Food and Agriculture Organization of the United Nations

Iraq

DIEM – Data in Emergencies Monitoring brief, round 12

Results and recommendations
April 2024

Data collection 16 October to 15 November 2023

Key highlights

- Around 25 percent of the surveyed households reported a decrease in their main source of income, 6 percent reported an increase and 69 percent reported no changes over the three months preceding the survey, an improvement from the year before (31 percent).

- Nearly 38 percent of the surveyed households reported facing shocks in the current round which affected their ability to earn an income and produce food for self-consumption in the three months preceding the survey. High food prices and lost employment were the most commonly reported shocks. High food prices were more frequently reported in Basrah, Diyala, Nainawa and Sulaimaniyah governorates compared to other governorates.

- Sixty-two percent of the crop producers reported production difficulties. No access to fertilizer (54 percent) was the most reported difficulty due to high prices in the market and insufficient government subsidies or delays in distribution. Not enough water for irrigation was the second most reported difficulty (53 percent), which was significantly higher in the southern governorates compared to other governorates due to the greater impact of reduced surface water levels from the Tigris and Euphrates rivers.

- Around 62 percent of the livestock producers reported a decrease in the number of animals they owned compared to the previous year due to distress sales (54 percent) and perished animals (8 percent).

- The percentage of severely food insecure households as measured by the Food Insecurity Experience Scale (FIES) was only 2 percent. The food security outcomes improved in the current round compared to all rounds conducted in 2022 thanks to improved production of main cereals in 2023 due to good rainfall and government support.

- The greater context of water scarcity in Iraq warrants a new strategy and investment plan for agriculture to reduce water losses and investments in new technology and management practices to improve water use efficiency and effectiveness.

- It is recommended to assess the input needs of vulnerable crop and livestock farmers in the south to inform the review and design of support measures to sustain farming and promote the application of climate-smart agriculture.

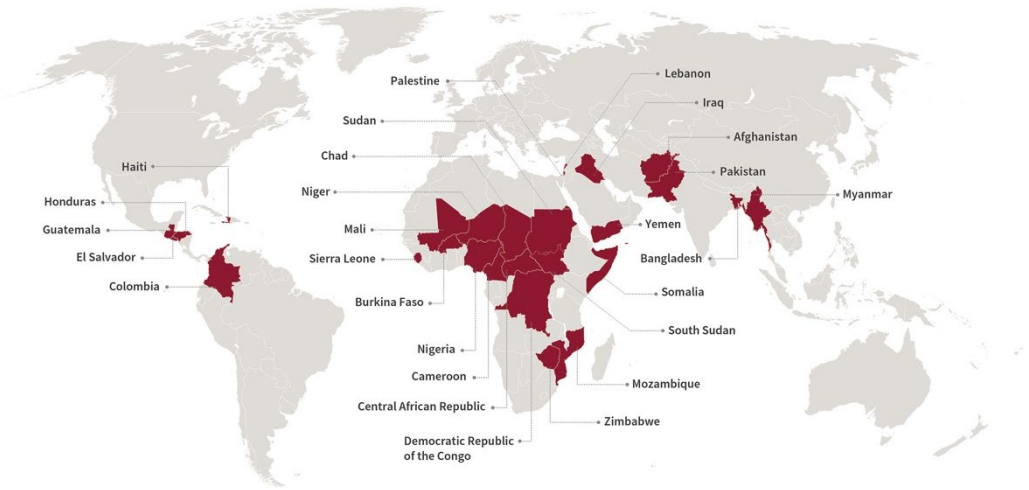
Methodology

The Food and Agriculture Organization of the United Nations (FAO) launched a household survey in Iraq through the Data in Emergencies Monitoring (DIEM-Monitoring) System to monitor agricultural livelihoods and food security. This twelfth-round survey reached a random sample of 2 448 households (1 420 non-agricultural households and 1 028 agricultural households) across 18 governorates of Iraq.

Data collection was carried out using computer-assisted telephone interviews from 16 October to 15 November 2023, during land preparation and before the planting of the main crops – wheat and barley. The survey utilized a panel list of agricultural households and non-agricultural households that were interviewed in previous data collection rounds. Random digital dialing was used to complete the target. A minimum of 30 agricultural households was reached in all governorates and the sample target of 136 households in each governorate was reached, meeting the targets. Data were weighted at the analytical stage to ensure that the regional population distribution was adequately represented. The sample size is representative at national and governorate levels with a 95 percent confidence level, and a 10 percent margin of error.

The results from this twelfth-round survey are comparable to the results of the ninth-round survey which was conducted between October and December 2022, during the same season. The ninth-round survey has been drawn from to make comparisons throughout this brief.

Figure 1. Countries with an established DIEM-Monitoring System



Source of data: FAO. 2023. DIEM-Monitoring. In: *FAO Data in Emergencies Hub.* Rome. [Cited 1 July 2023]. https://data-in-emergencies.fao.org
Source of map: United Nations Geospatial. 2023. Map of the World. In: *United Nations.* [Cited 12 January 2023]. https://www.un.org/geospatial/content/map-world-1

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 Iraq and other countries.

