Yemen

DIEM – Data in Emergencies Monitoring brief, round 10

Results and recommendations
September 2023
Key highlights

> A higher percentage of households reported facing more shocks in August 2023 compared to April 2023, May 2023 and June 2023 largely due to a reported increase in employment loss and higher food prices.

> Sixty percent of households reported a decrease in income. The percentage of households reporting over a 50 percent decrease in income marginally improved in August 2023 compared to June 2023.

> Of the crop producers who planted crops, 28 percent reported a decrease in the area planted, an improvement from the previous rounds. A high proportion of crop producers (76 percent) still reported difficulties, mainly insufficient irrigation or rainwater (57 percent).

> Over half of the livestock producers (51 percent) saw a reduction in the number of livestock compared to the previous year mainly due to the sale of animals during *Eid al-Adha*, and the poor health and death of animals.

> Based on the Food Insecurity Experience Scale (FIES), the prevalence of moderate to severe recent food insecurity (RFI) was 70 percent. The RFI equivalent to the Integrated Food Security Phase Classification (IPC) 3 and worse was 36 percent.

> Food insecurity slightly decreased in August 2023 compared to June 2023. The two likely reasons for this improvement are the onset of the harvest season for some areas and *Eid al-Adha* in the last week of June when households had better access to food due to certain religious practices.

> In line with food security improvements, based on the Data in Emergencies Monitoring (DIEM-Monitoring) and High Frequency Monitoring (HFM) surveys, households resorting to emergency livelihood coping strategies dropped to around 15 percent and 61 percent resorted to crisis coping strategies.

> In the current round, Hajjah and Al Hodeidah emerged as the most food-insecure governorates. In Hajjah, food insecurity, hunger and inadequate diet were higher in most data collection rounds, indicating a chronic situation.

> It is recommended to scale up existing food or cash-for-work programmes in food insecure areas, strengthen livelihood and resilience-building interventions, and distribute crop inputs and livestock feed to small producers within the scope of ongoing emergency livelihood support programmes.
Methodology

The Food and Agriculture Organization of the United Nations (FAO) conducted a household survey in Yemen through the DIEM-Monitoring System to monitor agricultural livelihoods and food security. This tenth-round survey was conducted via computer-assisted telephone interviews between 7 July and 11 August 2023. Households were surveyed across all 22 governorates of Yemen.

Initially, the sample was designed to include 110 households in each of the 22 governorates, amounting to a total of 2 420 households targeted nationally. This sample is representative of the population of Yemen and of the governorates at administrative 1 level with a 95 percent confidence level and a 10 percent margin of error. A total of 2 507 households were reached during this tenth-round survey using random digit dialing and a panel list of agricultural households that were surveyed in previous data collection rounds to reach the target.

Data were weighted at the analytical stage to ensure that regional population distribution was adequately represented. Weights were computed based on population size and wealth proxies (education of the head of household and access to potable water).

In Yemen, a total of ten rounds of surveys have been conducted since August 2020. Six of these surveys were DIEM-Monitoring rounds and four were HFM rounds. While DIEM-Monitoring surveys are more comprehensive and cover income, shocks, agricultural livelihoods, food security and needs, HFM surveys utilize the same methodology but only include a subset of indicators on income, shocks and food security outcomes.

The sampling frame for the first three rounds of DIEM-Monitoring surveys was not representative of the population of Yemen and these surveys have not been cited for national-level information and comparison purposes. Comparisons related to agricultural livelihoods have been drawn from the past two DIEM-Monitoring surveys: the fourth round, conducted in April 2022, and the sixth round, conducted in March 2023. For shocks, income change and food security, a wider range of data points are available. Therefore, in order to keep comparisons compatible with agricultural seasonality, the HFM surveys conducted in April, May and June 2023, and the DIEM-Monitoring survey in April 2022 have been used for comparisons.
Figure 1. Countries with an established DIEM-Monitoring System


The final boundary between the Sudan and South Sudan has not yet been determined. Final status of the Abyei area is not yet determined. 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.

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 61 percent of the surveyed households faced shocks in the three months preceding the survey. Sickness or death of household members (39 percent) and loss of employment (16 percent) were the two most frequently reported shocks (Figure 2). The percentage of households that reported experiencing shocks significantly increased compared to the HFM survey rounds from April 2023, May 2023 and June 2023. This was largely driven by a reported increase of death and illness of household members, loss of employment, and high food and fuel prices.

