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THE SUDAN

Agricultural livelihoods and food security
in the context of COVID-19

Monitoring Report
January 2021



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Abbreviations

COVID-19	Coronavirus disease 2019
FAO	Food and Agriculture Organization of the United Nations
FEWS NET	Famine Early Warning Systems Network
FPMA	Food Price and Monitoring Analysis
GIEWS	Global Information and Early Warning System on Food and Agriculture
IPC	Integrated Food Security Phase Classification
NGO	Non-governmental organization
OCHA	Office for the Coordination of Humanitarian Affairs
TOT	Terms of trade

Key highlights

- > In July–August 2020, the Food and Agriculture Organization of the United Nations (FAO) conducted a food security and agricultural livelihood impact assessment taking into account the effects of coronavirus disease 2019 (COVID-19). A total of 448 extension officers from the Ministry of Agriculture in 16 out of the Sudan's 18 states were interviewed. Additional secondary data were analysed and included.
- > The assessment indicates that the effects of COVID-19 urgent and essential restrictions have affected the agricultural value chain (from producers to consumers) and have further impacted the already fragile food security situation in the country.
- > Farmers and agropastoral communities who rely on access to land, water, pasture, labour and favourable crop/livestock production for their food security and income generation, are among the most affected population groups in the context of COVID-19 and assessed agricultural areas.
- > The June/September 2020 rainy season, coinciding with the main agricultural season for coarse grains, has generally been favourable across the country.
- > Prices of sorghum and millet continued to surge in August 2020 and reached record highs, with seasonal patterns compounded by a further depreciation of the local currency on the parallel market.

- > Production costs such as animal feed and drugs were reported to be much higher across all assessed states compared with the same time in 2019. Meanwhile, livestock prices continued to increase in July and August 2020.
- > In the Red Sea state, the price of first class fish increased by up to 275 percent in July 2020, compared with the same time in 2019.
- > Due to the increased prices of food commodities, many poor and vulnerable households experienced reduced purchasing power.
- > The high transportation cost of food commodities due to fuel shortages and limited movement as a result of COVID-19 restrictions, has further impacted food availability in almost all markets.
- > Anticipatory action and response to COVID-19 contributes to availability of and stabilizing access to food for the most food-insecure populations, as well as ensures continuity of the food supply chain and prevents the transmission of the virus among all actors involved.

COVID-19 and other risk factors in the country

Since the start of the COVID-19 pandemic in the Sudan in mid-March 2020, the Government confirmed that over 13 400 people contracted the virus, including 833 who died from the disease, as of 5 September 2020 (Office for the Coordination of Humanitarian Affairs [OCHA], 2020). Most confirmed cases were reported in urban areas, with approximately 70 percent in Khartoum (Famine Early Warning Systems Network [FEWS NET], 2020). Since March 2020, the Government has put in place essential and urgent measures to curb the spread of COVID-19, including curfews, closures of airports and borders, a ban of public gatherings and restrictions on internal population movements. During this time, most economic activities continued, while weak public compliance was observed for government-imposed restrictions and containment measures. In July, public spaces and businesses officially reopened. However, restrictions on public transportation within cities and between states remain in place, in addition to restrictions on movement and trade with other countries, such as Saudi Arabia, which have limited key exports (FEWS NET, 2020).

Project and methodology description
<p>Thanks to funding from the Government of the United States of America, FAO is implementing a project (July 2020–July 2021) to roll out data collection and analysis linked to COVID-19 to inform evidence-based programming in food crisis countries.</p> <p>This assessment was conducted during July–August 2020, with a combination of primary and secondary data collection methods. Extension officers from the Ministry of Agriculture were the main respondents of this study. Given the difficulties in quickly organizing interviews with households and other actors of the agricultural value chain, a sample of 448 key informants working for the Ministry of Agriculture were interviewed across 16 states of the Sudan (out of the total 18), as indicated in Table 1.</p>

Table 1. Number of key informant interviews conducted at state level

Number of key informant interviews	0	1–19	20–24	25–34	35–56
States	<p>North Darfur</p> <p>Central Darfur</p> <p>Abyei PCA</p>	<p>West Darfur</p> <p>River Nile</p> <p>Khartoum</p>	<p>Northern</p> <p>East Darfur</p> <p>Al Jazirah</p> <p>Sennar</p> <p>Blue Nile</p>	<p>North Kordofan</p> <p>White Nile</p> <p>Gedaref</p> <p>Kassala</p> <p>Red Sea</p>	<p>South Darfur</p> <p>West Kordofan</p> <p>South Kordofan</p>

Before the onset of COVID-19, the Sudanese economy was already stressed. Structural trade, fiscal deficits, internal conflict (leading to major population displacement), widespread poverty, high inflation¹ (Trading Economics, 2020), high levels of inequality, climatic shocks, pest proliferation, untargeted fuel subsidies, limited public expenditures on basic services and low fiscal effort, which relies on regressive indirect taxes, are the main factors that have negatively affected the country's economy.

