

---

# FOOD SECURITY IN IRAQ

## IMPACT OF COVID-19

---

WITH A SPECIAL SECTION ON  
**WATER SHORTAGES AND ADAPTATION**

NOVEMBER 2020 - MAY 2021



---

## EXECUTIVE SUMMARY

---

Over the six-month period analyzed in this report, Iraq experienced significant turmoil. In addition to the effects of the pandemic, with cases overall on the rise in Iraq – now in its third wave of infections – the devaluation of the Iraqi dinar in December 2020, and lower than usual seasonal rainfall, have all impacted upon the food security of households. The rainfall and water availability this year are the second lowest on record in 40 years.

Although oil prices have recovered compared to last year, the situation remains unstable. Demand and supply from major markets across the globe are affected, as countries battle deadly second and third pandemic waves. The challenge remains reconciling the government's considerable deficit and delivering the promises in its White Paper, while providing sufficient support to families and farmers in need, to preserve long-term food security and ensure no one is left behind in this triple threat phase: pandemic, prices and poor rainfall. Substantial social protection reform is still needed.

Water shortages have caused below normal vegetation development, and are affecting crop yields. According to initial estimates from FAO, by the end of the season, wheat production will be 70% lower and barley production negligible in volume. As well as farmers confronting challenges to accessing markets due to intermittent movement restrictions, higher fodder and input prices, the low rainfall is also having a knock-on effect on vulnerable households.

Although markets are functional, prices are higher for consumers. In Ninewa and Salah al- Din governorates, which are worst-affected by lack of rainfall, the levels of insufficient food consumption and use of negative coping strategies are about double the national average. The government and humanitarian-development community needs to respond fast to ensure that the impact on families in need can be cushioned.





---

## Acknowledgements

---

The Food and Agriculture Organization (FAO), the World Food Programme (WFP), the World Bank and the International Fund Iraq for Agricultural Development (IFAD) jointly prepared this report on the Impact of COVID-19 on Food Security in Iraq. The International Organization for Migration, the International Trade Center (ITC) and the Cash Consortium of Iraq (CCI) also contributed valuable data and analyses to this report.

Under the guidance of Dr. Salah Hajj Al Hassan (FAO), Ally-Raza Qureshi (WFP), Asif Bhutto (WFP), Alessandra Garbero (IFAD) and Tim Robertson (World Bank), a core team of experts from each agency developed this report: Hadi Fathallah (WB/IFAD), Fawad Raza (WFP), Sharon Rapose (WFP), René Verduijn (FAO), Halmat Najim (FAO). The team extends special thanks for insights from Khalid Shlash (FAO), Aseel Abdulhameed (FAO), Farooq Malazada (FAO) and Sami Bilal (FAO), Saman Ahmed (WFP), Nawaf Alawy (WFP) and Ahmed Abdulateef (WFP).

Special thanks to Yara Hesham Abdelrazik for design support.

### Contacts:

**Dr Salah ElHajj Hassan, FAO Representative to Iraq**  
salah.elhajj Hassan@fao.org

**Ally-Raza Qureshi, WFP Iraq Representative**  
ally-raza.qureshi@wfp.org

**Alessandra Garbero, PhD, IFAD Lead Economist, Near East, North Africa, and Europe Division**  
a.garbero@ifad.org

**Timothy D. Robertson, World Bank Agriculture and Food Global Practice**  
trobertson@worldbank.org

---

# I. POLICY RECOMMENDATIONS

---



## TO HELP COMBAT WATER SHORTAGES - affecting mainly rain-fed agriculture in the north

- **Upgrade early warning facilities and analytical services** to monitor strategic crops as well as water availability, use and productivity on the ground by relevant Ministries (e.g. Ministries of Transport, Water Resources and Agriculture), research centers and international partners. Information obtained from these services should help the government in maintaining or building up adequate strategic grain stocks.
- **Develop a *Drought Mitigation Plan*** as a means to respond to the drought observed, provide immediate assistance to the affected population, and consider additional measures to prevent, prepare for and mitigate the impact of drought linked to Climate Change in the short and medium term.
- **Invest in and rehabilitate large-scale irrigation infrastructure schemes** – dams, canals, conveyance pipelines, pump stations that were destroyed earlier by the Islamic State of Iraq and the Levant (ISIL);
- **Create public awareness** about drought and educate about efficient use of water and the importance of water conservation.
- **Reform the social protection system** to ensure that no one is left behind in what could be the most challenging phase of the COVID-19 pandemic for Iraq.



## II. PROGRAMMATIC RECOMMENDATIONS



### More resilient crop production

- Assist farmers with agricultural inputs for the 2021/22 crop season, under emergency aid programmes via vouchers (short-term solution);
- Introduce more drought tolerant varieties and focus on diversified agricultural commodities;
- Provide technical and financial support to farmers to upgrade equipment (irrigation) and water storage systems/ management practices;
- Equip farmers with supplementary irrigation systems to cope with the impact of low rainfall rates and water scarcity in areas that depend on rain – starting with summer crops;
- Invest seriously in the introduction/ adaptation of Good Agricultural Practices and Climate Smart Agriculture,

### Livestock rearing

- Assist livestock owners with inputs for livestock feed, under emergency aid programmes via vouchers, and promote the Livestock Emergency Guidelines and Standards (LEGS);
- Mitigate the impact of high feed prices by encouraging summer forages and distributing feed supplements particularly in areas with poor pasture conditions, by introducing:
  - ◊ Irrigated summer forages, such as Sudanese sorghum grass. Like above, equip selected livestock farmers with supplementary irrigation systems to cope with the impact of low rainfall rates and water scarcity in areas that depend on rain;
  - ◊ Sugar molasses as a strategic feed drought supplement;
  - ◊ Multi-nutritional feed blocks as a strategic feed supplement to improve poor grazing and rangeland areas;
- Increase the storage capacity of natural ponds to extend their period of utilization, and create new surface water reservoirs, in order to improve rangeland resources for grazing.



# III. SOCIOECONOMIC CONTEXT



## INTERNATIONAL AND NATIONAL DEVELOPMENTS

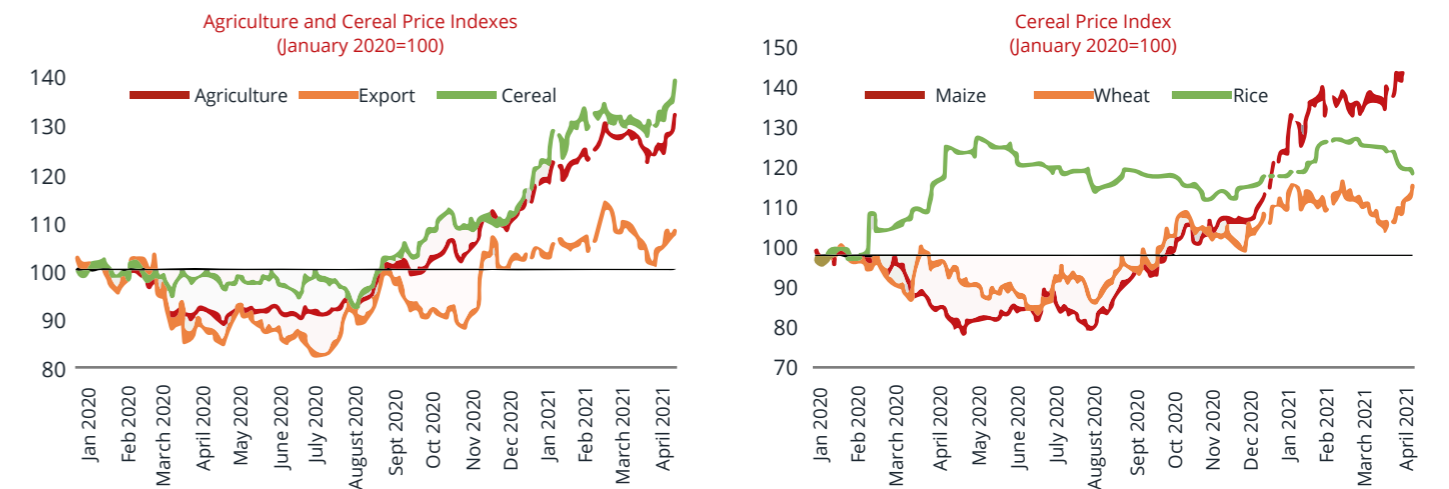
### I. Developments in the pandemic on the global and national level

Although the number of new infections peaked and then declined during the six month period covered in this report, Iraq registered the second-highest COVID-related fatalities in the region and an uptick in infections was registered during February 2021 with the spread of COVID-19 variants in Iraq.

### II. Global Commodity Prices and Outlook

The global agricultural commodity price index rose sharply during the reporting period and now stands at 30% above its January 2020 level (near the beginning of the pandemic). The World Bank April Commodity Markets Outlook projected that agricultural commodity prices will average about 14% higher in 2021 than in 2020, a substantial upward revision from the October 2020 forecast. The Agricultural Commodity Price Index was approximately 9% higher in the first quarter of 2021 (ending March 2021) than in the same quarter in 2020, on top of the rise in the fourth quarter of 2020. The average for March 2021 was 20% higher than a year ago in March 2020. Overall, there has been a pattern of increases.

Figure 1: Agriculture and cereal price indexes

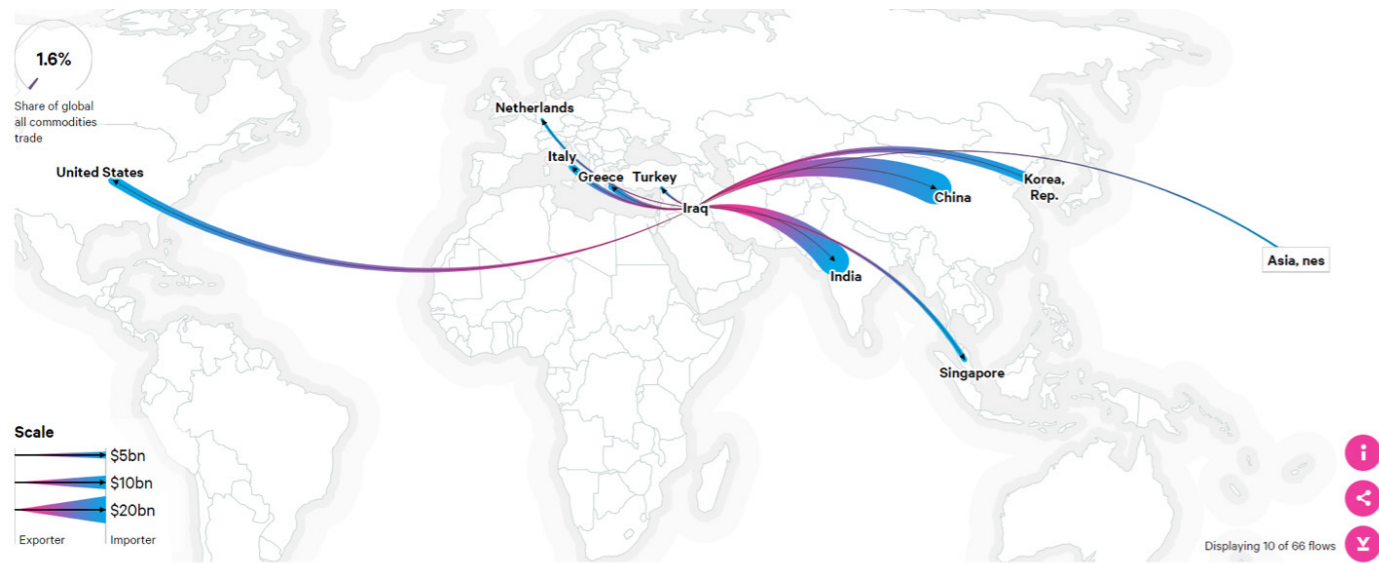


Source: World Bank Commodity Price Data

Note: Daily prices from January 2020 to April 2021. The export index includes cocoa, coffee, and cotton; the cereal index includes rice, wheat and maize