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

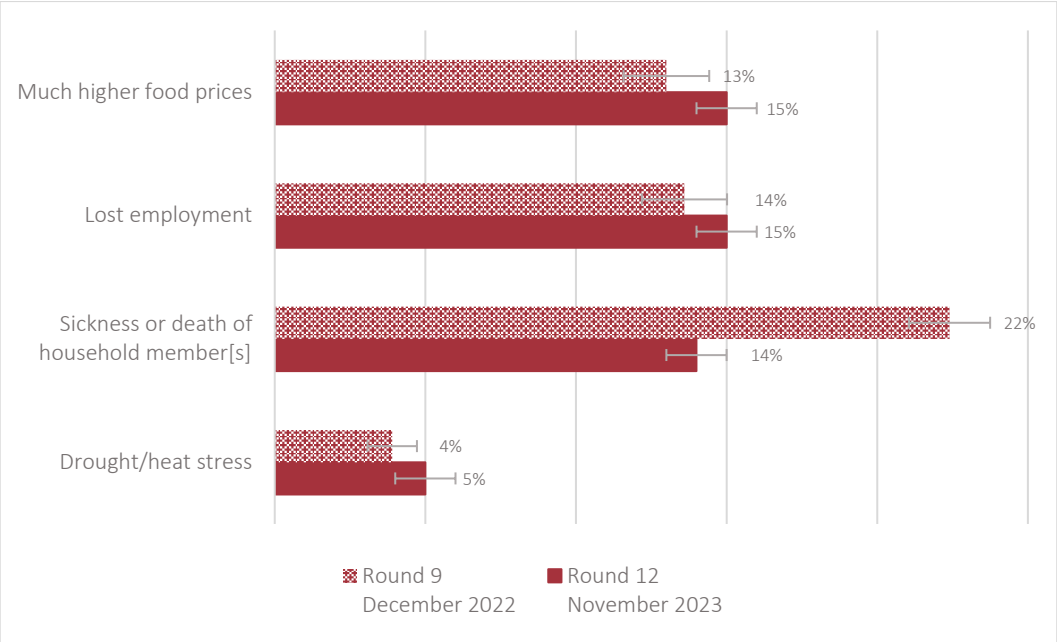
Income and shocks

Nearly 38 percent of the surveyed households reported experiencing a shock. High food prices (covariate shock) and lost employment (idiosyncratic shock) were the most reported shocks (Figure 2). Compared to the ninth round, there was no difference in the reported shocks. The higher percentage of households reporting loss of employment in the twelfth round could be explained by seasonality as less labour is required during the preparation of the cropping season.

The ongoing conflict in Ukraine has led to food and agricultural input price increases as Iraq is very reliant on imports. Iraq has been indirectly affected due to the increased cost of transportation as Iraq has not been importing significant food commodities from the Russian Federation and Ukraine (WFP, 2022).

Despite there being no official source reporting on the 2023 unemployment rate in Iraq compared to 2022, the unemployment rate in Iraq in 2022 was almost 15.5 percent (Shafaq News, 2023). Households that faced idiosyncratic shocks, such as unemployment, reported the largest decrease in income. In the twelfth round, water scarcity was not reported as a major shock by households – 42 percent of the respondents of the survey were farmers. A likely explanation is that water scarcity is a major issue in the south of the country.

Figure 2. Main shocks reported (percentage of households)



Source: FAO. 2023. Iraq: DIEM-Monitoring assessments results (December 2022 and November 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 19 March 2024]. https://data-in-emergencies.fao.org

Around 25 percent of the surveyed households reported a decrease in their main source of income during the three months preceding the survey. The results showed an improvement compared to the ninth round when the reported drop in main income was 31 percent. The main reasons for the decrease were: lack of job opportunities; high living costs and family expenses; delays receiving monthly salaries experienced by public sector employees of the Kurdistan Region of Iraq governorates (Dohuk, Erbil and Sulaimaniyah); sickness or death in the family; and high food prices.

Non-agricultural households reported a significantly larger decrease in income compared to agricultural households. This could be related to the measures taken by the Government of Iraq to financially support crop producers by increasing the price of wheat in Iraqi dinars (ID) – ID 825 000 per tonne from ID 560 000 per tonne since 2022 (USDA, 2023) – which benefitted the majority of agricultural households.

Another positive for the agriculture sector has been the better cereal production figures in 2023 compared to 2022 due to good rainfall in the region. The emergence of the warm phase of the El Niño–Southern Oscillation in 2023, after three consecutive years of regional drought, seems to have brought some relief to the entire region, on which Iraq depends so much in relation to its access to surface water from Türkiye, the Syrian Arab Republic and Iran through the Tigris and Euphrates rivers.