According to the latest Integrated Food Security Phase Classification (IPC) analysis (July 2020), about 9.6 million people are facing high acute food insecurity (IPC Phase 3 and above) – the highest level ever recorded in the history of the IPC in the Sudan.

Recent heavy rains are compounding the situation, which resulted in flooding in most of the country, causing significant damage, including to homes, infrastructure and cropland, thereby affecting vulnerable people's livelihoods (OCHA, 2020). On 4 September 2020, the Transitional Government of the Sudan declared a national State of Emergency until December 2020.

¹ The Sudan's annual inflation rose to 136 percent in June 2020, up from 114 percent during the previous month, reaching the highest level since December 1993.

Crop production and marketing

The June/September 2020 rainy season, which coincides with the main agricultural season (sowing and growing) for major food crops such sorghum and millet, has generally been favourable across the country (Global Information and Early Warning System on Food and Agriculture [GIEWS], 2020). According to FEWS NET, cumulative rainfall across most of the country was 95 percent above average. Above-average seasonal rains boosted yields and production prospects for the upcoming 2020 harvest (starting from November), and continue to be generally favourable.

Figure 1. The Sudan crop calendar



Source: FAO GIEWS, April 2020

There are, however, other factors to consider, beyond precipitation levels, which may affect the forthcoming harvest in the country. Overall, the COVID-19 restriction measures have caused a reduction in the availability of agricultural inputs, especially seeds in some areas, as reported by the interviewed extension officers. This is due to trade disruptions, which also led to a reduction in agricultural labour opportunities and, in turn, households' purchasing power.

Agricultural input markets were reported to be closed in multiple assessed states (e.g. East Darfur, Gadarif, Gezira, Kassala, Sinnar, South Kordofan, West Darfur and White Nile). In addition, movement restrictions hampered access to labour in most of the assessed states, with exception of Blue Nile, North, West and South Kordofan, and West Darfur. Although limited informal population movements continue across borders, reduced numbers of migrant labourers travelled from Ethiopia and South Sudan in search of labour opportunities that are usually available in higher producing areas such as Gadarif, particularly during the harvest season (FEWS NET, 2020). According to FEWS NET, farmers engaged in semi-mechanized activities are expecting increased labour shortages and wages during the upcoming harvest period. This is likely to result in greater costs for harvesting, delayed harvests and increased pre-harvest losses. The interviewed extension officers confirmed that farmers in their areas of jurisdiction were facing some difficulties to find labour opportunities, especially in the Kordofan region (West, South and North).