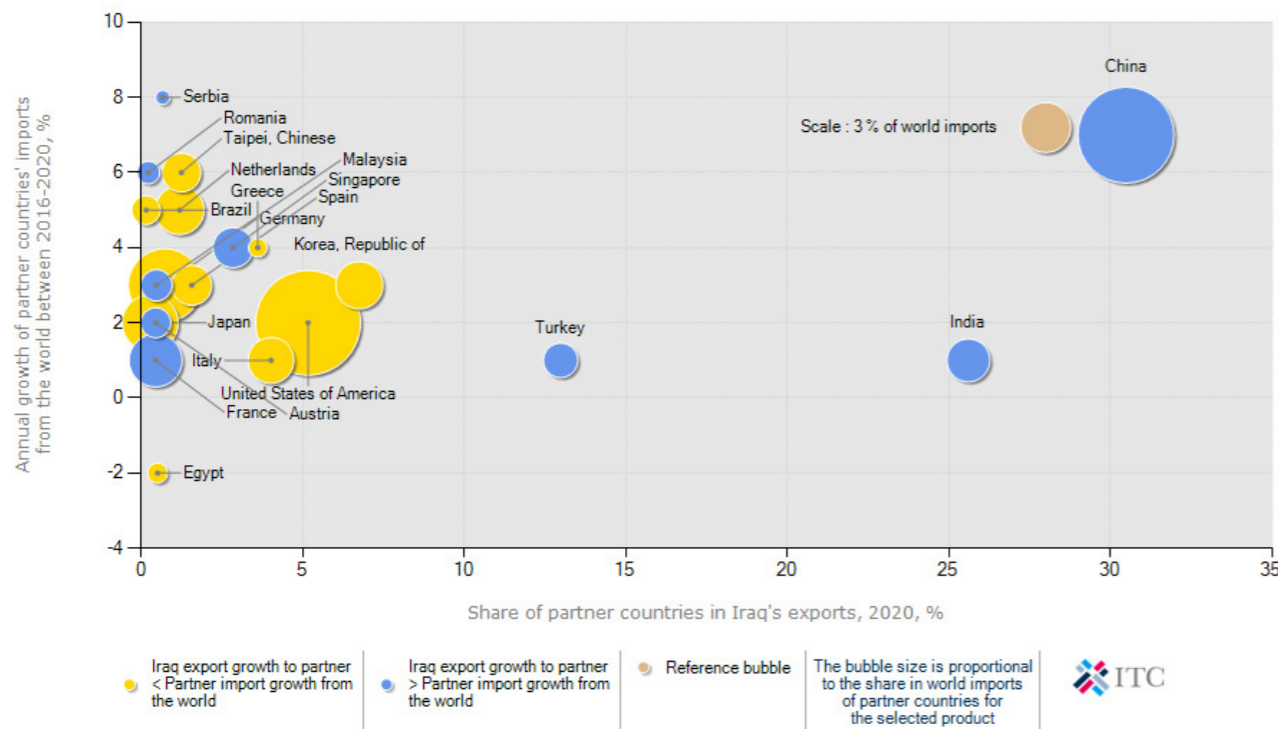
Figure 2: Iraq's Export Destinations by Scale (Source: Based on available data in 2019 for Chatham House)



III. Bilateral Food Trade: imports and exports

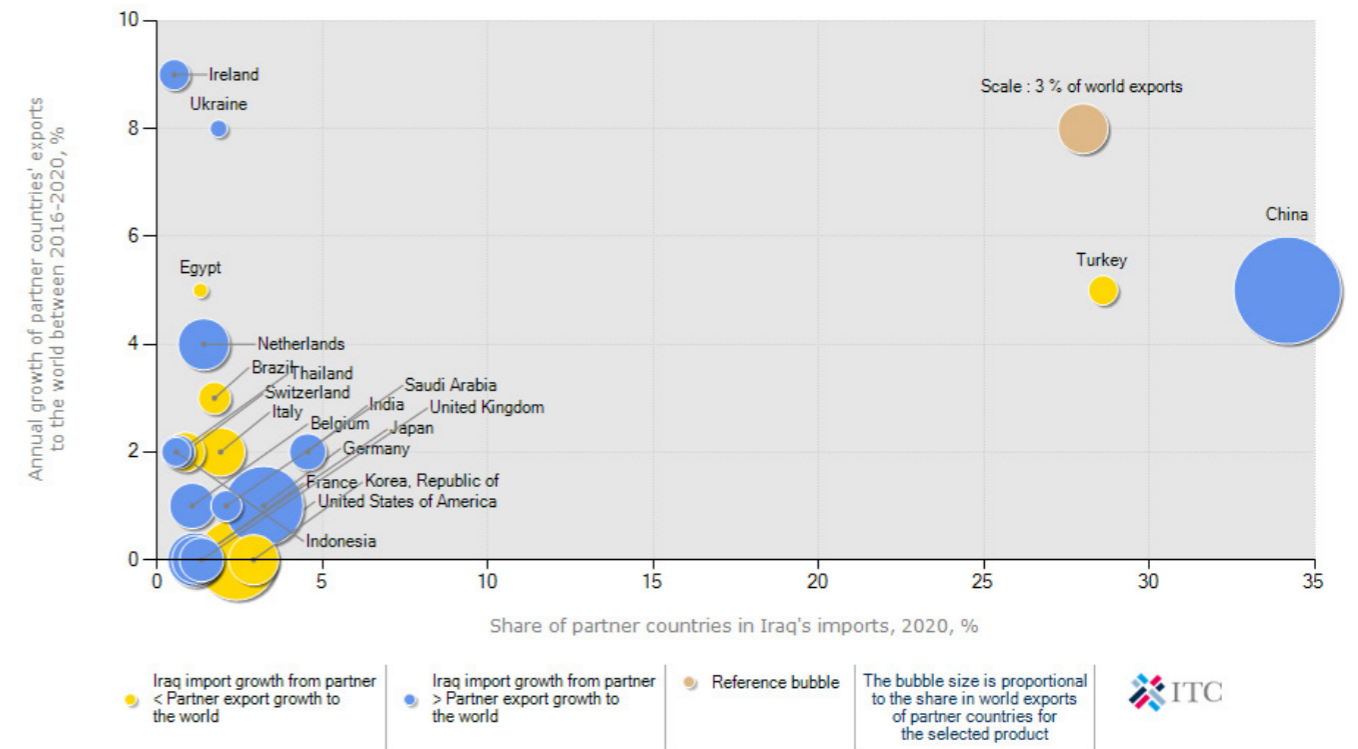
A combination of a sharp drop in oil prices and sizeable production cuts resulted in a 40% decline in oil exports (and fiscal revenues) in 2020. Despite some offset from lower imports, the external current account balance swung from a surplus of 0.5% of GDP in 2019 to a deficit of 15.2% of GDP in 2020. Iraq's exports, which peaked at USD 88.9 billion in 2019 and of which oil constitutes around 96%, is concentrated in two key major destinations – which account for around 60% of Iraq's exports – and both of which have been affected by COVID-19 and saw a temporary decline in oil utilization: China, whose demand for oil only recovered at the end of 2020 and through 2021 after managing to curb the pandemic; and India, which suffered a deadly wave that started in February 2021 (see Figure 2 and Figure 3).

Figure 3: Prospects of market diversification for all products exported by Iraq in 2020



Iraq also remains heavily dependent on a few countries for its imports, especially in the agrifood sector (Figure 4). Turkey remains the major agrifood trading partner for Iraq (other important agrifood trade partners are Syria and Iran, but unaccounted for by official reported data). Iraqi wheat imports for this year are expected to reach 1.7 million metric tonnes (mt), most of which are expected to come from Turkey in the form of cereals and milled products (flour), which account for around 85% of imports to Iraq. For rice, Iraq is very reliant on India primarily (92% of all rice imports in 2020), which poses a great threat for 2021 as India copes with the second wave of the pandemic and heightened food insecurity risks. Similarly in its meat imports, Iraq is dependent on Turkey (49%), India (23%) and Brazil (19%) for both red and white meat. All three countries have been hit by severe second waves of COVID-19.

Figure 4: Prospects of market diversification of suppliers for products imported by Iraq in 2020



IV. Short term macroeconomic outlook for the country

Iraq's socio-economic fragilities have been severely aggravated by the pandemic and the sharp decline in oil revenues, in tandem with widespread social unrest and political instability. COVID-19 exposed Iraq's already strained health system as well as the overall economy, with the government's fiscal position becoming unsustainable as oil revenues declined sharply to a level that barely covers the government's large wage and pension bills. Real GDP growth in 2020 contracted by 11%, reflecting a contraction of oil output and an interruption of non-oil economic activity, amid a sharp widening of fiscal and external imbalances. The sharp decline in oil revenue has widened the fiscal and external current account deficits to 20% and 16% of GDP respectively. The International Monetary Fund (IMF) projected growth in real GDP in 2021 to be around 1.1%, with consumer prices growing by 9.4%, the highest since 2003.



Government expenditure has become increasingly rigid and fiscal adjustments politically difficult, as the government payroll swelled to an estimated 24% of GDP in 2020—one of the highest in the world. Public employment policies have de-linked the allocation of labor resources from productivity and discouraged entrepreneurship. The non-oil private sector, especially agrifood, has been unable to cope with the pandemic with little access to credit, a lack of adequate infrastructure, and delayed government payments owed to farmers who sold their production to state-owned enterprises under the Wheat and Barley Subsidy Scheme.

In 2020, the government operated on a budget deficit of about 20%, after a small surplus in 2019. Having exhausted its own savings and facing tight financing constraints, the government has delayed the timely payment of salaries, pensions, and external debt service during 2020 and early 2021. Limited parliamentary authorization for government borrowing has resulted in the accumulation of over 6% of GDP in additional domestic and external arrears, bringing the total stock of arrears to 8.2% of GDP. Most of the remaining deficit has been financed by borrowing from the central bank of 13% of GDP. Government debt rose from 47% to 83% of GDP over the course of 2020, although about 9 percentage points of this increase reflects revaluation of the external debt stock with the new exchange rate.

In October 2020, the government unveiled the white paper for economic reform, which outlined the government's broad reform priorities. The reform plan included a package of reforms to reduce the fiscal and external imbalances and strengthen the social safety net. The reform plan passed by the parliament included a set of fiscal consolidation measures:

- (i) a nominal freeze of government wages, allowances, and pensions;
- (ii) a hiring freeze;
- (iii) removal of the exemption of government allowances from the payroll tax;
- (iv) a more-than-threefold increase in the domestic price of crude oil to reduce the implicit fuel subsidy;
- (v) an increase in excise and sales taxes on alcohol, tobacco, car sales, and shopping malls; and
- (vi) personal income tax measures, including a progressive payroll tax increase on wages, allowances, and pensions, and a 10% flat tax rate on retirement benefits and end-year services benefits.

At the same time, the government proposed an increase of IQD 2.5 trillion (79%) in the budget for targeted cash transfers to the vulnerable and allocated IQD 725 billion (equivalent to USD 0.5 billion) for additional COVID-19 related health spending. In parallel, the Central Bank of Iraq (CBI) announced a 22.7% devaluation of the IQD/USD exchange rate in December 2020, to narrow the external imbalance and mitigate pressures on reserves, including by helping to improve the fiscal balance and reduce the need for monetary financing of the budget, but increasing food prices by around 25 to 40%.