Crops

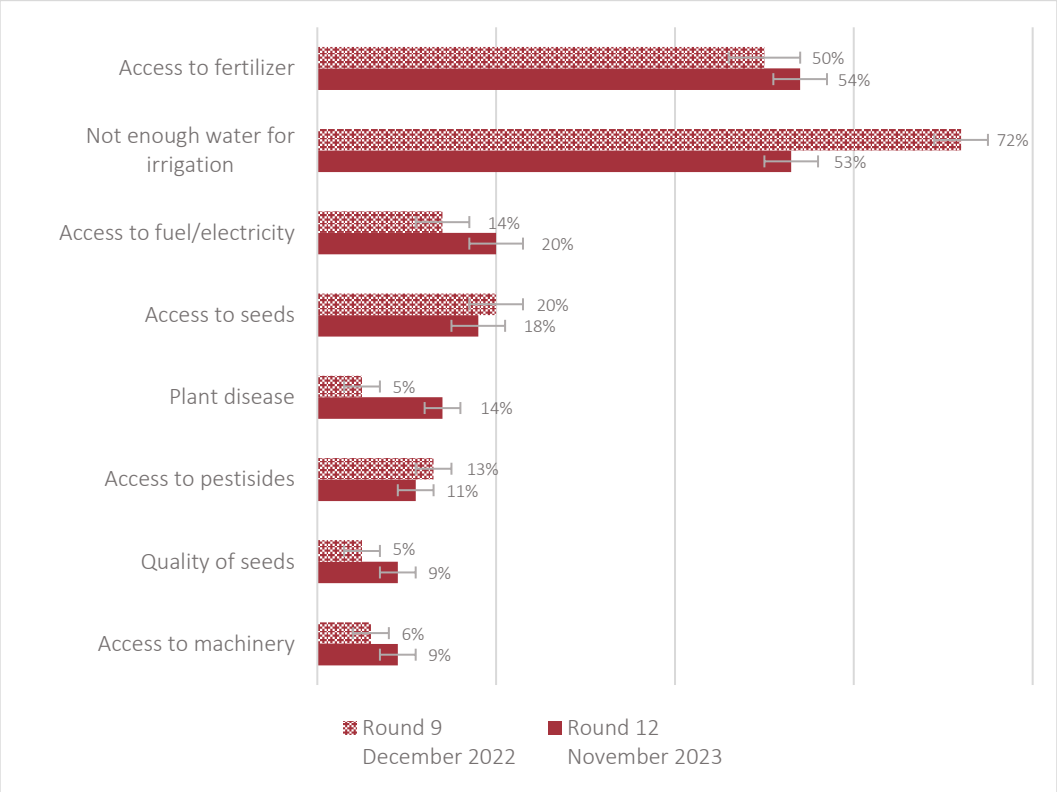
Figure 3. Iraq agricultural calendar

Source: FAO. 2023. GIEWS Country Briefs: Iraq. In: *FAO*, 3 February 2023. Rome. [Cited 19 March 2024]. https://www.fao.org/giews/countrybrief/country.jsp?code=IRQ

The twelfth round coincided with land preparation for planting the main crops – wheat and barley. Out of the 42 percent of surveyed households that were involved in agricultural activities, 82 percent were involved in crop production and 51 percent identified themselves as smallholder farmers with land size of less than 1 hectare. The major crops cultivated by the surveyed households were wheat and other cereals such as barley, rice, and maize (41 percent); dates (10 percent); tomatoes (7 percent) and okra (4 percent).

Sixty-two percent of crop producers reported production difficulties, a significantly lower percentage compared to the ninth round (78 percent). No access to fertilizer (54 percent) was the most reported difficulty in the current round (Figure 4). The main reasons were high prices in the market, reduced government subsidies and delays in distribution. Farmers reported that they received inputs after the sowing season so they could not make use of the received inputs.

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



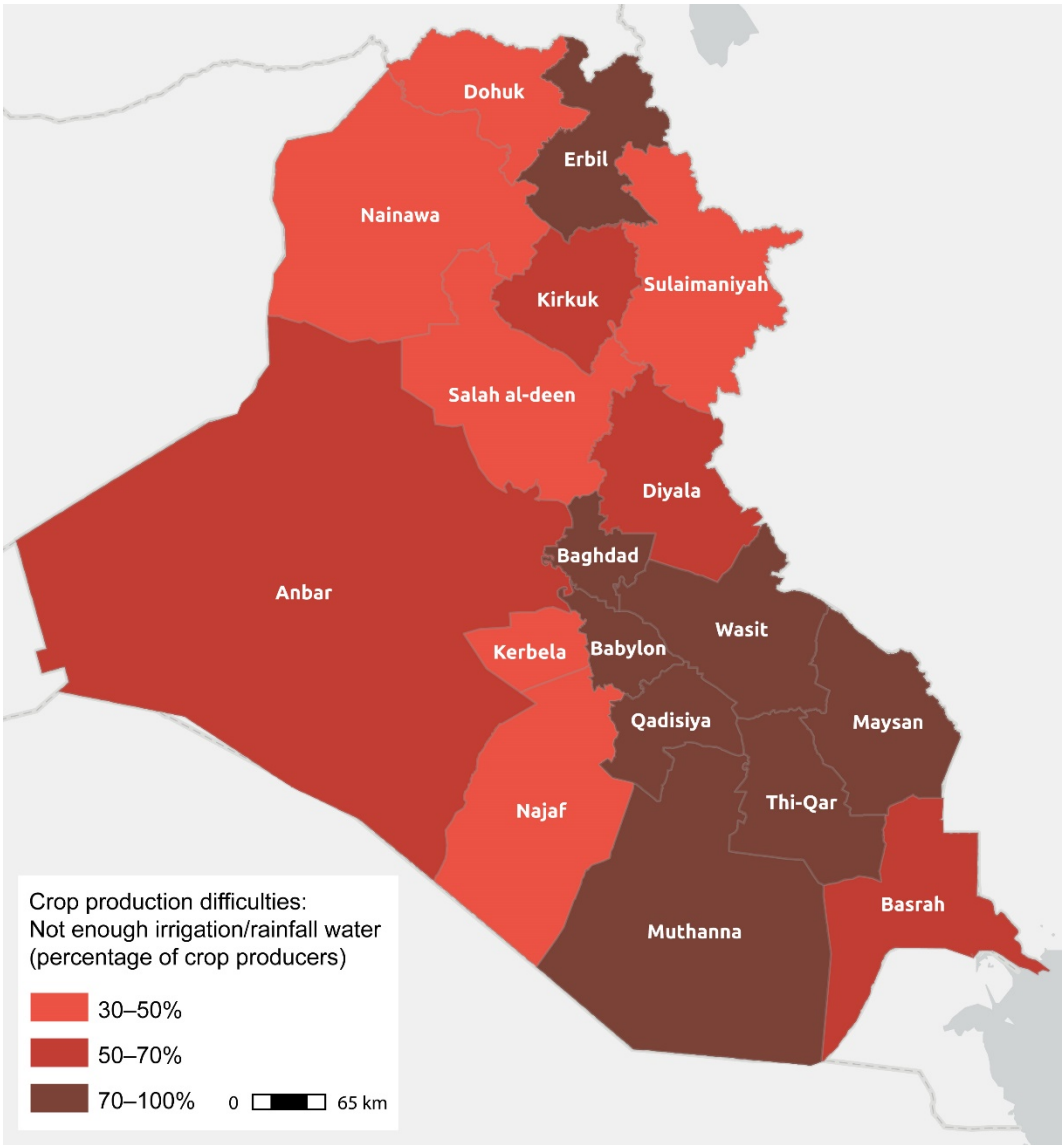
Source: FAO. 2023. Iraq: DIEM-Monitoring assessments results (December 2022 and November 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 19 March 2024]. https://data-in-emergencies.fao.org

