



Food and Agriculture
Organization of the
United Nations

Mali

DIEM – Data in Emergencies Monitoring brief, round 3

Results and recommendations

May 2022

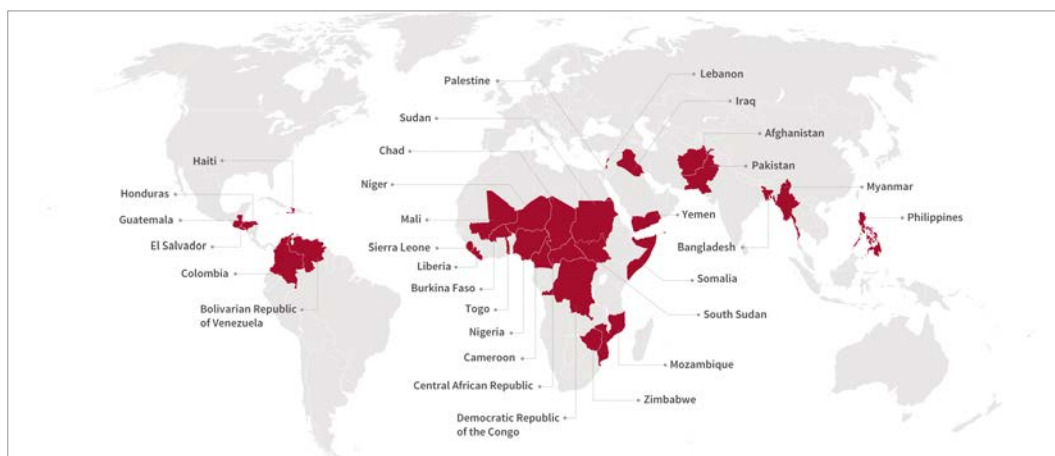
Methodology

The Food and Agriculture Organization of the United Nations (FAO) launched a household survey in Mali through the Data in Emergencies Monitoring (DIEM-Monitoring) System to monitor agricultural livelihoods and food security. The survey was conducted from 20 February to 9 March 2022 and reached 1 841 households.

Data was collected through face-to-face interviews in nine of the country's ten regions: Gao, Kayes, Kidal, Koulikoro, Ménaka, Mopti, Ségou, Sikasso and Timbuktu. The mainly urban district of Bamako was not included. Between 139 and 389 households were sampled in each region, with a total of 1 841 households surveyed.

The survey took place before the rain season after the harvest of the main food crops, which was the end of the off-season rice harvest. This is a period characterized by both the availability of food and the diminishing supply of pasture.

Figure 1. Countries with established DIEM-Monitoring Systems



Source of data: FAO. 2022. *DIEM-Monitoring*. Rome. Cited 6 April 2022. <https://data-in-emergencies.fao.org>

Source of map: United Nations. 2020. *Map of the World*. Cited 6 April 2022. www.un.org/geospatial/content/map-world

Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Sudan and South Sudan has not yet been determined. Final status of the Abyei area is not yet determined.

About DIEM-Monitoring

FAO established the DIEM-Monitoring System to collect, analyse and disseminate data on shocks and livelihoods in countries prone to multiple shocks. DIEM-Monitoring aims to inform decision making by providing regularly updated information on how different shocks are affecting the livelihoods and food security of agricultural populations.

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

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

Income and shocks

Most households (67 percent) experienced at least one shock in the three months preceding the survey.¹ An unusual increase in food prices was reported by 22 percent of households (Figure 2), particularly in the regions of Timbuktu (85 percent), Gao (74 percent), Ménaka (63 percent) and Kidal (62 percent), which are geographically further from the capital and are affected by the increased cost of transportation. Rising fuel prices were reported in all regions, but particularly by households in Timbuktu (45 percent) and Ménaka (18 percent).