Nevertheless, reported non-performing loans at state-owned banks increased to 12% as of Q2 2020, up from 10% at end-2019, primarily made up of loans made to farmers. Such figures are likely to be understated, as they do not reflect loans to public entities with uncalled government guarantees, particularly agrifood state-owned enterprises which have been footing in the bill, as government liquidity was challenged in 2020.

Economic activity declined sharply in 2020 and in early 2021 after the currency devaluation. Pandemic-related containment measures and the interruption of international travel and trade reduced the non-oil real GDP by 8% in 2020. At the same time, oil production has been cut by about 13% owing to OPEC+ commitments. As a result, overall real GDP has likely declined by 11%, while weak domestic demand has kept inflation low, at 1% in 2020.

Although final data is not yet available, a recent study by the World Bank, Ministry of Planning and UNICEF estimates that 4.5 million Iraqis (12% of population) are being pushed into poverty by the current crisis, increasing the poverty rate to 32%.



V. Economic Outlook

Following a 3.5% year-on-year (y/y) contraction estimated for the global economy in 2020, economic growth is expected to reach 5.5% y/y in 2021. However, this remains clouded by uncertainties including, but not limited to, the spread of COVID-19 variants and the speed of the global vaccine rollout. In addition, sovereign debt levels in many regions, inflationary pressures and central bank responses are also key factors. According to OPEC estimates, world oil demand is expected to increase in 2021, by 6.0 million barrels/day, to an average of 96.5 million barrels/day. Sluggish improvements in mobility, social distancing policies, trends toward home schooling and teleworking all contributed negatively to oil demand performance in the Middle East region in February. However, with the recoveries of the global economy and increased global demand, oil prices continue increasing over the past six months.

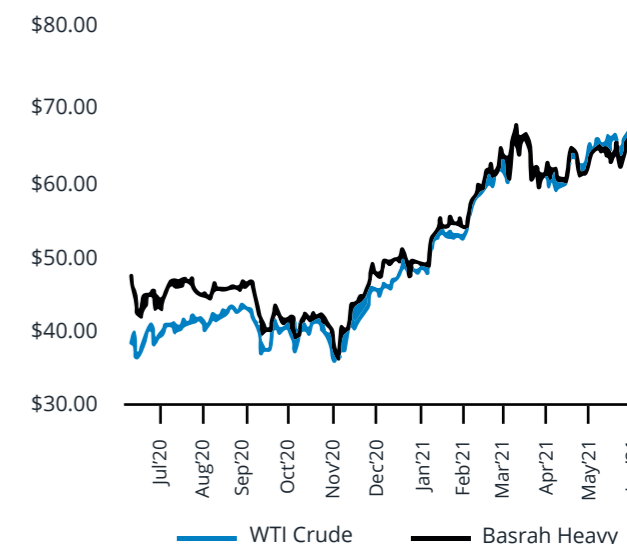


Figure 5: Prices per barrel over one year during the COVID-19 pandemic.



As mentioned in previous reports, Iraq still has a poorly diversified economy, with 98% reliance on foreign income from oil exports. Basra Heavy oil prices rose from USD 36.12/barrel on 2 November to a high of USD 67.57/barrel on 8 March – marking around an 87% increase. During the month of March, the price fell for the first time in the previous 6 months, dropping to USD 59.21/barrel by 24 March. The price recovered again in April, reaching USD 63.79/barrel by 30 April. Spot crude prices also fell for the first time in six months. The situation remains unstable. The CBI estimated that the inflation rate in Iraq increased to 5.6% in May 2021, where cost of food in Iraq increased 4.1% in over the same month of May in 2020.

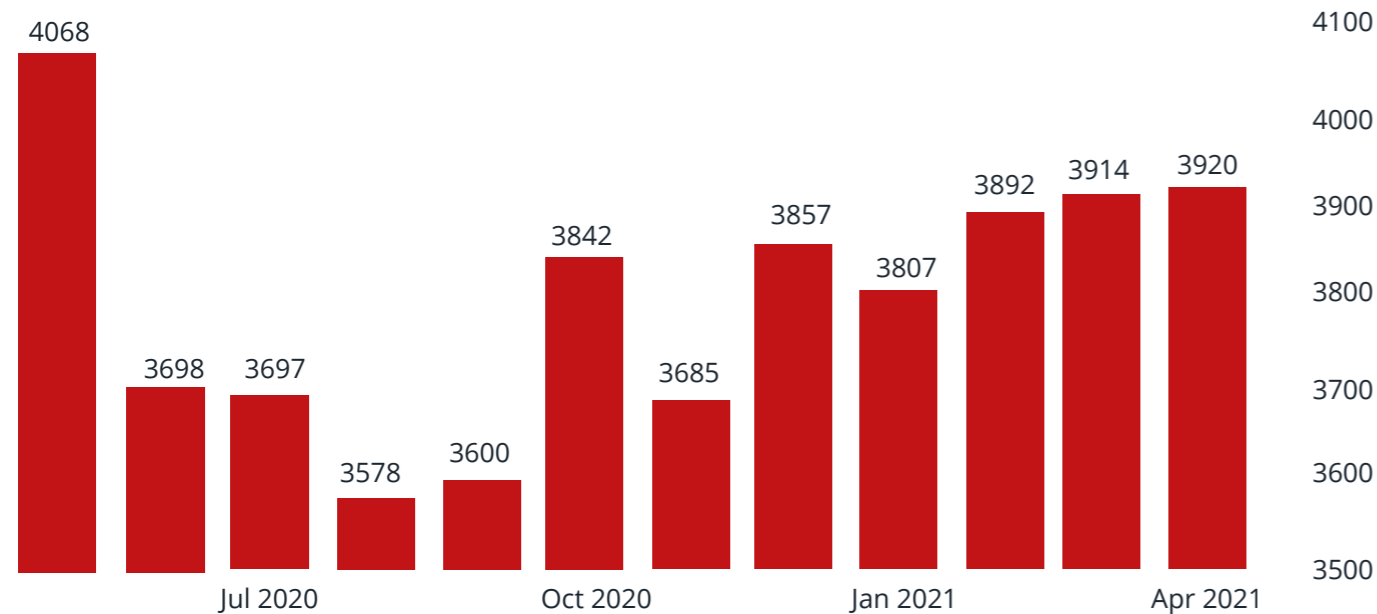


Figure 6: Crude Oil Production in Iraq increased to 3,920 BBL/D/1K in April from 3,600 BBL/D/1K in September last year. Source: OPEC



VI. Subsidies and Social Protection

The World Bank estimates that the pandemic has disproportionately affected the pre-pandemic vulnerable groups and poor. The crisis has also impacted upon the economic welfare of Iraqi households, adding to unemployment pressures especially among informal workers and those in self-employment. Unemployment remained more than 10 percentage points higher than the pre-pandemic level. The impact has been especially severe among workers in the northern governorates, which already had a high incidence of poverty, and female workers. Following a surge across the board during the initial lockdowns, the unemployment rate decreased gradually among men, but remained stable at a new rate 15 percentage points higher than the pre-pandemic level for both women and those in the north.

Workers in the informal private sector are a group particularly impacted during the pandemic. While the majority of wealthier Iraqis tend to be employed in the public sector, the mostly informal private sector is dominated by the poorer segment of the workforce. Compared to 87% of pre-pandemic public sector employees, only 66-67% of the pre-pandemic private sector workers were able to hold on to their jobs, either working as usual or reduced hours during the several lockdowns.

Limited fiscal space has impacted transfers, including the universal Public Distribution System for food rations (PDS), where the share of households receiving transfers dropped by more than 8 percentage points. The loss of household income and social assistance has increased vulnerability to food insecurity.

The expected spike in poverty as a result of the COVID-19 pandemic, and the projected increase in inflation in the wake of the exchange rate devaluation, put a premium on adequate protection of those most in need. At present, Iraq’s targeted cash transfer system provides support to about 1.4 million Iraqi households but, due to insufficient funding, excludes over half a million additional households below the poverty line.

The economic fallout from the pandemic puts a premium on strengthening social safety nets. Income and job losses are expected to further affect the most vulnerable, and Iraq’s poverty rate could spike according to projections by the World Bank, Ministry of Planning and UNICEF. Iraq’s current social welfare system is fragmented and inefficient. The core of the system is split between a cash transfers programme, the food ration system (PDS), and the pension system. These are complemented by various other subsidies, most notably fuel and electricity, both of which are costly and poorly targeted.

Targeting under the cash transfers programme has been improving. It is the largest component of the social transfer programme, accounting for around 1.6% of GDP in 2020. In contrast, the PDS food ration system is both costly and mostly untargeted. Inherited from the period when the UN sanctions restricted food imports, the PDS provides ration cards with specific quantities of wheat, rice, oil and sugar per household, depending on size. Eligibility is nearly universal, covering about 95% of the population. In addition to weak targeting, the food basket composition requires revision to better meet household needs. The PDS accounted for 0.5% of GDP in 2020. WFP is currently working with the Ministry of Trade to digitalize the PDS, to improve efficiency, save funds and ultimately enabling prioritization, so the right families receive the right rations at the right time.

The sharp decline in oil revenues also placed immense pressures on the government’s pro-growth and pro-poor spending. Tighter fiscal conditions impacted subsidies and transfers, including the PDS, where the share of households receiving transfers dropped by more than 8 percentage points.



VII. Changes in government policies affecting agriculture and food security

The major policy that has been championed by the government is the White Paper for economic reforms. The paper was produced at the request of Parliament as part of the June 2020 emergency borrowing law, was presented to Parliament in October 2020 and approved by the Council of Ministers. It set the contours of the fiscal budget plan of 2021 and the move by the CBI to devalue the currency. The White Paper offers a candid assessment of the root causes of Iraq's current macroeconomic imbalances, highlighting, among other factors, the sharp increase in the public sector payroll, the crowding out of private sector activity, and the weakness of financial institutions.



The proposed reforms are broad in scope and largely focused on the medium term. They emphasize ensuring fiscal sustainability and five key pillars:

- rehabilitating the financial sector;
- reforming state-owned production sectors including agrifood and trade;
- improving key infrastructure, including water management and irrigation schemes and land reform;
- enhancing provision of public services and social assistance, with particular reform of PDS; and
- strengthening governance and the legal environment.

The White Paper sets an ambitious goal of reducing the fiscal deficit from 20% to 3% of GDP in three years. Fiscal measures are focused on expenditure rationalization, raising revenues, and strengthening public financial management. Specifically, the paper envisages reducing the public wage bill—from 25% of GDP to 12.5% in three years—through restrictions on new employment, cutting transfers to state-owned enterprises and government subsidies, as well as a pension reform.

To rehabilitate the financial sector, the paper mentions potential recapitalization of state-owned banks and accelerating efforts to introduce core-banking systems. The paper also proposes phasing out financial support to state-owned enterprises, a law to restructure and transform them into private companies, and a public works programme to help absorb redundancies in the labor market.



# IV. FOOD AVAILABILITY & STABILITY



## A. FOOD PRODUCTION

### Progress Update on Wheat and Barley Growing Season (2020-21) in Iraq

In the northern parts of the country, sporadic and insufficient precipitation during the cropping season (2020-21) in Ninewa governorate, as well as portions of northeastern Duhok, Erbil, Sulaymaniyah and Salah al-Din, are expected to affect rainfed winter cereal production significantly compared to the previous year. In central and southern parts of the country, which require supplementary irrigation, the season proceeded under reasonably favorable conditions and the development of cereal crops. At the regional level, lack of rainfall exacerbated existing tensions over the management of water resources.