The percentage of surveyed crop producers who were not registered in the Agricultural Plan was significantly higher than those who were registered and receiving all subsidized benefits on inputs and outputs.

The second most reported difficulty by agricultural households was not enough water for irrigation (53 percent), a lot lower than the ninth round (72 percent) (Figure 5). The reporting of water shortages in the current round was much higher in the southern governorates compared to others. This makes sense as their agriculture depends mainly on irrigation from both the Tigris and Euphrates rivers with mixed farming. Based on El Niño–Southern Oscillation conditions over the past few years, the subregion has experienced a lot of water scarcity – reducing water flows from the Tigris and Euphrates rivers – which has been aggravated by

human interventions such as population growth and the building of dams in neighbouring countries. Iraq is becoming much more aware of its vulnerability to the impact of climate change, including extreme weather events. According to a publication by the United States Institute of Peace, the temperature in Iraq will be rising approximately seven times faster than the global average, which reduces water levels through evapotranspiration. If unmitigated, it will put a limiting factor on the sector through water scarcity, salinization of water and soils and desertification, starting with the southern part of the country (USIP, 2023).

Figure 5. Percentage of crop producers reporting not enough irrigation or rainfall (by governorate)



Source: FAO. 2023. Iraq: DIEM-Monitoring assessments results (December 2022 and November 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 19 March 2024]. https://data-in-emergencies.fao.org

Eleven percent of the crop producers reported planting less agricultural land, a lot lower than the ninth round (31 percent). Less planted area was associated mainly with lack of access to water for irrigation, high prices of agricultural inputs, low income and high cost of agriculture. Both Ministries of Water Resources and Agriculture approved an Agricultural Plan in October 2023 for the 2023/24 crop season that included cultivation of 1.5 million donum (375 000 hectares) based on surface water and cultivation of 4 million donum

(1 million hectares) using groundwater (Iraqi News Agency, 2023). The use of wells for irrigation purposes needs to be monitored closely because these are a finite source of water.

Thirty-nine percent of crop producers reported a decrease in harvest compared to a typical year, a significant improvement compared to the ninth round (60 percent). The main reason was related to government policy which increased the planted area for the 2022/23 season due to better rainfall. According to the reports, the 2023 wheat harvest resulted in more than 5.2 million tonnes, a significant increase compared to the 3.9 million tonnes harvested in 2022 (Central Statistical Organization, 2023).

Approximately 43 percent of the crop producers reported difficulties selling their products due to lower selling prices (43 percent), low demand by traders or customers (22 percent), payment delay from traders/buyers (21 percent), market flooded with both domestic and imported products (19 percent), and high transportation or marketing costs (17 percent). Thirty percent of the crop producers reported a drop in selling prices, which could have been caused by importing crops from outside and markets saturated with products, low demand from traders and high product costs compared to input prices. Lower selling price was particularly reported in Bablyon, Baghdad, Kirkuk, Muthanna, Salah al-deen, Sulaimaniyah, Thi-Qar and Wasit governorates. The results were not significantly different from the ninth round.