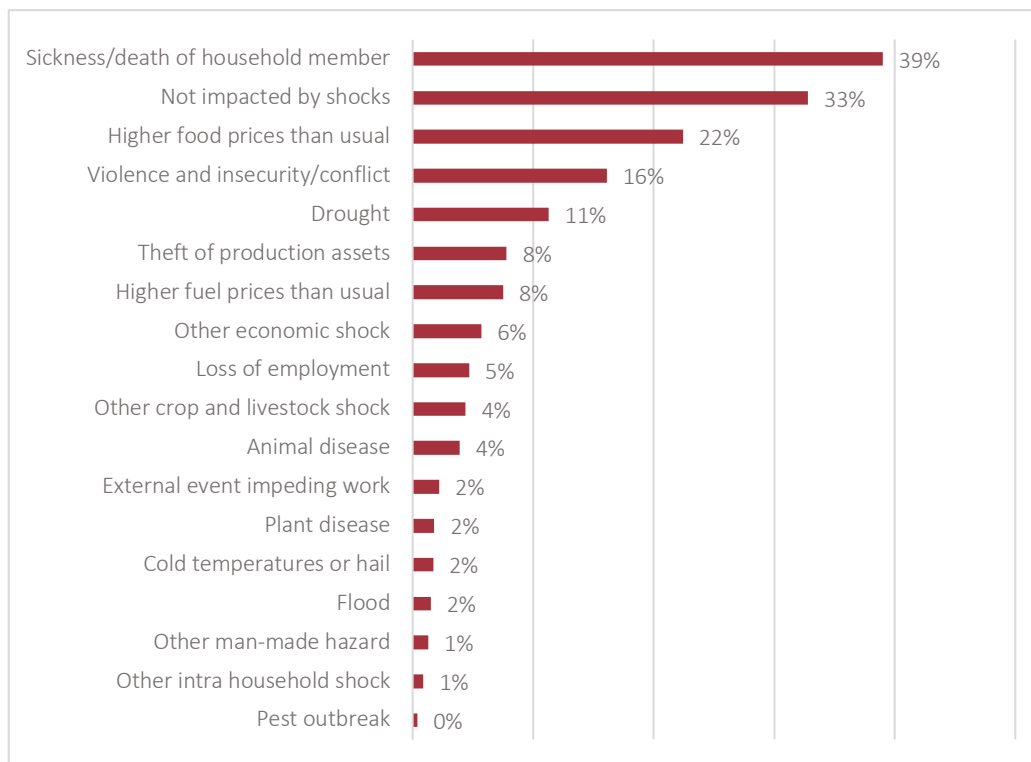
Drought was reported by 11 percent of households surveyed as the main shock, particularly in the desert regions of Kidal (23 percent) and Gao (32 percent), and in Sikasso (25 percent). The latter region, which has a tropical climate, is experiencing increased deforestation – particularly to fill the need for cultivatable land as a result of population growth and migration – which is leading to desertification and soil destabilization. Violence, insecurity and conflict affected 16 percent of households surveyed, particularly in the regions of Gao (66 percent), Mopti (44 percent), Timbuktu (43 percent), Kidal (33 percent), Ménaka (24 percent) and Ségou (15 percent).

One-third of respondents reported being affected by movement restrictions and border closures (18 percent), particularly in the regions of Gao, Ménaka, Kidal and Kayes.

¹ Since 9 January 2022, Mali has been under an economic embargo that limits trade of essential goods with its partners in the Economic Community of West African States (ECOWAS). This factor, combined with the deteriorating socioeconomic and security situation in the country, has contributed to the increase in food prices and economic losses recorded in the three months preceding the survey.

Mali imports 70 percent of the food consumed daily by its inhabitants (**World Food Programme**. 2022. *Rising prices of basic necessities in Mali*. Cited 25 May 2022. <https://bit.ly/3B1bA7m>). The country is particularly vulnerable to the consequences of the Ukrainian conflict, which, by driving up the prices of energy, agricultural inputs and foodstuffs – especially imported cereals, wheat, corn and vegetable oils – will contribute to higher prices on the domestic market. Conflicts and military operations are underway in some regions of Mali (Mopti, Timbuktu and Gao), with the situation in Ménaka and Gao having deteriorated particularly in recent months.

