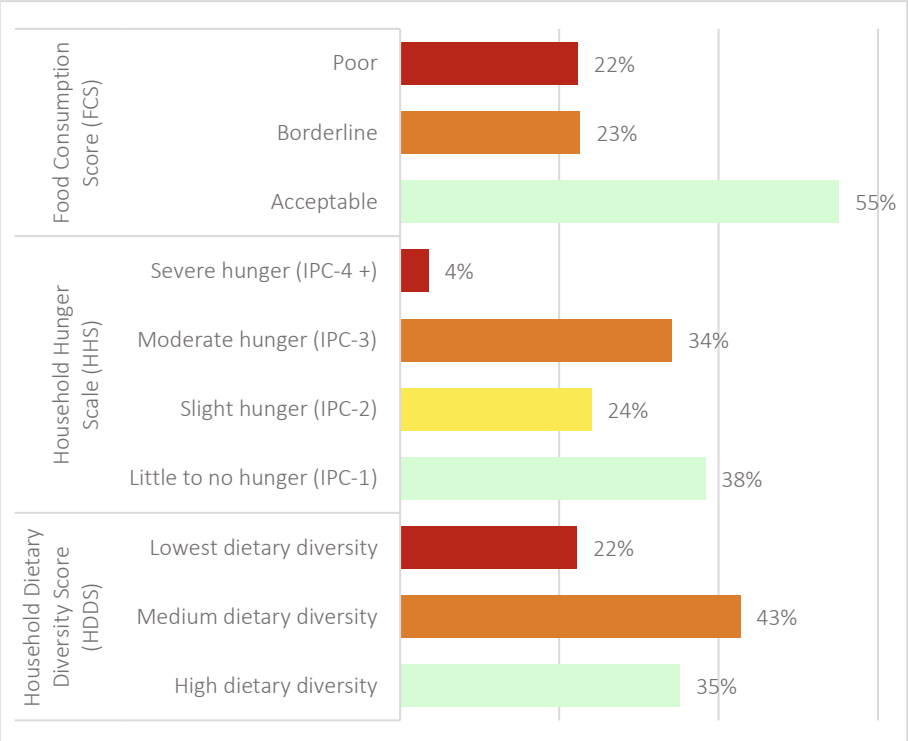


Source of data: FAO. 2022. Yemen: DIEM-Monitoring assessment results (March–April 2022). Rome. Cited 8 August 2022. https://data-in-emergencies.fao.org

[1] FIES results are subject to change. The country scale will continue to evolve over additional rounds of data collection allowing for more consistent comparability across rounds.

Other food security measures reported troubling hunger and dietary diversity situations that align with the prevalence of RFI IPC phase 3 and above. The household hunger scale (HHS) estimated that 38 percent of the households are experiencing moderate to severe hunger at the level of IPC Phase 3 and above. As per the Household Dietary Diversity Score (HDDS), in the 24 hours preceding the interview, 43 percent consumed three to four food groups per day, and 22 percent had very low dietary diversity of less than two food groups per day. The Food Consumption Score (FCS) estimated a 45 percent prevalence of inadequate food consumption (borderline and poor) of which 22 percent experienced poor food consumption (Figure 8).