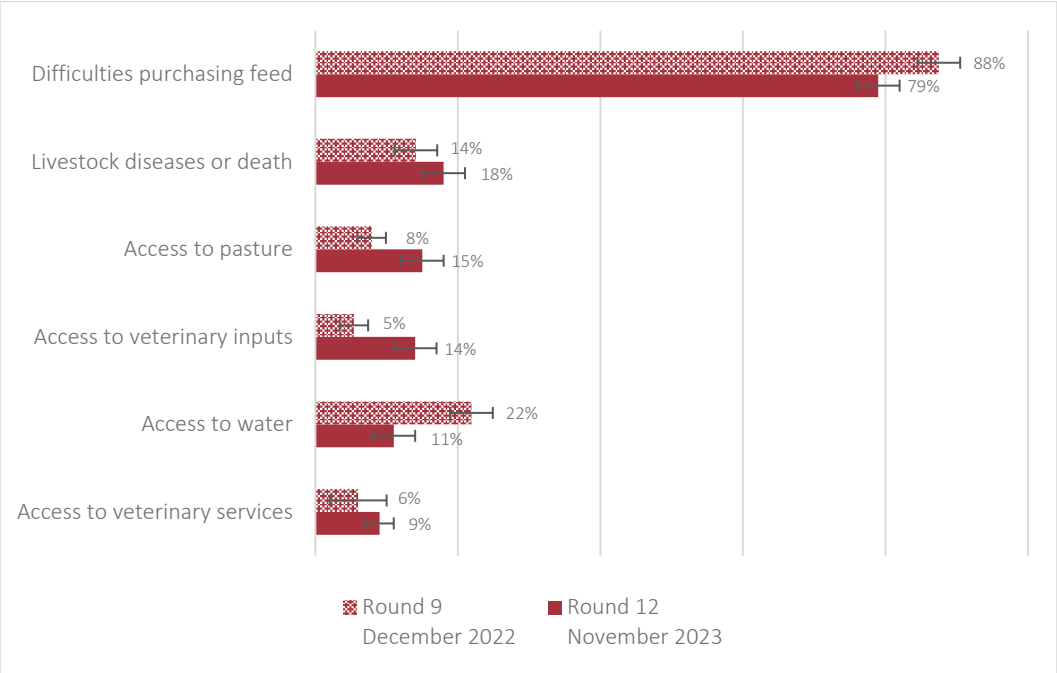
Only 4 percent of crop producers reported that they changed their crop-producing patterns due to recent climatic events, mainly in Babylon, Kirkuk, Maysan, Muthanna and Najaf. The main reasons were: new crops were more adapted to climate change (69 percent), less maintenance and work required (26 percent), required less field work (26 percent), cheaper inputs (26 percent) and lack of available inputs for usual crops (26 percent).

Livestock

Fifty-seven percent of the surveyed households reported involvement in livestock farming. The main livestock raised were cattle (47 percent), sheep (33 percent), poultry (15 percent) and goats (6 percent). Around 62 percent of the livestock producers reported a decrease in the number of animals they owned compared to the previous year due to distress sales (54 percent) and perished animals (8 percent). These findings are not significantly different from the ninth round. Distress sales were high in all governorates due to river water shortages and the overall worsening of water scarcity and soil salinity, resulting in less accessible water for livestock and animal fodder crop production.

Sixty-seven percent of the livestock producers reported production difficulties, mainly related to purchasing animal feed due to high prices (79 percent), followed by livestock diseases and death (18 percent) (Figure 6).

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



Source: FAO. 2023. Iraq: DIEM-Monitoring assessments results (December 2022 and November 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 19 March 2024]. https://data-in-emergencies.fao.org

Feed prices have been rising since 2021 when widespread crop failure in the northern areas of Iraq occurred (FAO, 2023). Difficulty purchasing feed was reported in all governorates but was highest in the south of Iraq. To assist the Mesopotamian Marshes – the area most affected by water scarcity, saline soils and water – the Government of Iraq has allocated ID 5 billion to support affected buffalo breeders with feed and vital supplies (United Nations, 2023).

A quarter of the livestock producers reported difficulties selling their products (including milk and dairy products). This was significantly lower compared to the ninth round (46 percent). Low selling price was the main livestock sales difficulty (52 percent), followed by damage or losses during transportation, or difficulty accessing the market (34 percent).

The percentage of livestock producers who reported low selling prices was significantly higher in Babylon, Basrah, Dohuk, Muthanna, Nainawa and Thi-Qar compared to other governorates. Eighteen percent of the livestock producers reported a decrease in the price of livestock, a figure significantly lower than the ninth round (44 percent). The main reasons for the low selling price could have been the inability to feed animals due to high prices of fodder and inputs, the spread of disease and suffering from malnutrition, low demand from traders and importing animals from outside.