The higher percentage of households reporting loss of employment could be due to the less labour-intensive agricultural season from March to August. Although the percentage of households reporting high food and fuel prices as a shock reduced substantially in 2023 compared to 2022 due to increased economic stability in the country, it was slightly higher in August 2023 (12 percent) compared to the previous two months. FAO’s Market Monitoring System confirms that the cost of a minimum food basket and the unofficial diesel price increased in August 2023 compared to June 2023 (FAO, 2023a).
Nearly 60 percent of surveyed households reported a decrease in income from their main income source in the three months preceding the survey. Twenty-seven percent of households mentioned that the decrease was more than half when compared to the same period the previous year. The difference in the percentage of households reporting an income decrease between the HFM June 2023 round and the DIEM-Monitoring August 2023 round is marginal compared to the HFM rounds from April and May 2023 when households reported the income decrease was significantly higher. Over 60 percent of respondent households reported decreased income from their main income source in 14 out of Yemen’s 22 governorates (Figure 3).
The tenth-round survey was conducted predominantly in a season that did not require labour-intensive agricultural activities. Even so, 60 percent of the surveyed households were involved in agricultural activities as a main income source. Agricultural producers experienced a significant decrease in income at a larger proportion (more than 60 percent) than non-agricultural households.
Crops

Figure 4. Yemen agricultural calendar

Of the surveyed households, 52 percent were engaged in the production and sale of crops, livestock and both in the 12 months preceding the survey. However, the number of agricultural households surveyed in Aden, Al Mahara and Sana’a City was low. Findings on agricultural livelihoods from these governorates should be interpreted with caution.

The tenth-round survey coincided with the sowing and growing seasons of some cereal crops, and the harvest of fruits and vegetables. The major crops planted by surveyed households were sorghum (28 percent), maize (26 percent) and other cereals such as wheat, millet (16 percent) and qat (9 percent). Around 76 percent of the crop producers faced difficulties during crop production. This percentage is similar to that of the previous two rounds of DIEM-Monitoring surveys conducted in March 2023 and April 2022. In Abyan, Al Dhale’e, Amran, Dhamar, Hadramawt, Hajjah and Raymah, more than 80 percent of crop producers faced difficulties.

The main reported difficulties did not change much compared to the DIEM-Monitoring surveys of March 2023 and April 2022. Insufficient rainfall and irrigation water (57 percent) was the most frequently reported difficulty in the tenth-round DIEM-Monitoring survey, as in previous rounds (Figure 5). According to FAO’s Global Information Early Warning System on Food and Agriculture (GIEWS) (FAO, 2023b), there were heat stress and dry conditions in Yemen in June and August 2023. February 2023, the month preceding the sixth-round DIEM-Monitoring survey, and March and April 2022, the months preceding the fourth-round DIEM-Monitoring survey, were also months with less rainfall according to GIEWS data. This could be the reason for such high reporting of water scarcity in Yemen where most cereal crop producers rely on rainfed irrigation.
A higher percentage of crop producers (over 50 percent) reported water scarcity in the western part of the country, which also experienced a higher rainfall deficit. Water crises were cited by crop producers in the governorates of Al Mahwit, Dhamar, Lahj and Taizz as the most prominent difficulty in this tenth-round DIEM-Monitoring survey as well as the HFM survey from June 2023 and the DIEM-Monitoring survey from March 2023. The second most reported crop production difficulty was access to agricultural machinery, tools and animals for ploughing (23 percent), which increased from the previous rounds (Figure 5). There was also a higher percentage of crop producers reporting other difficulties such as low quality seeds and access to labour in the tenth-round DIEM-Monitoring survey compared to the previous rounds.

Of the crop producers who planted crops, 28 percent reported a decrease in the area planted and 48 percent expected reduced harvest compared to the same period the previous year. Crop sales were limited to qat (28 percent), other non-food cash crops (31 percent), some vegetables and fruit, and food crops. Sixty-eight percent of crop sellers faced difficulties selling their main crops. These numbers were 60 percent in the March 2023 DIEM-Monitoring survey and 53 percent in the April 2022 DIEM-Monitoring survey. The major difficulties reported were lower crop prices (60 percent), low demand from usual traders and buyers (40 percent) and surplus products in the market (20 percent). Imported cereals and grains were available at
lower prices in the market, reducing demand for domestic products and lowering the selling price.