In Ninewa, winter cereals in rainfed areas are expected to fail and some farmers have already resorted to ploughing up their fields, have decided to leave stunted crops for pasture, or to lease them out to livestock farmers to recover at least some of their costs. The wheat harvest is forecast to be 70% lower than the 1.4 million mt harvested in 2020, and over 50% lower than the 850,000 mt harvested in 2019. The KR authorities expect their wheat crop to be half of last year's exceptional harvest, down from 1.5 million mt to 750,000 mt in 2021. The 2021 barley crop has failed completely, and production is forecast at a level of 11,510 mt, which is negligible when compared to the 1.36 million mt harvested the previous year.

Figure 7 : Number of Respondents by four key groups.

	Farmer survey		KII Agricultural, Extension officers		Senior government officials		Agricultural input vendors	
	Dec'20 \ Jan'21	Feb'21 \ Mar'21	Dec'20 \ Jan'21	Feb'21 \ Mar'21	Dec'20 \ Jan'21	Feb'21 \ Mar'21	Dec'20 \ Jan'21	Feb'21 \ Mar'21
<b>NUMBER OF RESPONDENTS</b>	360	600	29	146	11	36	12	17

By the end of April, wheat had been harvested in the south and centre of the country – typically grown with assistance from supplementary irrigation. Harvesting of wheat mainly continued in the north in May. The expected economic impacts of the expected below-average cereal production in 2021 are: loss of income, increased feed prices of barley and other livestock feed products for livestock producers; and increased import requirements for PDS food rations.

- Under an EU funded project, FAO is expanding its support to livestock and dairy producers which includes:
- i) cultivation of newly introduced fodder crops - Alfalfa and Sudanese grass, with high quality seeds already distributed and planted by farmers;
  - ii) distribution of fixed sprinklers to 70 small-livestock producers/ returnees in Ninewa, to mitigate the impact of low rainfall, and increase green fodder production and availability of feed during summertime; and
  - iii) At scale, FAO introduced two new feeding technologies based on better utilization of local feed resources: molasses and feed blocks as strategic feed supplements. These interventions show great promise for expansion to support vulnerable farmers in affected areas.

## B. IMPACT OF COVID-19 ON FARMERS

FAO regularly assesses the impact of COVID-19 on the supply side of the food system, through conducting household surveys with farmers and livestock owners, and Key Informant Interviews (KIIs) with Ministry of Agriculture (MoA) senior officials, extension officers, and agricultural input vendors. FAO undertook two rounds of such data collection, in December 2020/January 2021, and another during February/March 2021.

The interviews were conducted in four governorates representing four distinct agro-ecological regions in Iraq, namely the north (Ninewa), Kurdistan Region (Duhok), centre (Diyala) and south (Misan). Altogether, 960 agricultural households (engaged in farming and livestock production) were interviewed during the two rounds.

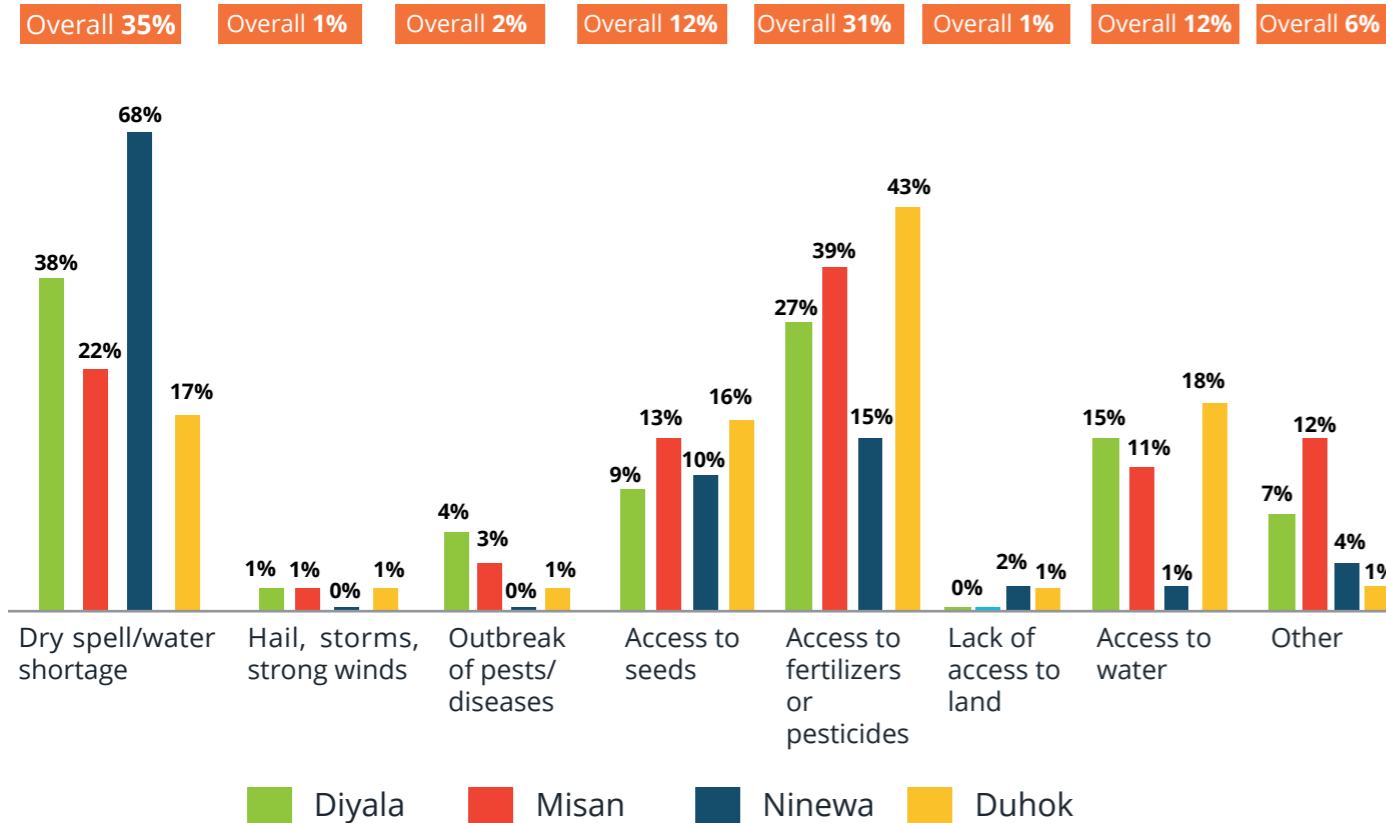


Figure 8: Difficulties faced by farmers



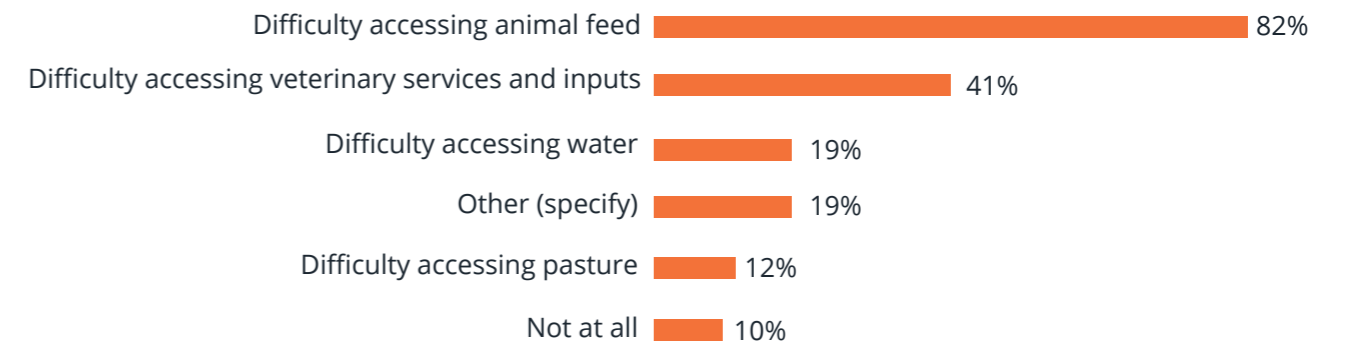
A majority of respondents among farmers reported they faced difficulties with their crop production. In December 2020/ January 2021, the most commonly cited difficulty was lack of access to fertilizers or pesticides. Difficulty accessing seeds was also experienced by one-quarter of respondents. They reported that the government did not provide fertilizers, pesticides, and seeds on time for the growing season, thus, farmers had to buy them in markets at higher prices and lower quality, as they were not certified in Iraq. In addition, the 22% currency devaluation of the Iraqi Dinar vs. the US Dollar that took place in December 2020 negatively affected farmers, since they used to buy imported inputs in USD, whereas all their sales are in IQD.

Water was also seen as a key constraint for farmers as they experienced low rainfall, which is especially challenging since a substantial part of crop production in the north and Kurdistan Region (KR) is rain-fed (wheat and barley). As a consequence, farmers may incur additional costs for irrigation.

In February/March 2021, a question was added to the survey: if farmers faced any difficulty accessing seeds. Around 49% of respondents reported that they faced such difficulties due to the high price and low quality of seeds, insufficient supply of seeds, and insufficient household income.

The main difficulties observed by farmers in Ninewa and Diyala were water shortages, whereas in Misan and Duhok, access to fertilizers or pesticides were mentioned most frequently (Figure 8). Access to seeds and water was also perceived as difficult for the four governorates. However, the major issue for farmers in February/March 2021 was the water shortage, because of a lack in rainfall during the 2021 crop season.

Figure 9: Type of difficulties faced by the livestock producers

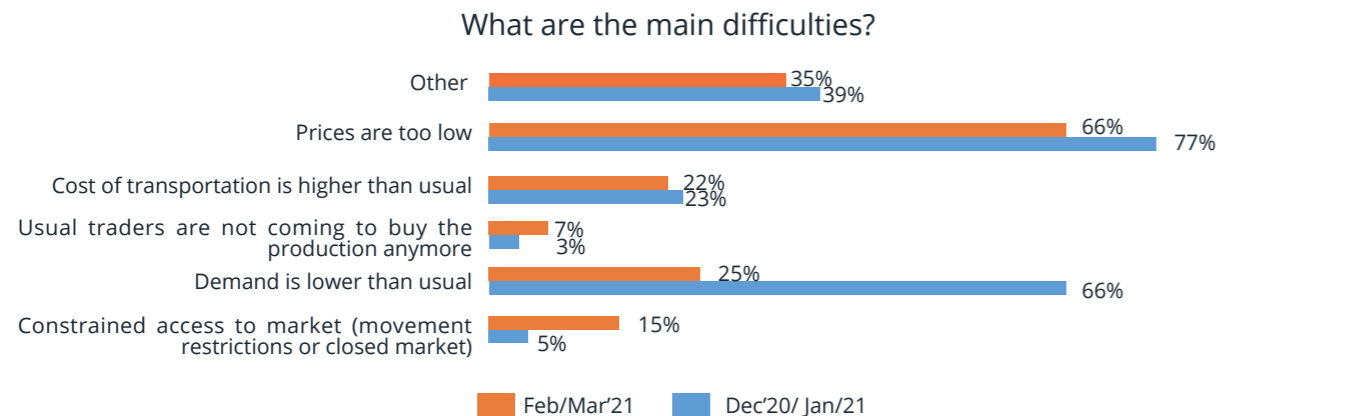


C. SOCIO-ECONOMIC STATUS OF HOUSEHOLDS (CROPS AND LIVESTOCK COMBINED)

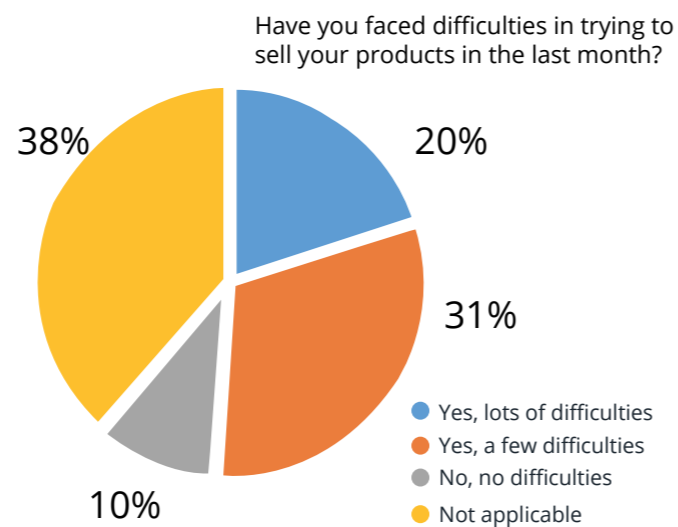
During both rounds of data collection, respondents stated they perceived their household income had decreased over the previous two months, in comparison to the same time last year. The main reasons for this decrease were COVID-19 restrictions (47%), lost employment (25%), higher production cost (19%), increased price of food and commodities (17%), increased price of agricultural inputs (15%), currency devaluation (14%), and water shortage (12%). The effect of the currency devaluation was especially felt across the households during the February/March 2021 round. Moreover, the farmers already stated that they lost their production during the 2020/2021 season due to lack of rainfall.