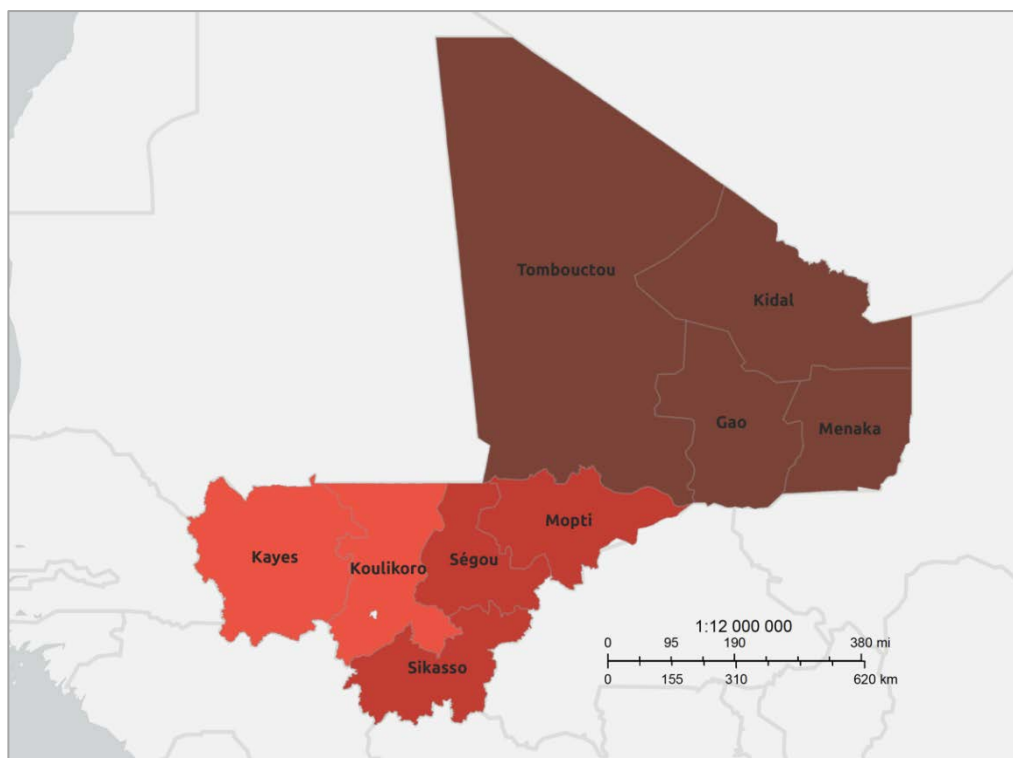
Figure 2. Main shocks reported in the three months preceding the survey (percentage of households)



Source of data: FAO. 2022. Mali: DIEM-Monitoring assessment results (February–March 2022).

A decrease in income in the three months preceding the survey was reported by 65 percent of surveyed households compared to a typical year. This decrease was particularly high in the regions of Ménaka (89 percent), Timbuktu (87 percent), Gao (85 percent) and Kidal (84 percent), where households were affected by the drought and derived their income primarily from crop production (Figure 3).