Livestock

Sixty-four percent of livestock producers reared sheep, while the rest reared cattle or goats as their main livestock in the 12 months preceding the survey. Fifty-one percent of livestock producers reported a reduction in the number of livestock compared to last year, mostly driven by animal sales at good prices due to Eid al-Adha in late June 2023, and the poor health and death of animals. Fifty-nine percent of livestock producers reported difficulties in livestock production in the three months preceding the survey – a lower percentage compared to the DIEM-Monitoring surveys from March 2023 and April 2022 where 65 and 75 percent of livestock producers, respectively, reported facing production difficulties.

In Abyan, Al Baydah, Al Jawf, Amran, Hadramawt, Lahj, Marib, Raymah and Shabwah governorates, over 60 percent of livestock producers reported facing production difficulties in the tenth round DIEM-Monitoring survey. The most reported difficulties included access to feed from the market (61 percent), animal disease or death (29 percent), access to pasture (21 percent) and access to water (21 percent). These figures are similar to those of previous rounds, however with a lower prevalence (Figure 6).

Figure 6. Livestock production difficulties (percentage of livestock producers)

Nearly 56 percent of livestock producers accessed livestock feed from open pasture and 33 percent accessed livestock feed from community-managed pasture. Sparse rainfall in the months of June 2023 and August 2023 likely affected pastures and caused fodder scarcity. Fodder price was also higher in the market in August 2023. In Al Marah and Hadramawt, over 80 percent of livestock producers reported difficulties purchasing feed.

Of the producers selling livestock and livestock products, 42 percent faced selling difficulties. Low selling prices (81 percent) and low demand (21 percent) were the most cited difficulties. Poor body condition of the animals in dry weather and the availability of lower priced and imported meat items in the market could have been reasons for the reported low selling prices. Low selling prices was also cited as the prime difficulty during the DIEM-Monitoring surveys in March 2023 and April 2022.

**Fisheries**

In the three months preceding the survey, around 2 percent of the surveyed households engaged in fish production and sales along the coastal areas of Abyan, Al Hodeidah, Al Maharah, Hadramaut, Lahj, Socotra and Taiz. Around 70 percent of the fishery households reported 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 high fuel prices limiting fishing.

Eighty-five percent of fishery households reported difficulties with fishery and aquaculture production. The most reported difficulties were access to fishing grounds (83 percent), access to fishing inputs (57 percent) and damage of fishing equipment (23 percent). The fish producers reporting high fuel prices as a difficulty decreased by nearly half in the tenth-round DIEM-Monitoring survey compared to the fourth round DIEM-Monitoring survey in April 2022 (Figure 7). Reduced volatility in fuel price in 2023 compared to 2022 could be the reason for this change (FAO, 2023a).
In the three months preceding the survey, 85 percent reported difficulties with fish sales. The most cited difficulties for the sale of fish products were low selling prices (96 percent) and high marketing costs (28 percent). Eighty-six percent of fish producers reported a decrease in fish prices compared to the same period last year.

**Food security**

Based on the FIES,\(^1\) the prevalence of moderate to severe RFI was 70 percent and the prevalence of RFI equivalent to crisis or worse (IPC Phase 3 and worse) was 36 percent (Figure 8). Other food security measures indicate that 30 percent of households are experiencing moderate or severe hunger, 39 percent are experiencing moderate to low dietary diversity (as measured with the household dietary diversity score [HDDS]) and around 45 percent reported inadequate food consumption (as measured with the food consumption score [FCS]). The various measures of food insecurity are not comparable due to methodological differences. However, data from the various food security indicators included in the survey indicate that food insecurity was between 30 and 40 percent.\(^2\)

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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.
2. The food security situation in Yemen is assessed based on five food security outcome indicators: 1) FIES, RFI moderate or severe; 2) FIES, RFI to IPC Phase 3 or worse; 3) Household hunger scale (HHS) moderate or severe; 4) HDDS moderate or low; and 5) FCS borderline or poor.
Despite inadequate food consumption, food security outcomes generally improved in 2023 compared to 2022, mainly due to the increased physical security and economic stability gained after April 2022. Moreover, food security outcomes slightly improved in August 2023 compared to June 2023. The two possible reasons for this improvement are the onset of the harvest of fruit and vegetables each June and July, and Eid al-Adha, a religious festival that occurred in the last week of June 2023 when households generally had better access to food due to obligations such as Zakat.  