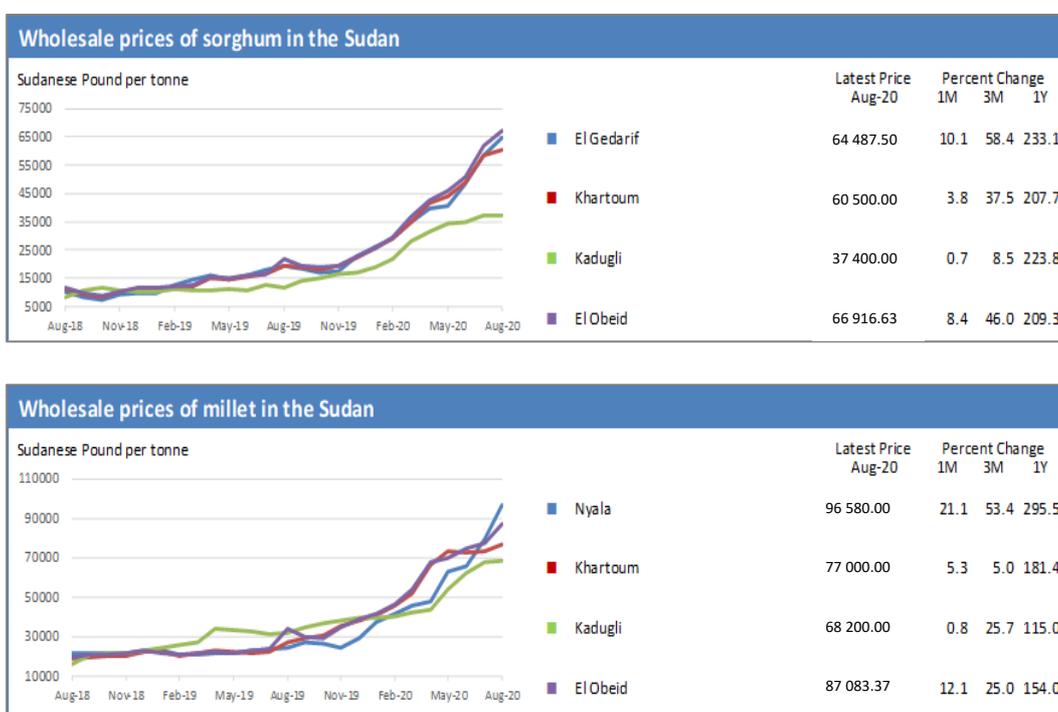
Extension officers reported the following additional shocks impacting crop production in the current season: plant diseases, heavy rains and flooding. The presence of fall armyworm was regularly reported in Blue Nile, White Nile and West Kordofan states. One of the latest FAO desert locust bulletins indicated that locust infestations are

expected to increase on the Red Sea coast in the Sudan as a result of early swarm breeding favoured by good rains.

More than 506 000 people have already been affected in 17 of the country’s 18 states, according to data from the Government’s Humanitarian Aid Commission. In OCHA’s first Floods Flash Update (September 2020), nearly 100 people were reported to have lost their lives due to floods and landslides, and another 46 people were injured; about 20 000 ha of cropland were affected; and according to FEWS NET, the most affected states were Gezira and Kassala, followed by the Red Sea, North Kordofan, South Darfur, North Darfur, West Kordofan and Northern states.

In East Africa, prices of coarse grains declined in June, where newly harvested crops and easing of the COVID-19 pandemic-related lockdown measures improved market availability. In the Sudan however, prices strongly increased until August 2020, due to the restricted domestic supply, a weakening currency and pandemic control measures, which negatively impacted supply chains. For example, prices of locally grown sorghum and millet continued to rise in August and reached record highs (Figures 2 and 3).

Figures 2 and 3. Wholesale price variation for sorghum and millet in the Sudan



Source: FAO FPMA, July 2020.

According to FAO’s Food Price and Monitoring Analysis (FPMA) bulletin issued in July 2020, grain prices were inflated by a poor 2019 cereal harvest, weak currency, fuel shortages and high prices of agricultural inputs, which increased production and transportation costs. Additional pressure on grain prices is prevalent due to market and trading disruptions because of COVID-19 containment measures.

Livestock production and marketing

Livestock production continues to be an important source of food and income for a large proportion of the country's population. Livestock are raised mostly by nomadic or semi-nomadic pastoralists who engage in transhumance movements both within the Sudan and to neighbouring countries.

According to the interviewed extension officers, the main shocks faced by livestock keepers in the past three months prior to the assessment were the following (in order of importance): lack of pasture, restricted livestock movement (transhumance) due to COVID-19 containment measures, livestock diseases such as *peste des petits ruminants* and *haemorrhagic septicaemia*, followed by insufficient veterinary services, conflict/insecurity and limited access to water.

Many respondents also reported on the lack of feed, especially in areas where pasture was unavailable and human/animal movements were forbidden. Abattoirs were also reported to be closed during the peak of the COVID-19 pandemic.

Due to the COVID-19 restrictions and the various shocks discussed above, unusual migration patterns were observed in most states, with the exception of the Blue, River Nile and Northern Darfur regions. This resulted in animal breeders moving to new areas, which generally were not exploited. According to an FAO report on the impacts of COVID-19, limited internal, cross-border movement, livestock transhumance and nomadic migration resulted in a concentration of herds in limited spaces. However, the relatively favourable rainfall has increased the availability of pasture and water resources. This, in turn, has improved animal body condition in the main pastoral and agropastoral areas.