Figure 3. Percentage of households reporting a decline in their main source of income



- > 40–60%
- > 60–80%
- > 80–100%

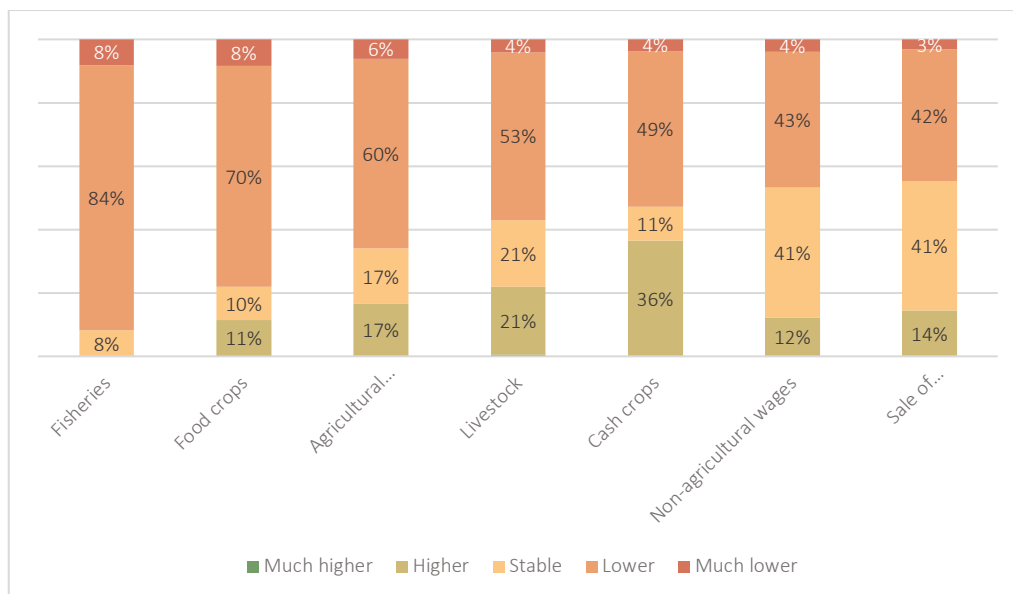
Source of data: FAO. 2022. Mali: DIEM-Monitoring assessment results (February–March 2022).

Source of map: Esri, HERE, Garmin, FAO, NOAA, USGS. 2018. *Map of Mali*. Cited 25 April 2022.

<https://data-in-emergencies.fao.org/pages/explore>

Households involved in crop production reported a greater decline in income than those involved in livestock production or the selling of agricultural products (Figure 4).

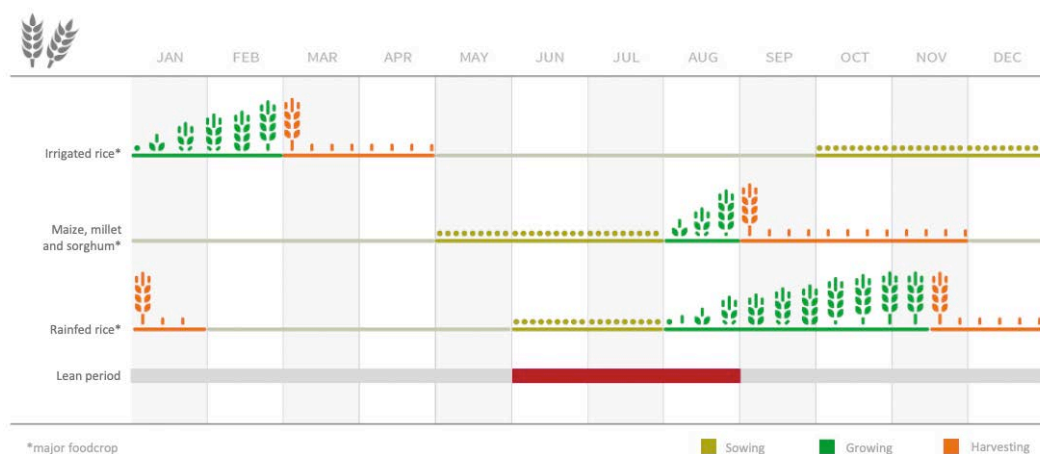
Figure 4. Change in income in the three months preceding the survey (percentage of households)



Source of data: FAO. 2022. Mali: DIEM-Monitoring assessment results (February–March 2022).