The results of the tenth-round survey indicate that Al Hodeidah and Hajjah had a higher prevalence of food insecurity, hunger and inadequate dietary diversity according to most food security outcome indicators (Figure 9). Poor dietary diversity and inadequate food consumption were relatively higher in Al Baydah, Al Dhale’e, Al Jawf, Lahj, Shabwah and Taizz. In Hajjah, food insecurity, hunger and inadequate diet have been higher over most data collection rounds, indicating a chronic situation.

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3 Zakat is one of the pillars of Islam that is practiced more commonly on religious occasions. Considered a form of worship, Muslim individuals donate a proportion of their wealth to charitable causes.
Figure 9. Prevalence of food security indicators by governorate

Households with a major income source stemming from agriculture, households with no income sources depending on debt and savings, and livestock producers had a higher prevalence of food insecurity according to most of the food security measures.

Based on the livelihood coping strategy index, approximately 15 percent of households resorted to emergency coping strategies – a substantial decrease compared to previous rounds. Households resorting to crisis coping strategies increased (61 percent) in the tenth round DIEM-Monitoring survey mainly because households shifted from emergency to crisis coping strategies. Borrowing money, buying food on credit and reducing health expenses were widely practiced. In the western governorates, over 70 percent of the surveyed households adopted crisis and emergency coping strategies. In Al Jawf, this number was over 85 percent (Figure 10).

Figure 10. Crisis and emergency coping strategies by governorate (percentage of households)

Nearly 31 percent of households experienced hardships due to food shortages and adopted food consumption-based coping strategies. Despite the usage of these strategies, the situation improved compared to all previous rounds of DIEM-Monitoring surveys. The most frequently adopted food consumption-based coping strategy was eating less preferred foods five days out of seven.

Overall, in August 2023, food insecurity was higher among non-agricultural households. However, a higher proportion of agricultural households resorted to crisis or emergency livelihood coping strategies. Food insecurity was higher in rural areas than in suburban and urban areas. A larger proportion of urban households reported consuming inadequate diets and fewer meals than suburban households, signalling that food-based coping strategies were higher in urban areas.
Needs

Ninety-one percent of agricultural households reported needing assistance in the three to six months following the survey. In Al Jawf, Dhamar, Hadramawt, Hajjah and Sa’ada, nearly 100 percent of the agricultural households reported needing assistance. The major needs cited were crop inputs (43 percent), crop infrastructure (32 percent), livestock feed (32 percent), livestock infrastructure (22 percent) and veterinary services (16 percent). The reported needs align with the difficulties cited by the crop and livestock producers.

Approximately 20 percent of the surveyed households reported receiving assistance in the three months preceding the survey. The assistance received was food (17 percent) and cash (3 percent). Of the households who received assistance, 65 percent reported it was from the World Food Programme, 16 percent reported receiving assistance from other United Nations agencies, 8 percent received assistance from non-governmental organizations, 4 percent reported that assistance was received from FAO and 4 percent received assistance from the government.
Recommendations

Short-term recommendations (1–6 months)

> Strengthen the livelihood and resilience-building interventions in Al Hodeidah and Hajjah, the governorates where higher levels of food insecurity were identified in the tenth and previous rounds.

> Expand and boost humanitarian assistance as a short-term measure, in governorates like Aden, Al Jawf, Al Mahwit, Hajjah, Ibb and Sa’ada, where there is higher reporting on employment loss and decreased income.

> Prioritize households without income sources, agricultural day labourers and livestock producers for humanitarian assistance and livelihood resilience programmes.

> Distribute livestock feed to small livestock holders. Scale up livestock vaccination and livestock input programmes, particularly in Abyan, Al Mahwit, Ibb and Sana’a, where there is higher reporting on livestock death and diseases.

> Humanitarian and livelihood support programmes should consider agricultural seasonality. March through July is largely the plantation season when agricultural income is constrained. Agricultural day labourers and smallholders need more support during this season than in the harvest and post-harvest seasons.

Medium to long-term recommendations (6 months and beyond)

> Support the provision of solar water pumps for irrigation-dependent farmers, the rehabilitation of traditional local water harvesting schemes such as cisterns or ponds, terraces and watershed management, and/or the construction of new water tanks and small reservoirs for water harvesting in rural areas. Al Mahwit, Dhamar, Lahj, and Taizz governorates should be prioritized for water harvest and solar pump initiatives.

> Implement campaigns to raise the awareness of farmers and communities on water scarcity, management and use.

> Enhance vaccination campaigns of small ruminants and treatments against internal and external parasites.

> 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.
Notes


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