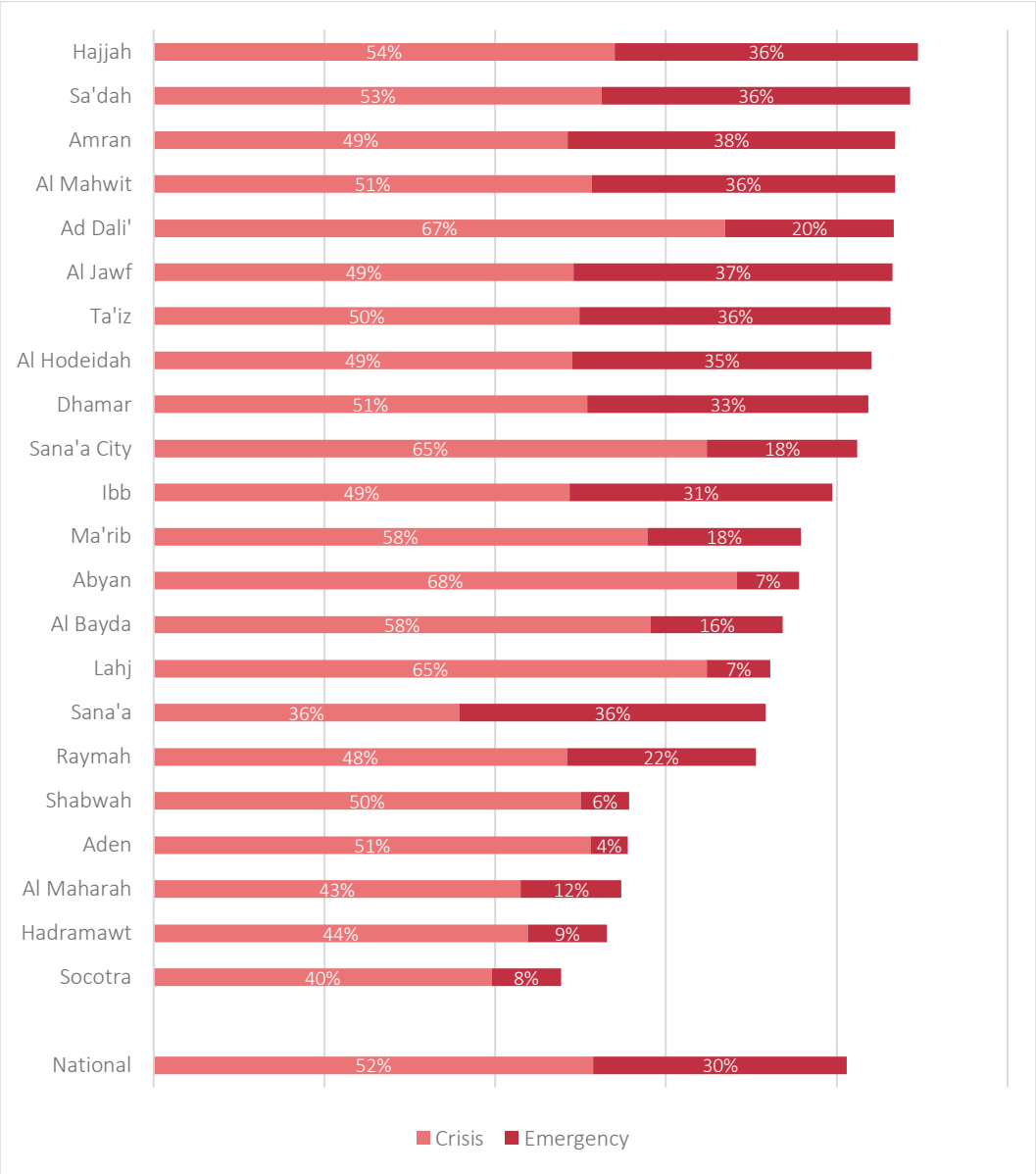
Figure 8. Food insecurity measures – FCS, HHS and HDDS



Source of data: FAO. 2022. Yemen: DIEM-Monitoring assessment results (March–April 2022). Rome. Cited 8 August 2022. https://data-in-emergencies.fao.org