Crops

Figure 5. Mali crop calendar



Source of data: FAO. 2021. GIEWS – Global Information and Early Warning System: Country briefs – Mali. In: *Food and Agriculture Organization of the United Nations*. Rome. Cited 24 April 2022. fao.org/giews/countrybrief/country.jsp?code=NER&lang=en

Nearly three-quarters of the households surveyed were involved in crop production, which represents the main source of income for 57 percent of agricultural households.² The main crops in Mali are maize, sorghum and millet.

Access to inputs is a challenge, with 35 percent of households struggling to access fertilizer, particularly those in Timbuktu (83 percent), Mopti (53 percent) and Sikasso (41 percent). Eleven percent of surveyed households were not able to source enough seeds, and 10 percent reported difficulties accessing pesticide.

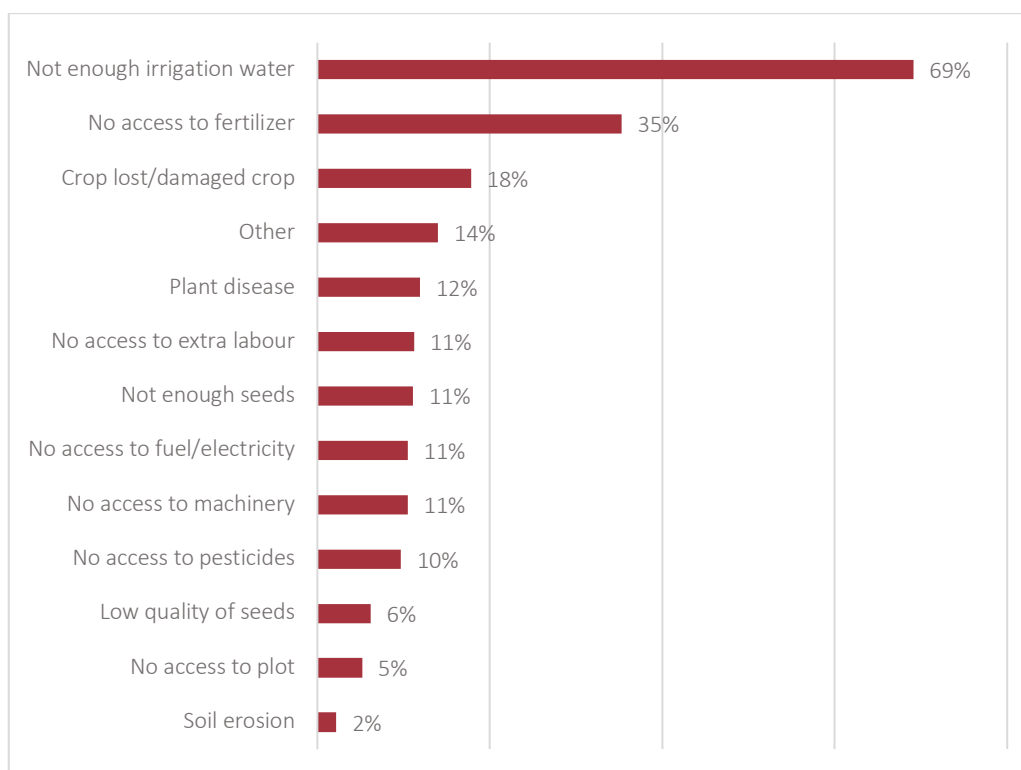
Most households reported difficulties accessing irrigation water (69 percent), particularly in Sikasso (87 percent) and Segou (84 percent). Damage to crops during the growing season was reported primarily by households in Ménaka (47 percent) and Mopti (46 percent). Theft of production assets was reported primarily in Diffa (13 percent), Maradi (8 percent) and Agadez (7 percent).