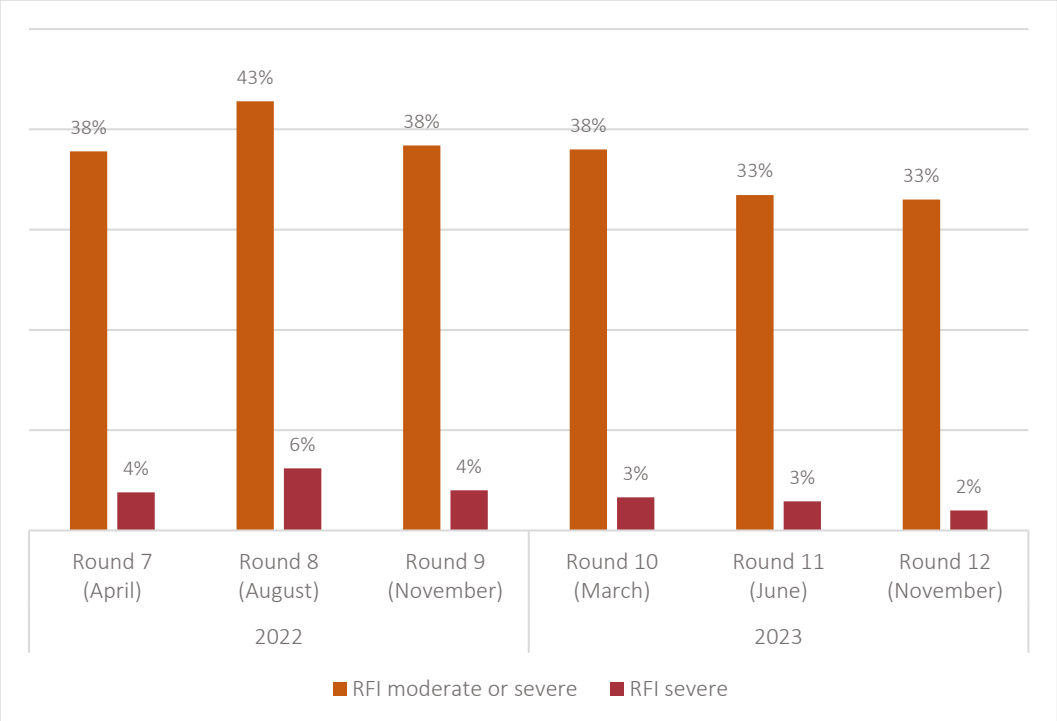
Only 2 percent of livestock producers reported changing the composition of their herd or flock due to recent climatic events. The main considerations for the few that made changes were that the economic and natural environment – availability of inputs – had become more appropriate and required less work.

Food security

The prevalence of recent food insecurity (RFI), as assessed with the FIES,[1] refers to a household's inability to obtain food for consumption in adequate quality and/or quantity. Figure 7 demonstrates the prevalence of both RFI moderate or severe, and RFI severe over different rounds conducted in 2022 and 2023. In the twelfth round, 33 percent of the surveyed households reported experiencing moderate or severe RFI which was lower than the ninth round (38 percent) conducted during the same period in 2022. Additionally, the recent severe food insecurity was 2 percent, lower than the ninth round (4 percent). These findings align with a recent report published by the World Food Programme (WFP) which reported a 3 percent prevalence of food insecurity in Iraq in 2023 (WFP, 2024).

The trend analysis (Figure 7) shows that the prevalence of RFI moderate or severe was lower over the last two survey rounds conducted in 2023 compared to other rounds. It was substantially higher in the eighth round conducted in July and August 2022. The prevalence of severe RFI in the twelfth round was lower compared to other rounds and significantly higher in the eighth round. The results indicated that household food security in 2023 was better compared to 2022 when large global food and agricultural input price increases occurred due to the ongoing conflict in Ukraine.