Interviewed extension officers reported tension and conflict among herders and farmers, due to the expansion of cultivation in grazing areas, especially in the Darfur and Kordofan regions.

Prices of feed and animal drugs were reported to be much higher across all assessed states, compared with the same time the previous year. Meanwhile, livestock prices have continued to increase in July and August 2020. According to FEWS NET, goat prices increased by 15–35 percent, which is 4–6 times above the five-year average across most markets.

High livestock prices were driven by high demand during the Eid al-Adha festival at the time of the survey, high transportation costs due to COVID-19 movement restrictions and currency depreciation.

According to an FAO report on the impacts of COVID-19, livestock exports were also reported to have diminished in most assessed states. In Kassala, for example, the number of exported sheep and camel heads decreased by 23 percent (August 2020), compared with July 2020. According to the same FAO report, the terms of trade (TOT) between livestock and cereals (amount of sorghum (kg)/sheep), increased by 30 percent in July 2020, compared with June 2020. This means that only 219 kg of sorghum are traded for a sheep. In comparison to the same time the previous year, TOT decreased by 41 percent, which was attributed to increased sheep prices by 125 percent and increases in sorghum prices by 279 percent.

Fisheries

According to FAO, the Sudan's large fisheries resources are located along the Red Sea coast, the Blue and White Nile Rivers, Lake Nubia and the Roseires, Jebel, Awlia, Khasm Elgirba and Marrewi dams. A significant reduction of the supply of freshwater fish to the Sudan was observed after the secession of South Sudan. For the most part, traditional fishing techniques and vessels are used in inland fisheries. Fisheries are however becoming increasingly commercialized and exploitative in nature in response to increased market pressure. Fishing ships operating in the Red Sea are large and include motorized trawlers and dhows. The Sudan is a significant importer of fish, while there is no formal export of fish or fishery products. Most fish are consumed fresh in the country.

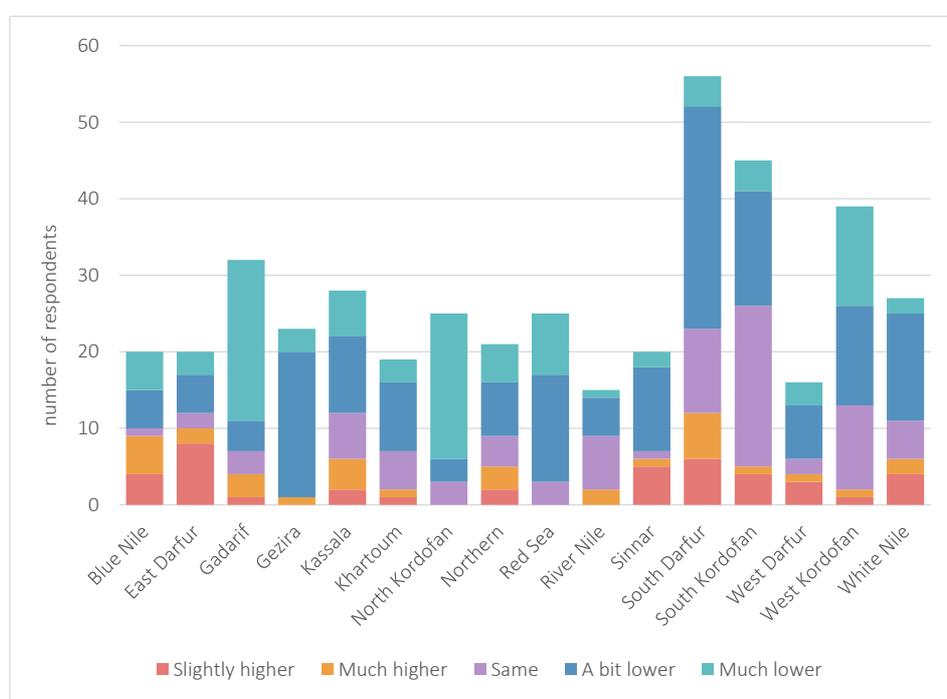
The interviewed fisheries extension officers indicated that the main shocks affecting the sector during the past three months prior to the assessment (in order of importance) were the following: difficulties in marketing the fish due to COVID-19 movement restrictions, a lack of or high fuel prices, an absence of fishing materials, inputs and difficulties to store and/or process the fish. In the Red Sea state, the respondents indicated shortages of ice.