Although households reported selling a similar proportion of their production compared to the previous year in both survey rounds, 51% of respondents stated that they faced difficulties selling their products. Of those who faced difficulties, 77% stated the price of products locally were significantly lower, 66% found that demand was lower than usual, and 23% stated the transportation cost was higher than usual. Meanwhile, 39% referred to other "other difficulties", such as the non-payment of financial dues by the government on time, or the lack of storage facilities for keeping farm products (Figure 10). The combination of lower prices, lower demand, higher transport costs and lack of government payment, could explain in part why a majority of farmers reported a significant decline in income.

Figure 10: Difficulties selling products, and overall difficulties faced by farmers in both rounds



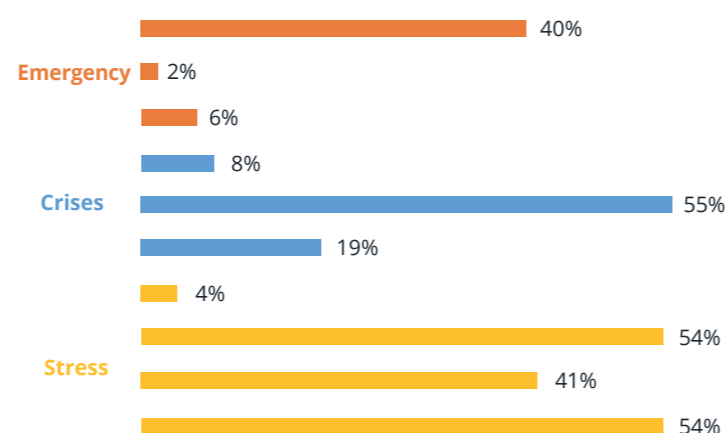
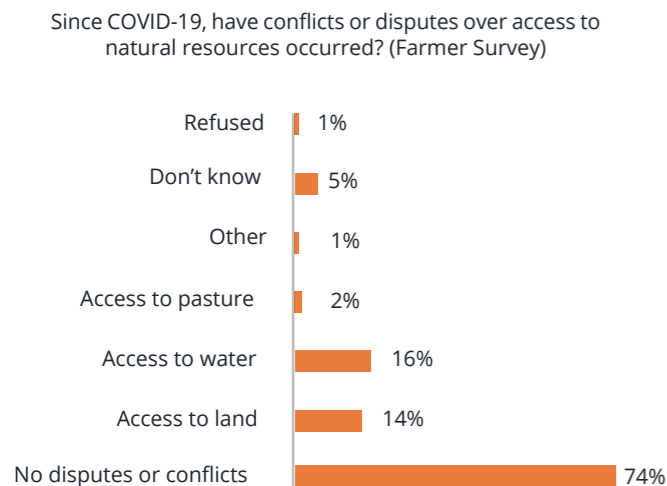
Farming households and extension officers were asked if any disagreement or disputes had occurred in their district since the start of the COVID-19 pandemic. Respondents were informed that these could be disagreements or arguments between individuals, families, communities, etc. and did not need to be violent. According to the household survey, 74% of respondents stated that disputes or disagreements over access to natural resources had not occurred since the start of the COVID-19 pandemic. 16% of respondents experienced disputes or disagreements over access to water, 14% stated access to land, and 2% access to pasture (Figure 11). However, 66% of extension officers reported no dispute or conflicts over access to natural resources, and only 17% reported access to land to be an issue.



The Livelihood-based Coping Strategy Index (LCSI) was applied in the last round of data collection (February/March 2021) to measure the household's experience of livelihood stress and asset depletion. The top livelihood coping strategies that most surveyed households adopted were: "decrease expenditure on inputs" (55%), "purchase food on credit" (54%), and "spend savings" (54%). Overall, 40% of farming households sold productive assets, as shown in Figure 12. The results indicated that coping strategies were applied by most households in Diyala, followed by Ninewa, Misan and Duhok.

Figure 11: Disputes or conflicts over access to natural resources

Figure 12: Livelihood coping strategies



175 KIIs were conducted with extension officers of the MoA in all governorates, in both rounds (29 in December/January and 146 in February/March 2021). Most respondents stated that their work had been affected by the pandemic, but they were able to provide extension support to farmers with limited access. The extension officers confirmed that the main issues facing farmers were not being provided enough supplies by the agriculture departments, such as seeds, pesticides, fertilizers and machines. The high cost of sprinklers was also a challenge, alongside increased market prices of inputs due to the devaluation of the Iraqi dinar, and non-payment of financial dues by the government which affected the farmers' plans of planting crops the next season. They also reported that slaughterhouses were functioning normally. The main issue being confronted in 2021 was the effects of low rainfall and water shortages, mainly in the north and centre of Iraq, as well as the continued impact of COVID-19.

At the MoA, 47 interviews were conducted with the senior government officials, in both rounds of data collection. The respondents stated that the government shared decisions and announcements to farmers through the official Ministry website, via extension officer staff in all districts and sub-districts, social media, and WhatsApp. In addition, senior government staff reported that the most urgent needs of farmers for the subsequent season were access to financial support, access to inputs (seeds, fodder and more), access to their land/livestock, and access to information and markets. This confirmed the main issues detailed by the extension officers and farmers.

In both rounds, 29 key informant interviews were conducted with agricultural input vendors, through email. Vendors experienced a number of challenges in both survey periods. The majority reported that their sales levels decreased over the two-month period prior to the survey, in comparison to the same time last year. A majority of vendors reported difficulties transporting goods, and increased material and operational costs. This may have led in part to increased costs for consumers, since most vendors reported that they increased their prices either somewhat or significantly. The majority of vendors also reported that customers were asking to buy on credit more, and some vendors had allowed purchasing on credit more frequently, potentially increasing debt. Most vendors projected that they would have difficulties operating their businesses in the coming months, due to a lack of supply, and anticipated that prices would continue to rise. 88% of agricultural vendors reported price increases of commodities or goods, one of the reasons being the currency devaluation in December 2020. Its impact was seen mainly in results from the February/March round.



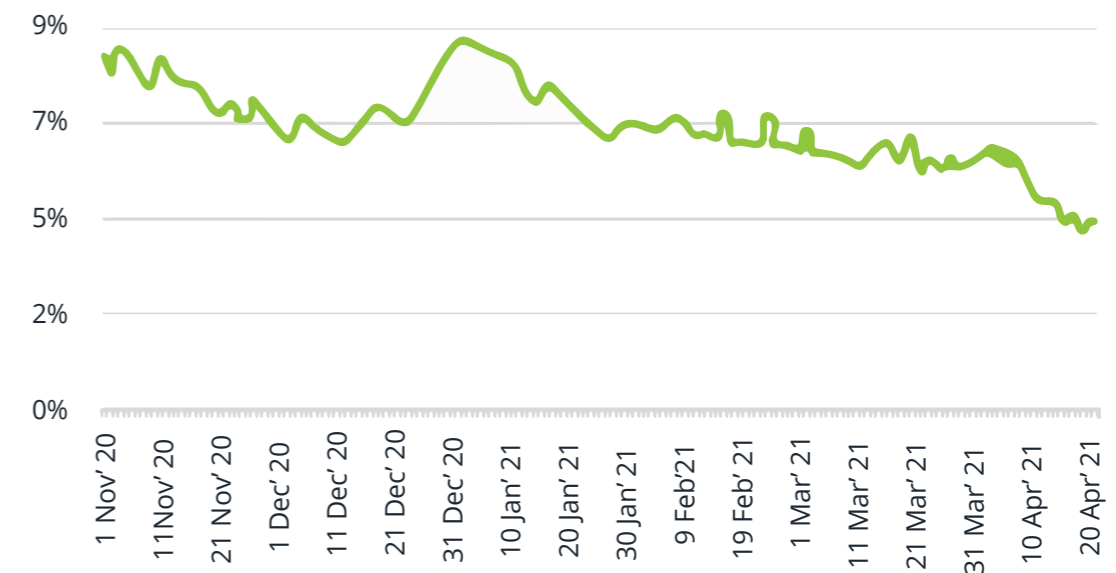
## V. FOOD ACCESS & STABILITY



While Iraq is confronting the third wave of the pandemic, the food security situation remained volatile over the six-month reporting period. WFP's Hunger Monitoring System continues to closely follow the food security situation.

With the sheer drop in oil prices and OPEC curbs on oil exports, the country struggled with high fiscal deficits during 2020. As mentioned, the government was even struggling to pay salaries and pension entitlements, and on 19 December, to reduce the pressure on public finances, the CBI announced the devaluation of the Iraqi dinar. This was the first time IQD fell in value against USD since the Iraq War in 2003. An immediate rise in the proportion of people with insufficient food consumption was observed in the week following the devaluation. The price of the Cash-based Transfer (CBT) Food Basket – the typical basket of family food items for monthly purchase – also increased by 14%. Though prices have stabilized, they are at a new high, impacting the household food security of vulnerable populations especially internally displaced people (IDPs), returnees, refugees and vulnerable Iraqi host communities.