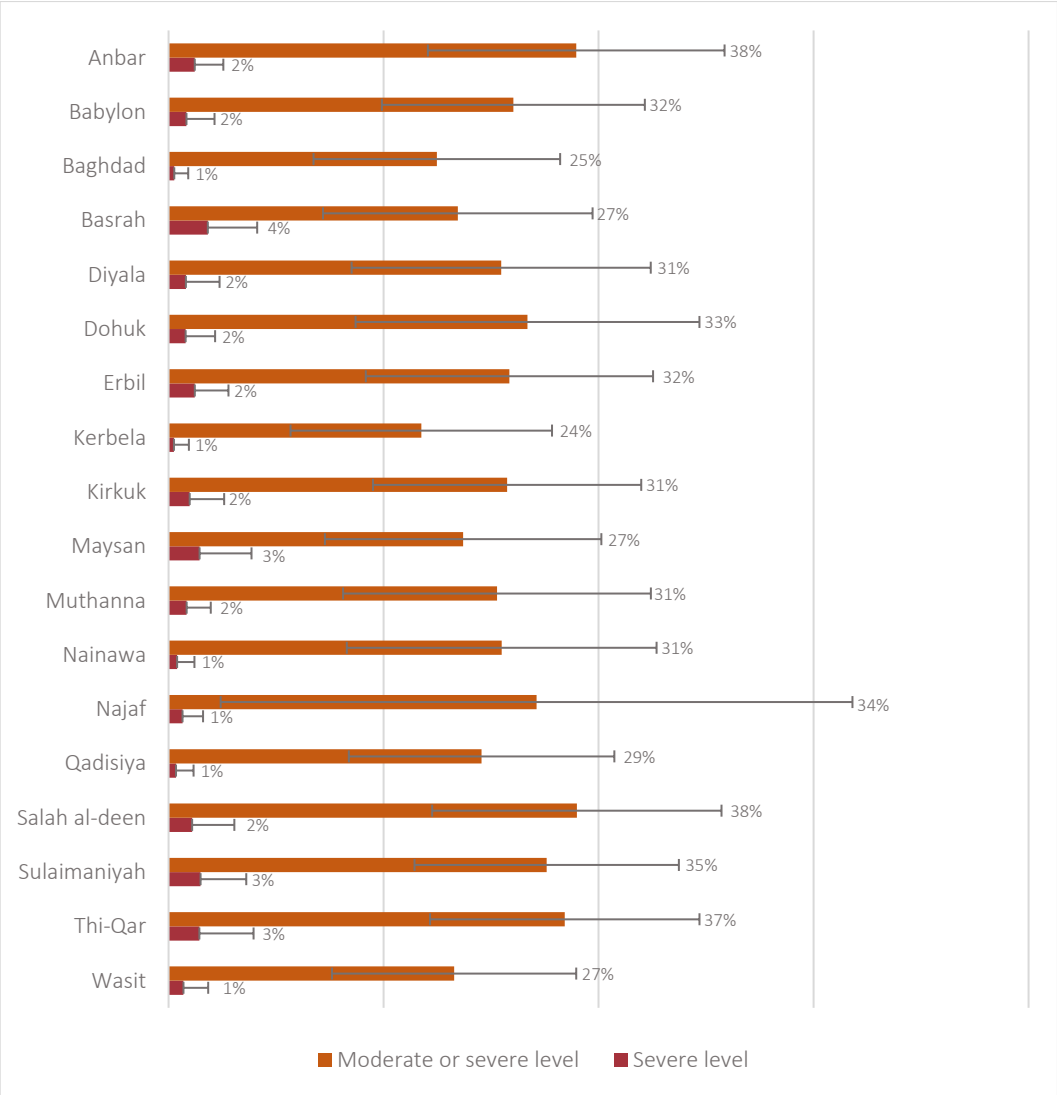
Figure 7. FIES by survey round



Source: FAO. 2023. Iraq: DIEM-Monitoring assessments results (December 2022 and November 2023). In: *FAO Data in Emergencies Hub*. Rome. (Cited 19 March 2024). https://data-in-emergencies.fao.org

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

Figure 8. FIES by governorate



Source: FAO. 2023. Iraq: DIEM-Monitoring assessments results (December 2022 and November 2023). In: *FAO Data in Emergencies Hub*. Rome. (Cited 19 March 2024). https://data-in-emergencies.fao.org

The prevalence was significantly higher in Anbar, Salah Al-Deen, Thi-Qar and Sulaimaniyah (Figure 8). Severe food insecurity was significantly higher in the south (mainly Basrah, Maysan and Thi-Qar) and in the north (mainly Sulaimaniyah) compared to other governorates.

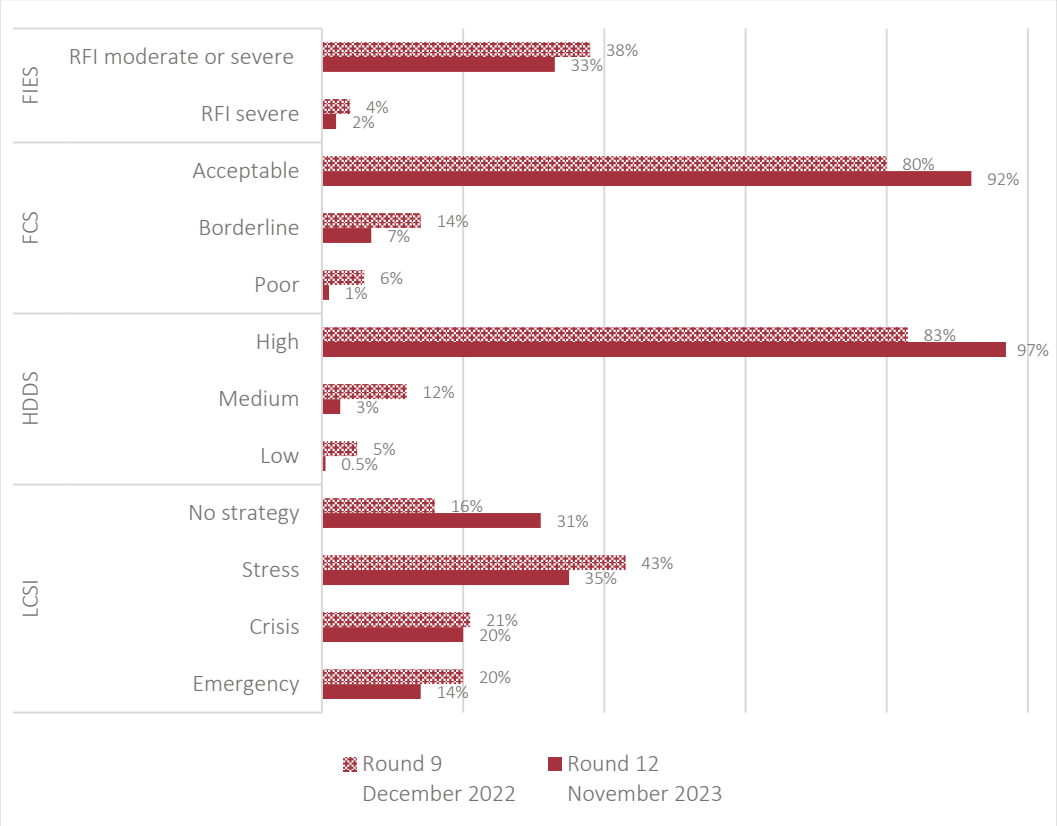
Food insecurity among non-agricultural households was significantly higher than agricultural households. As expected, the prevalence of RFI was higher among households facing both idiosyncratic (unemployment) and covariate shocks (high food prices). Households that reported a decline in income during the three months preceding the survey saw higher RFI than the ones who did not.