Nevertheless, according to FAO, in the Blue Nile state, fish production further increased by 6 percent in July 2020 compared with June, although it remained 31.4 percent below the 2019 output at the same time of year. Rising water levels of the Rosaires Lake due to the onset of the rainfall season has also created a conducive environment for fishing. However, in the Red Sea state, the price of first class fish in July increased by 275 percent compared with the same time of the previous year.

Food security, livelihoods and coping mechanisms

Direct and indirect impacts of COVID-19 on households' food security were observed. On a larger scale, COVID-19 containment measures are having significant indirect impacts, such as hindering physical access of many poor households to areas where they normally generate income through labour. In addition, due to increased food commodity prices, many poor and vulnerable households have reduced capacity to purchase from markets and shops. Restricted internal and cross-border trading due to the COVID-19 containment measures have also hampered the food supply system and affected food availability.

Figure 4. Number of respondents interviewed reporting on different levels of food availability compared with the usual for this time of the year



Source: FAO 2020; FAO assessment results

High transportation costs of food commodities, due to fuel shortages and increased reliance on costly fuel on the informal market, coupled with limited movement have further impacted food stability in almost all markets.

Moreover, the closure of food markets across the country decreased the availability of basic food commodities. For example, most assessment respondents indicated slightly lower and/or much lower levels of food availability at local markets across all assessed states, especially in Gadarif, and North and West Kordofan (Figure 4).

Figure 5. Number of respondents reporting on the adoption of various negative coping mechanisms



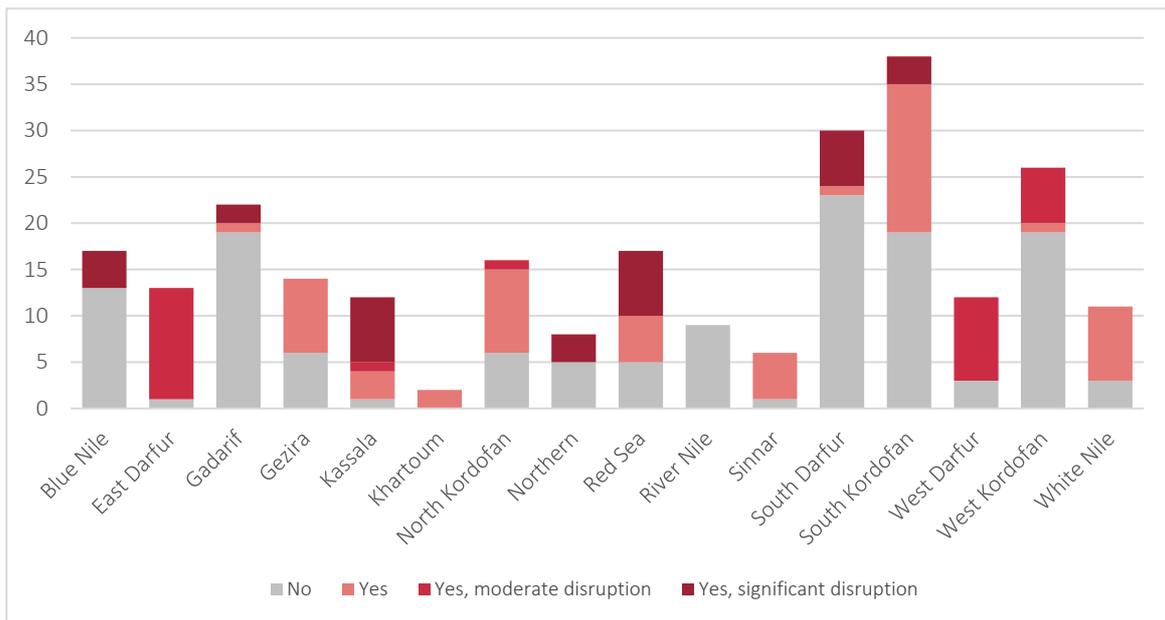
Source: FAO 2020; FAO assessment results

Respondents indicated that most affected populations resort to negative coping mechanisms, such as (in order of frequency of response) reducing non-essential food expenditures, selling agricultural productive assets (e.g. livestock and tools) and seed consumption (Figure 5).

Level of assistance, required needs and most affected population groups

According to respondents, there were some disruptions of humanitarian assistance, especially in East Darfur, West Darfur, Kassala, Khartoum and Sinnar states, mainly due to COVID-19 movement restrictions, and the closure of the airport and country borders (Figure 6).