Of the farmers surveyed, more than one-third reduced the size of their cultivated areas compared to a typical year, particularly in the regions of Gao, Ménaka and Timbuktu, which have been affected by insecurity and conflict. Households affected by these shocks reported less access to land (20 percent versus 5 percent for all households surveyed), as well as higher crop loss (31 percent versus 17 percent).

A majority of households reported a decline (72 percent) or a sharp decline (14 percent) in harvest compared to a typical year, particularly in the Ménaka (100 percent), Mopti (95 percent) and Timbuktu (95 percent) regions.

² **Ministry of Agriculture.** 2019. Agriculture and income sources in Mali. Bamako. microdata.worldbank.org/index.php/catalog/3409/download/47789

Figure 6. Percentage of farmers reporting difficulties in crop production



Source of data: FAO. 2022. Mali: DIEM-Monitoring assessment results (February–March 2022).

Livestock

Of the households surveyed, 45 percent engage in livestock production (either alone or in combination with crop production). Livestock production is predominant in Kidal (100 percent of households surveyed), Ménaka (75 percent), Sikasso (69 percent) and Gao (61 percent). In Ménaka and Kidal, herders reported larger herds (on average more than 60 animals per herd) than in the rest of the country (less than 20 animals).

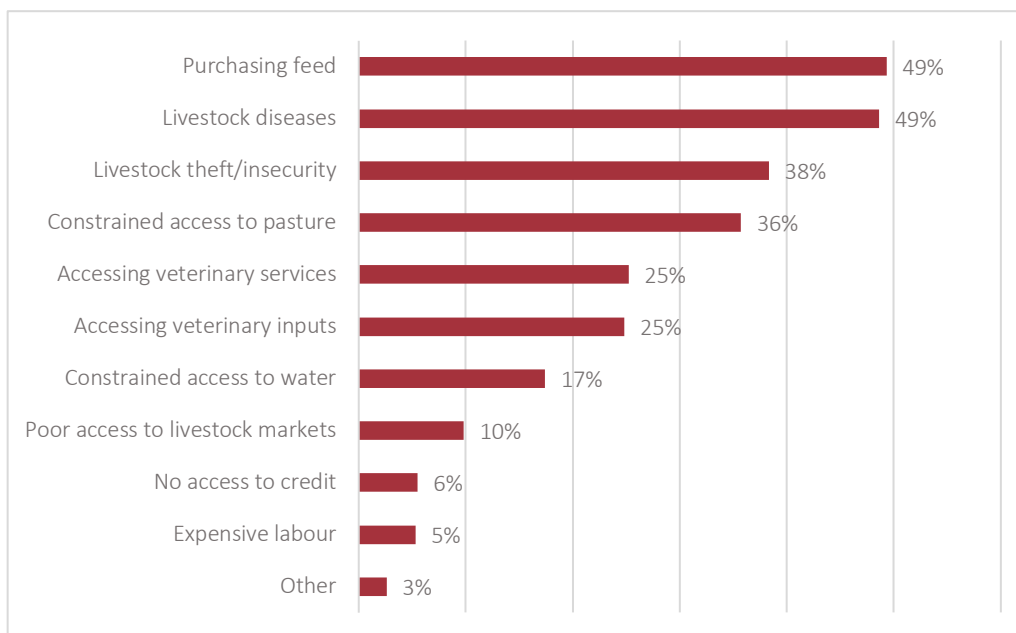
Several difficulties were reported by herders, with access to feed leading the way (49 percent) (Figure 7) – particularly in Timbuktu, Ménaka and Gao – followed by animal death or disease – particularly in Timbuktu, Kidal, Ménaka and Sikasso.³

Livestock theft (38 percent) was largely experienced in the central and northern regions of the country (Timbuktu, Kidal, Gao, Ménaka and Mopti), which are also the areas most affected by conflict and insecurity. Lack of access to pasture, veterinary services and inputs, and water affected households in the north.