The household dietary diversity score (HDDS) is a qualitative measure of food consumption that reflects a household's ability to access a variety of foods and is calculated based on food items that a household has consumed over the 24 hours preceding the survey. HDDS improved in the current round compared to the ninth round, with less than 1 percent of households reporting low dietary diversity compared to 5 percent in the ninth round (Figure 9). Similarly, less than 3 percent of households reported medium HDDS compared to 12 percent in the ninth round.

The food consumption score (FCS) is a composite score based on dietary diversity, food frequency and the relative nutritional importance of food groups at household level over the seven days preceding the survey. Only 8 percent of households reported poor or borderline food consumption, significantly lower than the ninth round (20 percent) (Figure 9).

The livelihood coping strategies index (LCSI) measures livelihood changes to understand the extent to which households cope with shocks affecting their livelihoods and filling gaps in food consumption. The results indicated that 69 percent of the households adopted livelihood coping strategies to meet their food needs (Figure 9). This was significantly lower compared to the ninth round (84 percent). The most common coping strategies included borrowing food or relying on help (44 percent), reduced health expenses (41 percent) and spending savings (33 percent). Households that relied on agriculture as their main income source used significantly more livelihood coping strategies than households that relied on non-agricultural activities as their main source of income. The percentage of households resorting to emergency livelihood coping strategies showed a significant decrease in the twelfth round (14 percent) compared to the ninth round (20 percent).

Figure 9. Food security indicators



Source: FAO. 2023. Iraq: DIEM-Monitoring assessments results (December 2022 and November 2023). In: *FAO Data in Emergencies Hub*. Rome. [Cited 19 March 2024]. https://data-in-emergencies.fao.org

Overall, food security outcomes improved in 2023 compared to 2022 due to overall improved macroeconomic and weather conditions in the wider region. The food security outcomes improved in the current round compared to all rounds conducted in 2022 thanks to the improved production of main cereals in 2023 due to good rainfall and continued government support for the public distribution system which provided a food basket to all Iraqi households, except those with an income higher than USD 1 100 and senior government officials.

The impact of a trend to higher temperatures, greater water scarcity, more extreme weather events, increased salinization of water and soils, and desertification need to be considered for the agriculture sector. These impacts may lead to significant outmigration from rural to urban areas.

Needs

Eighty-four percent of the surveyed agricultural households indicated a need for assistance in the three to six months following the survey. The main needs included inputs for crop and vegetable production (63 percent), infrastructure for crop and vegetable production (39 percent) and livestock feed (36 percent). Only 1 percent of agricultural households reported receiving assistance in the three months preceding the survey. The delivered assistance was exclusively food assistance from non-governmental organizations and the government.

Recommendations

A number of short, medium and long-term recommendations can be made, largely based on the results from this twelfth-round survey. By implementing the recommendations, several benefits stand out including: reducing imports; improving farmer and community resilience; enhancing the competitiveness of Iraqi agricultural products; creating jobs; and contributing to a sustainable sector that conforms to international climate adaptation commitments.

Short-term recommendations

- Rehabilitate existing irrigation networks and introduce modern water-saving irrigation techniques such as drip irrigation. Gradually reduce dependence on inefficient flood irrigation systems using open canals.

- Increase support for the introduction of climate-smart agriculture in existing farming practices. Encourage the cultivation of crops, vegetables, and grasses and seeds that are more tolerant to drought; saline soils and water under the Agricultural Plan to adapt to a progressively resource scarce bio-physical environment.

- Respond to the emergency needs of livestock producers under pressure from water scarcity and saline soils, and water, particularly in the south – Mesopotamian marshes – with feed, forage seeds and new management practices.

Medium and long-term recommendations

- Implement a national water management plan supporting a sustainable agriculture sector that takes into account the changing conditions of increased water scarcity in relation to water available for irrigation from different water sources – precipitation, surface water and wells. Consider using suitable water management measures as instruments for promoting efficient and rational water use for irrigation purposes, such as Water User Associations and/or water tariffs.

- Develop a strategy and investment plan for the agriculture sector that draws on the expertise of all major stakeholders – the Government of Iraq, international organizations and, especially, the private sector. This should lead to investment in modernizing the sector, covering the manufacturing of production inputs, machinery, equipment and services in selected value chains where Iraq has a competitive advantage versus neighbouring countries.

- Support farmers with a strong mix of agricultural services including vaccinations, finance, modern technology and sustainable management practices, and encourage the cultivation of a variety of crops, fruit and vegetables to increase agricultural diversity, diversify incomes, and improve national and household food security.

- Enhance marketing functions for vegetable products and food processing for both public and private sectors. Support farmers to form producer-marketing groups to improve their bargaining positions when collectively buying inputs and selling produce. Use these groups to deliver training and introduction of new climate-smart agriculture techniques and management practices with the aim of improving produce quality, gaining access to larger markets and the chance for higher profit margins.

- Increase local animal fodder production and utilize modern irrigation, farm management, and marketing techniques in livestock and dairy production to raise rural incomes in a sustainable fashion while aiming to mitigate or prevent rural to urban outmigration.

Notes

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Contact

FAO Representation in Iraq

FAO-IQ@fao.org
fao.org/iraq | @FAOIraq
Baghdad, Iraq

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

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