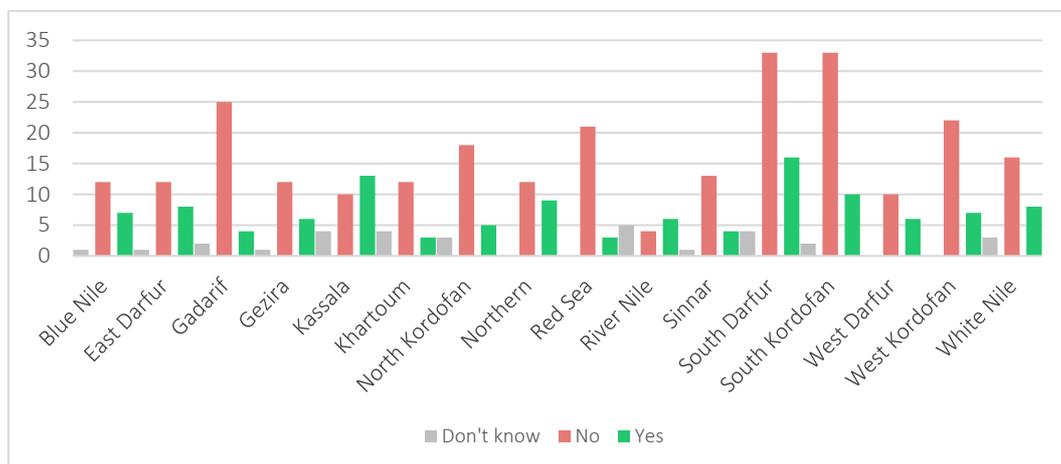
Figure 6. Number of respondents reporting on disruption of humanitarian assistance



Source: FAO 2020; FAO assessment results

In addition, most respondents reported no further increases of new agricultural programmes since the onset of the COVID-19 pandemic (Figure 7).

Figure 7. Number of respondents reporting on new/increased assistance since COVID-19



Source: FAO, 2020; FAO assessment results

The extension officers that participated in this survey, indicated the main needs (in order of importance) to boost crop, livestock and fisheries production are shown in Table 2.

Table 2. Reported main needs to boost agricultural production in order of importance

Sector	Crop	Livestock	Fisheries
First main need	Fuel	Feed	Inputs and material
Second main need	Agricultural inputs, tools and machinery	Veterinary services	Equipment (fridge, ice-making, etc.)
Third main need	Access to financing (e.g. loans)	Water and vaccines	Capacity building

Source: FAO, 2020; FAO assessment results

Conclusion

Key prospects

The assessment carried out indicates that the effects of the COVID-19 pandemic and related restrictions have further aggravated the already fragile food security situation in the Sudan. Poor households in pastoral areas faced complications accessing food and income until September 2020, while from October 2020 through January 2021 their status is expected to improve due to seasonal access to labour and animal products, as well as the expected production from the ongoing main cropping season.

Nonetheless, the depletion of productive assets linked to the adoption of negative coping mechanisms might erode the capacity of rural households to prepare for the next agricultural season due to the potential lack of income and inputs.

Recommendations

It is therefore recommended to continue ensuring the availability of and stabilizing access to food for the most food-insecure populations. This should be done through enhanced access to agricultural and livestock inputs (seeds, vaccines, supplementary feed, etc.) and services, such as capacity building and training to maintain production. The aim is to strengthen environmental protection and conservation for increased food production and the continuity of critical food supply chains. Particular attention shall be given to the reduction of post-harvest losses by up-scaling post-harvest technologies such as small stores at farm or household levels, as well as through the promotion of new technologies for milling and processing. Developing local feed and farming input supply modalities such as the rehabilitation of pasture and the establishment of community seed communication systems and the organization of farmers into producer groups are other key aspects to consider. Finally, to ensure that food supply chain actors are not at risk of COVID-19 transmission, local level dedicated awareness raising at distribution points, markets, etc. shall be undertaken. Additionally, revised modalities for agricultural extension and protocols for compliance with hygiene and safety measures during planting, harvesting and selling will need to be implemented. Support on the implementation of sanitary and phytosanitary measures in the downstream value chain (i.e. in animal slaughterhouses, trade points and during transportation of food) should be strengthened and intensified.

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