The Hajjah governorate had a high prevalence of food insecurity, hunger and inadequate diet based on all five measures – RFI moderate and severe, RFI IPC Phase 3+, FCS, HHS and HHDS. Among the other governorates, Al Hodeidah, Al Jawf, Al Mahwit, Amran, Dhamar, Ibb and Sana'a had a high prevalence of food insecurity in three out of the five food security measures mentioned above. In these governorates, a large majority experienced RFI at IPC Phase 3 and above. Nearly 54 percent of the households experienced hardships due to food shortages and adopted food consumption-based coping strategies. Frequently adopted coping strategies included eating less preferred foods and limiting portion size at mealtimes. Based on the Livelihood Coping Strategy Index (LCSI), 52 percent of the surveyed households resorted to crisis coping strategies and 30 percent to emergency coping strategies (Figure 9). Borrowing money, buying food on credit, selling household assets and reducing health expenses were widely practised. The proportion of households resorting to emergency coping strategies is alarming and has increased from the previous rounds. In Al Hudaidah, Al Jawf, Al Mahwit, Amran, Dhamar, Hajjah, Sa'dah, Sana'a and Taiz, over one-third of the households resorted to emergency coping strategies. The situation has likely been driven by the soaring food prices and decreased income.

Figure 9. Crisis and emergency coping strategies adopted by the households (by location)



Source of data: FAO. 2022. Yemen: DIEM-Monitoring assessment results (March–April 2022). Rome. Cited 8 August 2022. https://data-in-emergencies.fao.org

Needs

Nearly 95 percent of the surveyed households reported needing assistance in the three to six months following the survey. A large majority (68 percent) of the households cited cash or food assistance as their primary need. Animal feed was cited as a need by 27 percent of the surveyed households. While cash remains the major need across all livelihood groups, over one-third of the crop producers cited fertilizer and irrigation water as their main needs. Among livestock producers, 35 percent mentioned the need for animal feed and 34 percent cited veterinary services. Over one-third of the respondents from other livelihood groups mentioned the need for animal feed as a way to support, possibly, a second income source such as small ruminants and poultry.

Recommendations

Short-term recommendations (1–6 months)

- Expand and boost resilience-building interventions focused on restoration and diversification of livelihoods as a short-term measure.
- Food consumption gaps and high reliance on crisis and emergency coping strategies call for strengthening food security and livelihood interventions. Enhance the livelihood resilience of farmers through cash-for-work programmes like rehabilitation and maintenance of rural roads.
- Distribute agricultural inputs to livestock and crop producers within the scope of existing emergency livelihood support programmes. Support small-holder farmers with productive inputs. Provide equipment and technical support for income-generating activities like cash crops, greenhouse horticulture, backyard poultry and vegetable production, milk processing and marketing while focusing on female farmers.
- Prioritize vulnerable areas like Al Hodeidah, Al Jawf, Al Mahwit, Dhamar, Hajjah, Ibb and Sana'a, and livelihoods for food security and livelihood interventions.
- Transfer cash through community infrastructure rehabilitation programmes to improve and diversify income.
- Reduce the cost of animal feed by improving the production of animal feed, fodder and animal rations from local feed ingredients, including agro-industrial biproducts.

Long-term recommendations (6 months and beyond)

- Provide solar water pumps to ensure water provision for crop production and livestock herds during a fuel shortage.
- Establish water user associations to promote sustainable water resource management systems and irrigation schemes to mitigate drought risks. Install solar photovoltaic pumps that ensure water provision and evade high fuel prices.
- Strengthen Early Warning Systems that trigger early action focusing on crop and weather forecasting, pest and disease surveillance for livestock and crops, and domestic market monitoring.

- Improve animal nutrition by introducing and demonstrating appropriate technologies at Farmer Field Schools.
- Support systematic disease surveillance, vaccination campaigns of small ruminants, and treatments against internal and external parasites.
- Increase the share of small-holder livestock farmers in the value chain system through transferring, processing, packaging and marketing activities to farmers associations, and promoting partnerships with the private sector.
- Provide training and input support to rural women for the promotion of animal health and feeding, milk production and sheep and goat fattening, food processing, backyard gardening and roof water collection.
- Support the vulnerable fisherfolk community in the coastal areas by rehabilitating infrastructure and facilities for fish production. Facilitate marketing and protection of fish products from spoilage or contamination by providing solar-powered cold storage.

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