Figure 13: Percentage of people with insufficient Food Consumption



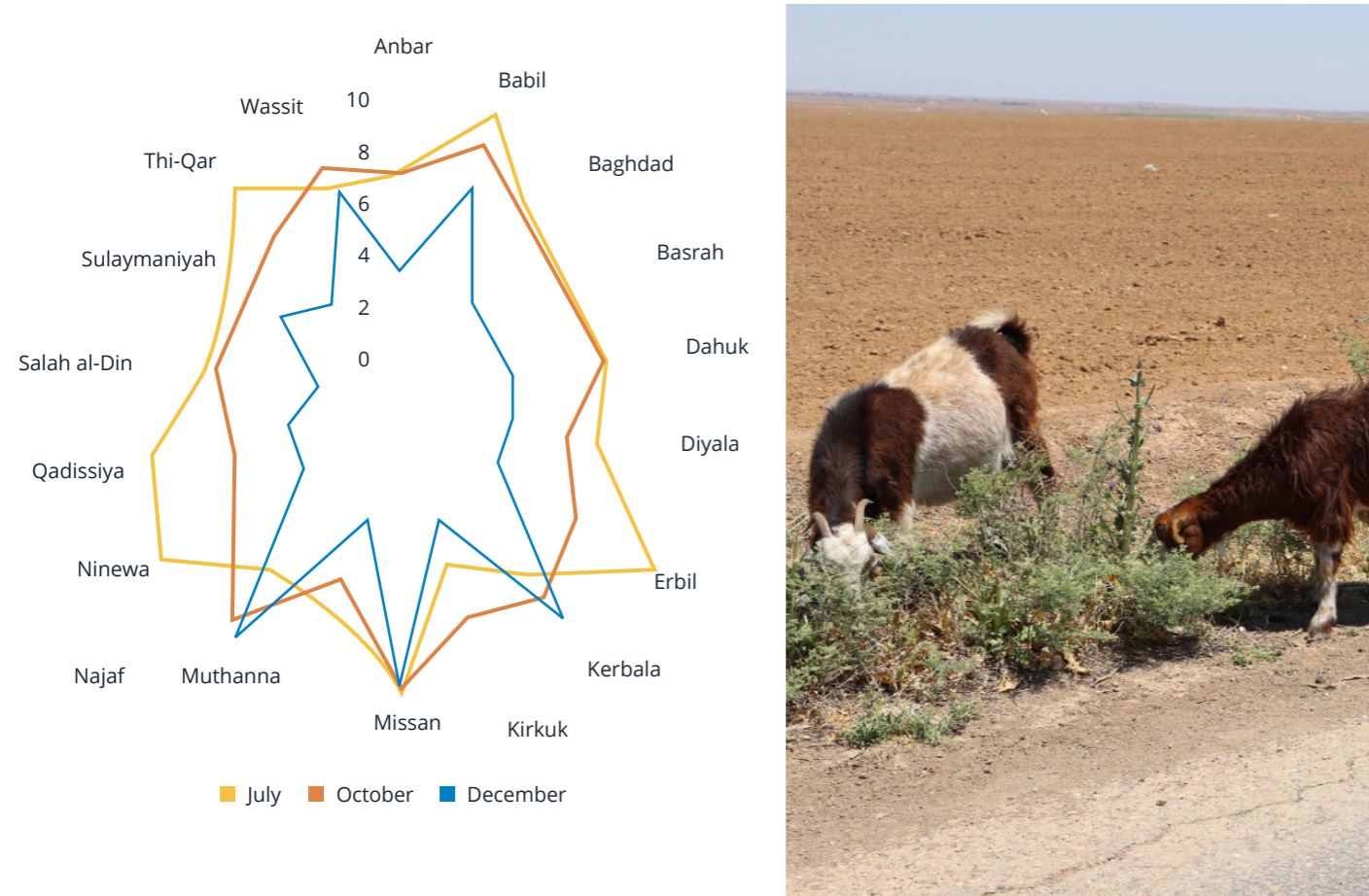
A drop in the number of people with insufficient consumption was expected during the holy month of Ramadan, which the Hunger Monitoring System captured (Figure 11). The level of food consumption improves, generally, in Muslim countries during Ramadan because of increased charity (zakat) and food sharing with poor and needy families. By the end of April around 4.7% people were estimated to have insufficient food consumption. In this period, 8.5% people were using food based coping strategies at crisis or above-crisis levels. Relying on less expensive food (34.5%) and borrowing food (27.4%) were the most commonly used coping strategies. Around 17% of respondents reported challenges in accessing markets in April, while around 26.6% of those who needed to access health facilities also reported challenges, due to e.g. lack of funds, or distance to the facility.

The Central Statistics Organization estimated the Consumer Price Index (CPI) at 110.40 points continuously for three months - from March through May. The most important components of the CPI basket include housing, water, electricity, and liquified petroleum gas (amounting to 31.3% of total weight) and food and non-alcoholic beverages (totalling 30.1%). Transportation accounts for 11.1%, clothing and footwear for 7.3%, household supplies, appliances, and maintenance for a total of 6.4%. The index also includes miscellaneous services and goods (3.9%), communications (2.9%), health (2.3%), recreation and culture (1.6%), restaurants (1.4%), education (1%) and alcoholic, beverages and tobacco (0.7%). The index has a base of 100, as of 2007. The cost of food in Iraq increased 4.1% in May of 2021 compared with the same month in 2020.

MARKET FUNCTIONALITY

The reduced Market Functionality Index (rMFI, looking at a limited range of factors) was compiled from WFP's Hunger Monitoring System data in December, after the devaluation of the Iraqi dinar revealed that market functionality was negatively impacted in all markets across the country (Figure 14 below). The prices of food and non-food items increased, and predictability of prices was also impacted. Around 46% of the responding retailers reported a decrease in their average sales.

Figure 14: Reduced Market Functionality Index (mMFI)



FOOD BASKET PRICES

With the devaluation of Iraqi dinar, the prices of major food commodities, especially imported food items, skyrocketed. The highest variation in the food basket price was observed in Baghdad, while the Sulaymaniyah market was found to be the least impacted. Vegetable oil is the most impacted commodity: the price increase has been more than 70% during past six months. This also reflects global price increases in vegetable oil.

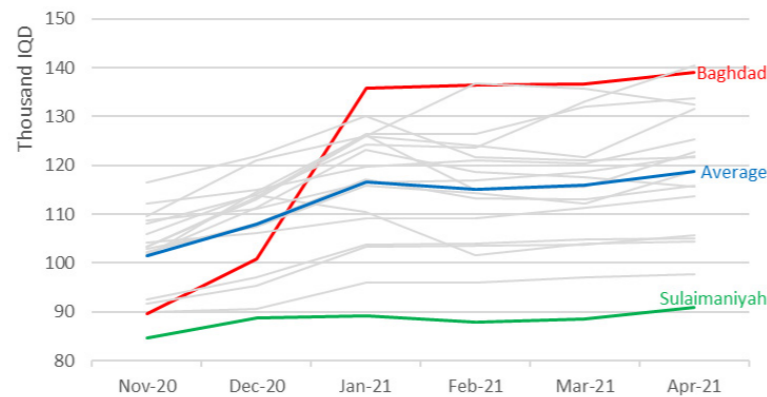


Figure 15: CBT Food Basket Price

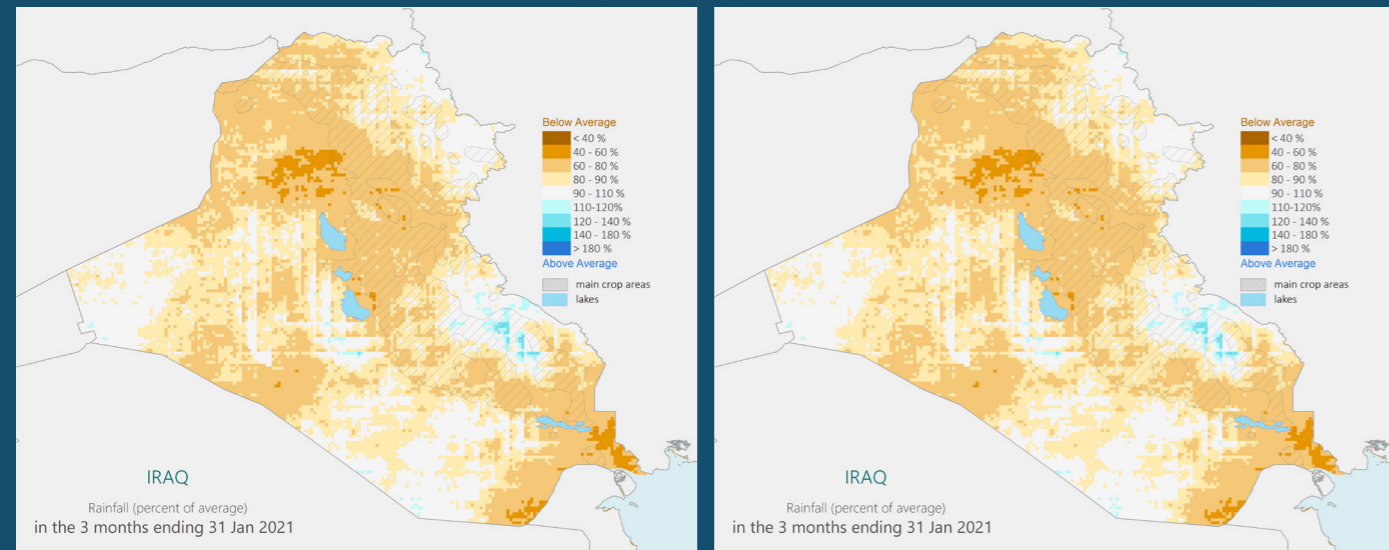
SPECIAL SECTION

VI. SEASONAL ANALYSIS: WATER SHORTAGES, FOOD PRODUCTION, ACCESS AND THE EFFECT ON HOUSEHOLDS



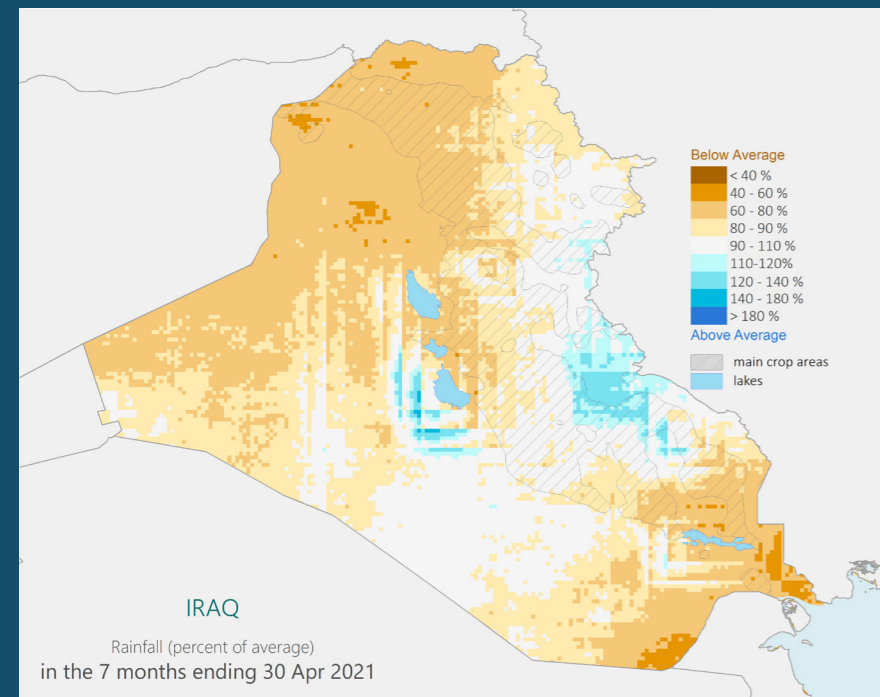
The 2020/2021 rainfall season has been characterized by below-average conditions, particularly in the northern governorates of Iraq. Such conditions were experienced in most of the country over the period November 2020 – January 2021 (Figure 16, left-hand map).

In the period February – April 2021 (Figure 16, right-hand map), the situation improved in the central parts of the country, with above-normal rainfall, mostly in Diyala and Wassit governorates.



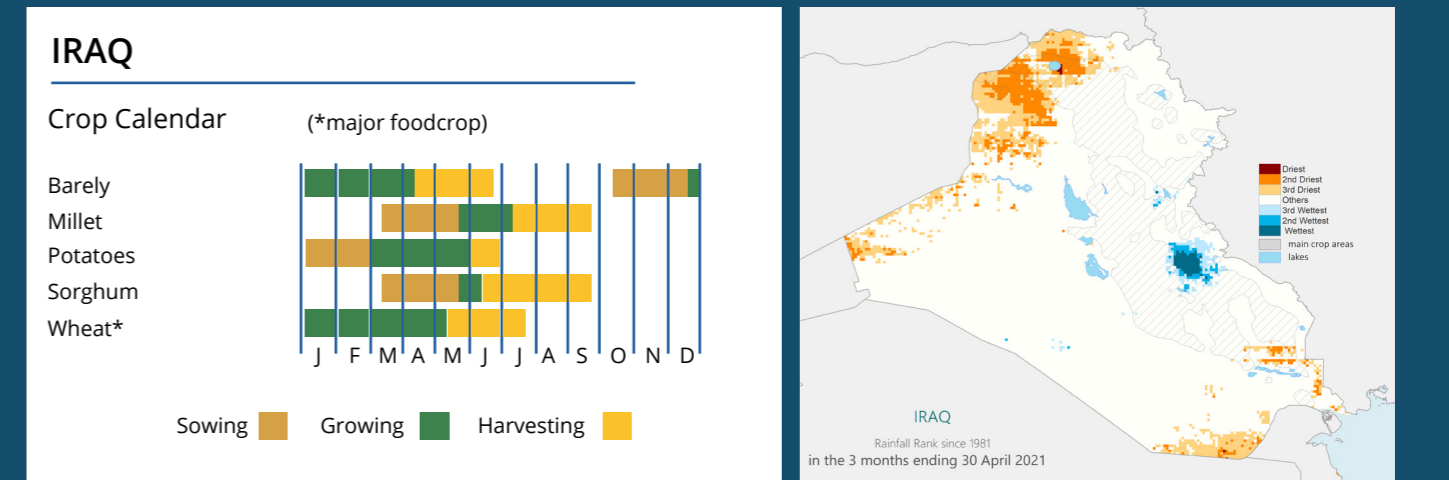
**Figure 16**  
In contrast, the northern parts of the country – where rainfed agriculture is concentrated - have continued to receive below-average rainfall: particularly in Ninewa, Duhok and Erbil governorates (western Erbil).

The seasonal overview from November 2020 – April 2021 (Figure 17), confirms these patterns, showing below-average rainfall in the northern parts of the country: Ninewa, Duhok, western Erbil, western Kirkuk, northern Salah al-Din. Precipitation was up to 40% below normal. This has most likely led to a below-average planted area, crop failures, and is likely to have impacts on the final yield of the two main rainfed winter crops: wheat and barley.



**Figure 17**

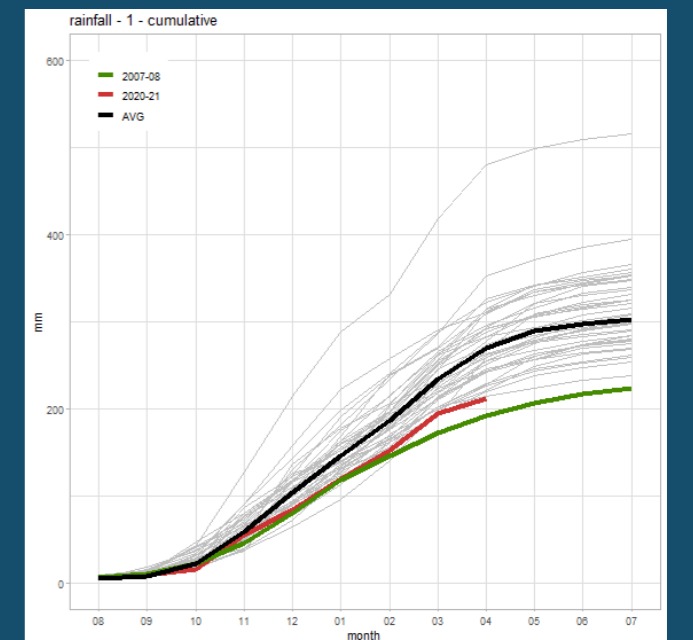
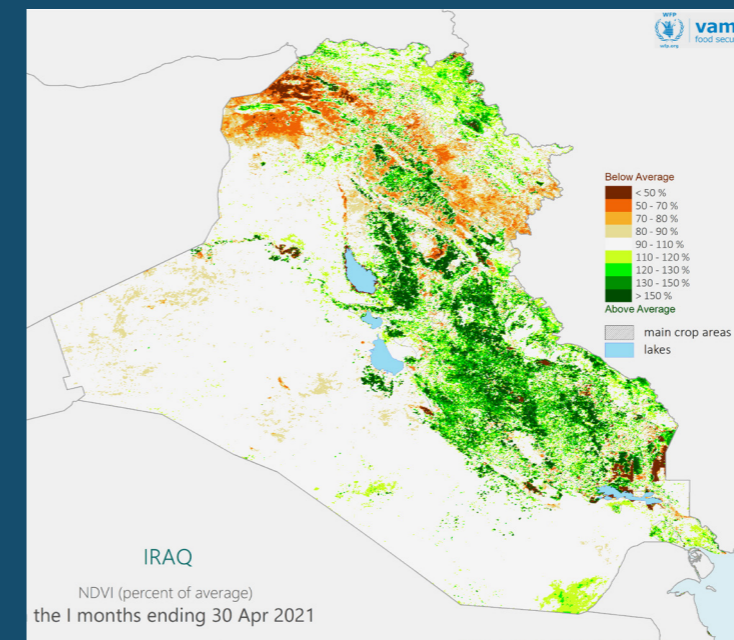
The rainfall deficit in the second part of the season (February-April 2021) has been particularly strong in some areas of Ninewa and Duhok governorates, where the 3-months' cumulative rainfall is the second and third lowest on record in 40 years (Figure 18 map).



**Figure 18**  
This period overlaps with some critical crop stages: heading, flowering, grain filling - see crop calendar in Figure 18. Hence dry conditions can have strong negative impacts on crop development and yield.

The vegetation development map (Figure 19) shows some areas with below-average conditions in the northern parts of the country: northern Ninewa, the south of Erbil city, and in south-west Sulaymaniyah governorates. The irrigated areas show mostly above average conditions, also in some zones in the north of the country (e.g. the large irrigated area close to Kirkuk).

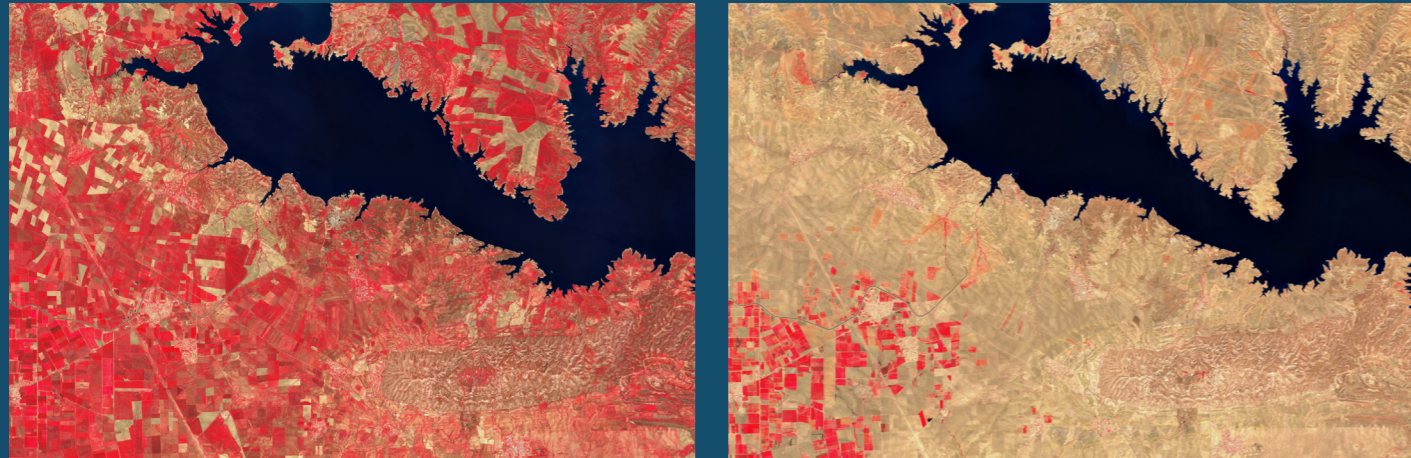
Of concern could be the amount of seasonal rainfall that has fallen in the entire Tigris-Euphrates river basin since October 2021. The plot below (average cumulative rainfall in Tigris and Euphrates Basin) shows that the current season is the second driest in 40 years (red line). The driest was the 2007-08 season (green line), when one of the worst droughts in the country occurred.



**Figure 19**

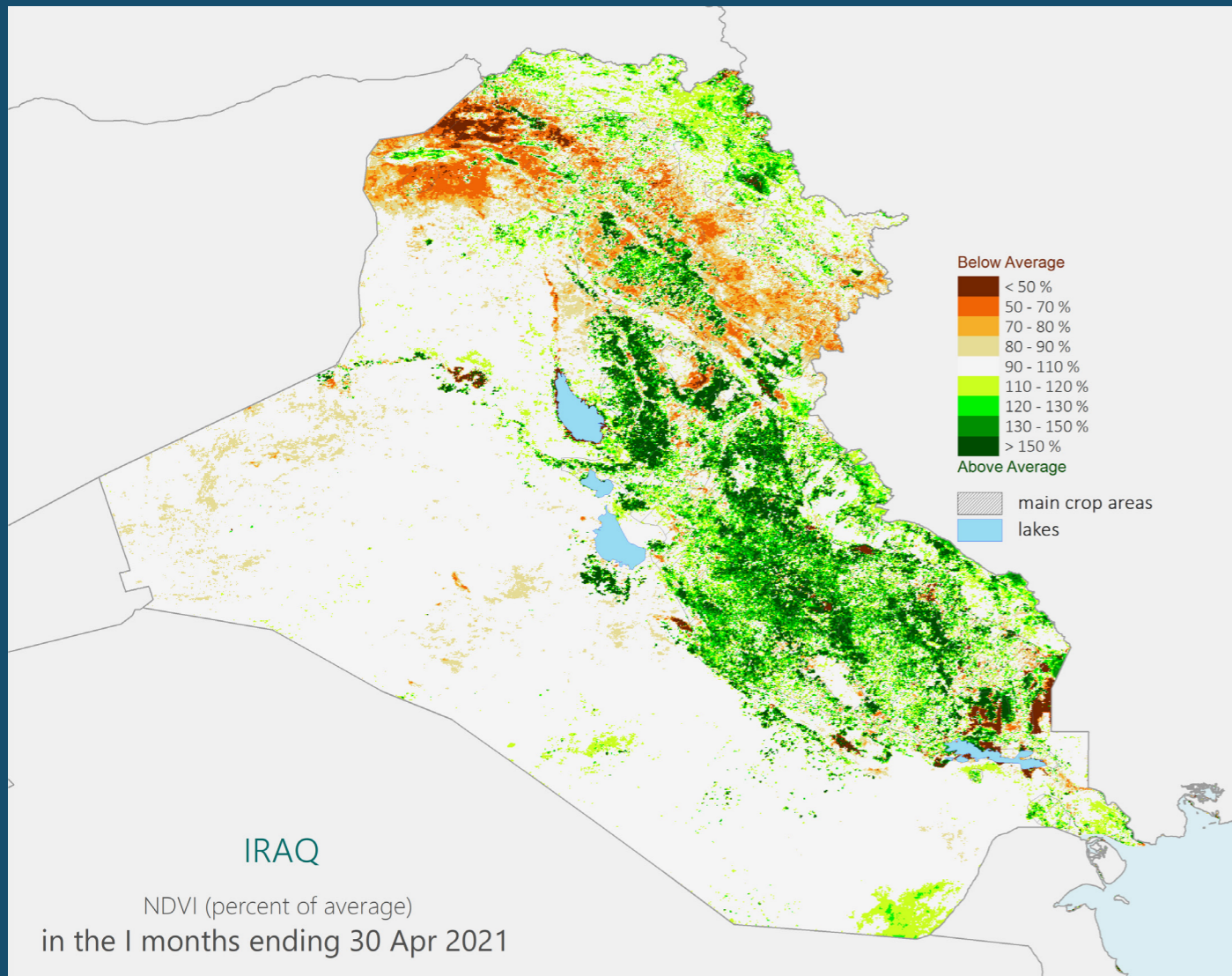


Considering that the water demand for irrigation will grow in the coming months, out of the rainfall season and into the dry season, it is essential to closely monitor vegetation development in the irrigated areas, to evaluate some possible impacts due to the reduced water availability for irrigation.



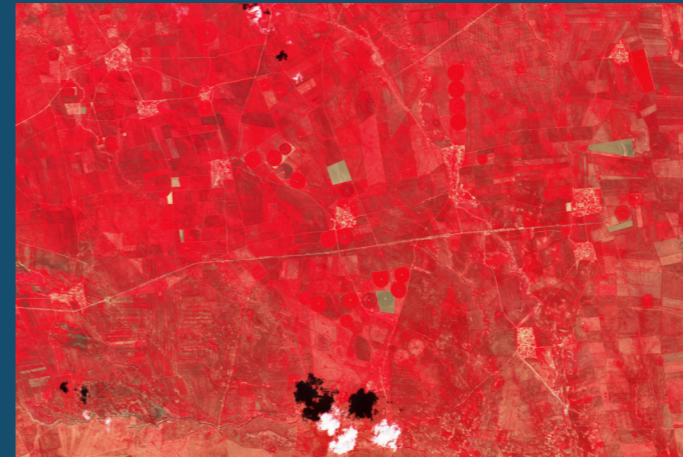
Furthermore, the level of vegetation development illustrates a stark difference in rainfall between 2020 and 2021. Figure 20 shows high-resolution images of the vegetation development (red) in Ninewa governorate, in an area close to Lake Duhok for the same month in 2020 and 2021. It is evident that the extent of cultivated fields is lower in 2021, than just one year earlier.

Figure 20

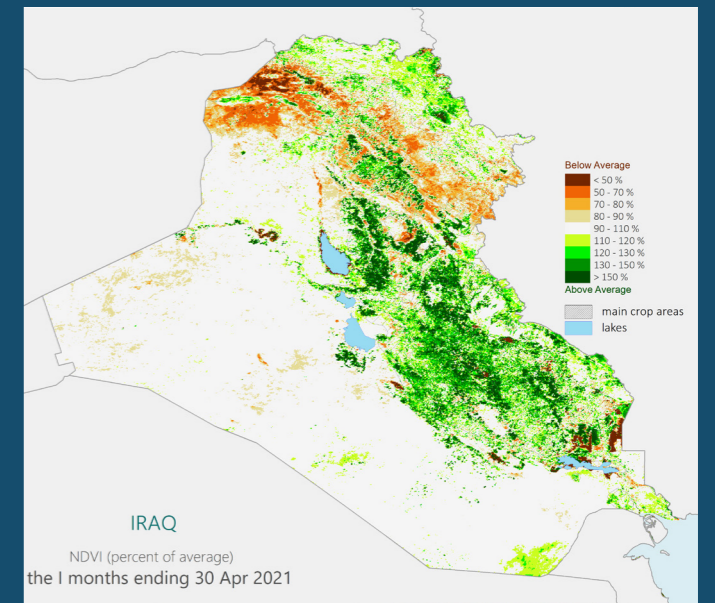
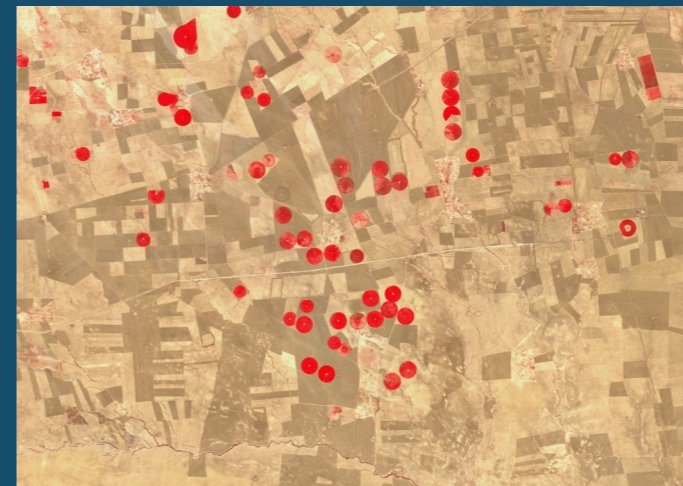


Irrigated areas of Ninewa, Sulaymaniyah, Salah al-Din and Erbil have been impacted. As mentioned previously, barley production has been the most affected, with FAO estimating that there will be more than a 70% reduction in wheat production, while barley is largely lost (>99%) in Ninewa. A 50% reduction in wheat production is estimated for the Kurdistan Region. Grazing areas and rangelands are greatly reduced, and livestock are using abandoned barley fields. Prices of animal fodder have increased, and thus the potential risk of destocking and lower animal prices.

Figure 21



WFP's Hunger Monitoring System revealed that during the month of May, around 8% of people in Ninewa and Kirkuk governorates had insufficient consumption. (The national average for May was around half, at 4%). Around 13% people are employing negative coping strategies in Ninewa - while the national average is 7.5%. The highest month on month (m/m) increase in the price of the food basket was also observed in Ninewa (6.8%) and Salah al Din (8.9%) during April. The food security of vulnerable families may already be negatively affected by the water shortages in their areas.



## VII. CONCLUSION

This report has provided sound evidence of factors that impact the current food supply and demand situation in Iraq.

On the food supply side, COVID-19 restrictions still limit mobility across governorates as well as on commercial and trade activity. Crude oil prices have mostly recovered to pre-pandemic levels (at the time of publication). This allows the government of Iraq to pay more commitments on government salaries, pensions and input and output agricultural subsidies. Meanwhile, input supply traders and farmers are confronting price increases for frequently imported agricultural inputs, as a consequence of the 22% devaluation of the IQD versus the USD in December 2020. While inputs often have to be paid in USD, sales are obtained in IQD. There has been a predictable reduction in prices paid by the government to farmers since the guaranteed subsidized prices for grains (in IQD) have not yet been adjusted, after the devaluation of the currency.

In production, the reduced precipitation of the 2020-21 main cropping season has affected harvests of wheat and barley (solely rain-fed) in Ninewa and the Kurdistan Region, and has resulted in a reduction in available grazing areas for livestock. The latter has led to an increase in fodder crops and animal feed prices. Of great concern is the reduction in surface water (lakes, dams) observed this year due to high temperatures and increased need for supplementary irrigation. This requires close monitoring of all water sources for the upcoming 2021-22 cropping season, since if the water shortages continue, irrigated crop production may also be affected.

On the food demand side, COVID-19 still impacts the economy even if oil prices have mostly recovered to pre-pandemic levels at the time of publication. Unemployment levels are still higher than before, and just like producers, consumers feel the negative effect from the 22% devaluation of the IQD versus the USD. The price of the CBT Food Basket – the typical basket of family food items for monthly purchase – increased by 14%. Though prices have stabilized, they are at a new high, impacting the household food security of vulnerable populations especially IDPs, returnees, refugees and vulnerable Iraqi host communities.

Following the devaluation of the Iraqi dinar, market functionality was negatively impacted in all markets across the country. The prices of food and non-food items increased, and predictability of prices was also impacted. Many retailers reported a decrease in their average sales. What is of most concern is that among the governorates affected by the current water shortages, around 8% of people in Ninewa and Kirkuk had insufficient consumption. This is almost double the national average. Around 13% of people are employing negative coping strategies in Ninewa – while the national average is 7.5%. The highest month on month (m/m) increase in the price of the food basket was also observed in affected governorates Ninewa and Salah al-Din during April.

Iraq's dependence on crude oil revenues to subsidize and feed its population has been severely affected during the COVID-19 pandemic and led to many hardships especially among the most vulnerable groups. While economic hardship for the government may be easing due to a recovery of crude oil prices, the impact of increased water scarcity across the country (and region) is clearly being felt. Therefore, it will be opportune for the country to start now the changes and investments required to its overall food system, to better manage a future that will be characterized by higher temperatures, extreme weather events, water scarcity, land degradation through salinization and a growing population.



## REFERENCES

1. The CBT food basket includes diversified food items to provide 2,100 kcal per capita per month.
2. WFP's Market Functionality Index (MFI) supports the "market assessment and risk identification" and "market situation monitoring" processes of cash-based assistance operations. On a scale of 0 to 10, the full package analyses nine different dimensions of a market, to help make informed transfer modality decisions and detect changes in market functionality over time. The MFI reduced version for assessment over the phone analyses four of these dimensions (skipping the observational dimensions).





## ACRONYMS

<b>BeneMark</b>	Beneficiary Market Perspectives Survey
<b>CBT</b>	Cash-based transfers
<b>CCI</b>	Cash Consortium of Iraq
<b>FAO</b>	Food and Agriculture Organization
<b>FCS</b>	Food Consumption Score
<b>FPI</b>	Food Price Index
<b>GDP</b>	Gross Domestic Product
<b>HiH</b>	Hand in Hand Initiative
<b>HMS</b>	Hunger Monitoring System
<b>IDP</b>	Internally Displaced People
<b>IFAD</b>	International Fund for Agricultural Development
<b>IOM</b>	International Organization for Migration
<b>IQD</b>	Iraqi Dinar
<b>ISIL</b>	Islamic State of Iraq and the Levant
<b>ITC</b>	International Trade Centre
<b>KI</b>	Key informant
<b>KRG</b>	Kurdistan Region Government
<b>KR</b>	Kurdistan Region
<b>MENA</b>	Middle East and North Africa
<b>mMFI</b>	Mobile Market Functionality Index
<b>MoA</b>	Ministry of Agriculture
<b>MoI</b>	Ministry of Interior
<b>MoLSA</b>	Ministry of Labor and Social Affairs
<b>MoMD</b>	Ministry of Migration and Displacement
<b>MoP</b>	Ministry of Planning
<b>MoT</b>	Ministry of Trade
<b>MoWR</b>	Ministry of Water Resources
<b>m/m</b>	Month on month
<b>mVAM</b>	Mobile Vulnerability Analysis and Mapping
<b>NAP</b>	National Agricultural Plan
<b>PDS</b>	Public Distribution System (of food rations)
<b>rCSI</b>	Reduced Coping Strategy Index (food based)
<b>SCHNS</b>	Supreme Committee for Health and National Safety
<b>SMEs</b>	Small and Medium Enterprises
<b>SMEB</b>	Survival Minimum Expenditure Basket
<b>ToT</b>	Terms of trade
<b>USD</b>	United States dollar
<b>WASH</b>	Water, Sanitation and Hygiene
<b>WFP</b>	United Nations World Food Programme
<b>WHO</b>	World Health Organization
<b>y/y</b>	year on year