³ The report "Réunion technique de validation des productions prévisionnelles 2021/2022 et bilans céréaliers/alimentaires ex-post 2020/2021 prévisionnels dans les pays du Comité permanent inter-États de lutte contre la sécheresse dans le Sahel et de la CEDEAO" published in November 2021 by the Ministry of Agriculture, Livestock and Fisheries described an animal health situation characterized by the presence of avian influenza in the Koulikoro and Sikasso regions, and foot-and-mouth disease in the Sikasso region.

The difficulties mentioned, combined with distress sales (27 percent) explained by the inability to feed animals or an urgent need for money, led to a decrease in livestock for 56 percent of households.

Figure 7. Percentage of farmers reporting difficulties in livestock production



Source of data: FAO. 2022. Mali: DIEM-Monitoring assessment results (February–March 2022).

Food security

According to the Food Insecurity Experience Scale (FIES), 20 percent of households were moderately to severely food insecure, with severe food insecurity affecting 3 percent. The highest levels of food insecurity are reported in Timbuktu (79 percent), Ménaka (56 percent) and Gao (48 percent).

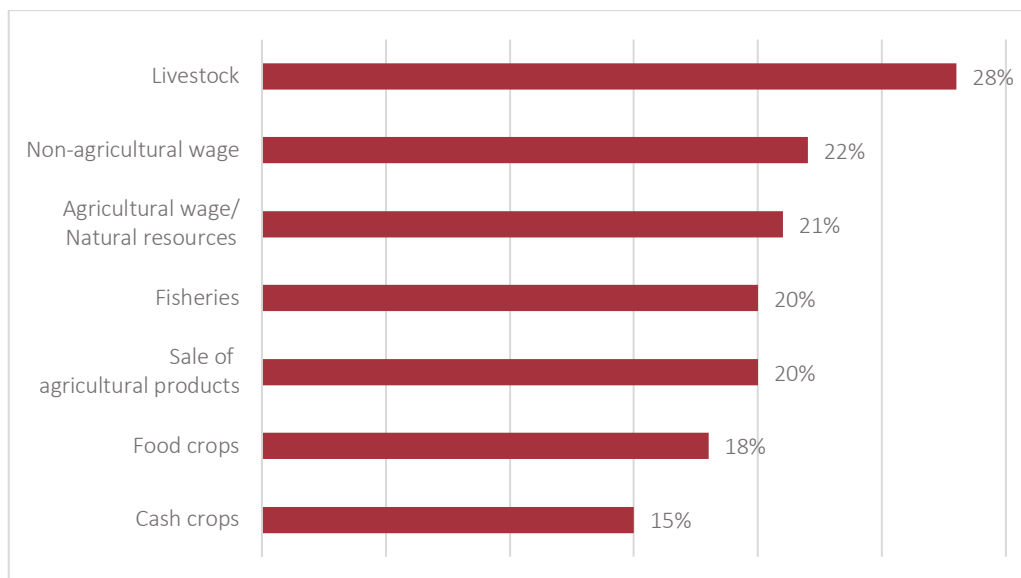
The survey indicated that the households most vulnerable to food insecurity were those headed by widows (38 percent), women (37 percent) and single people (30 percent).

According to the household hunger scale (HHS), 83 percent of households experienced no or low hunger (Level 1 Integrated Food Security Phase Classification (IPC)), 9 percent experienced mild hunger (IPC level 2), and 8 percent experienced moderate hunger (IPC level 3).

Seventy percent of surveyed households had an acceptable household dietary diversity score (HDDS), 17 percent an average score, and 13 percent a low score. The regions of Ménaka (43 percent), Kayes (33 percent) and Koulikoro (22 percent) had the most households with a low score.

In terms of livelihoods, livestock farmers are at higher risk of food insecurity than crop farmers, reflecting the period of relative abundance following the harvest (Figure 8).

Figure 8. Moderate or severe food insecurity based on FIES (by income source)

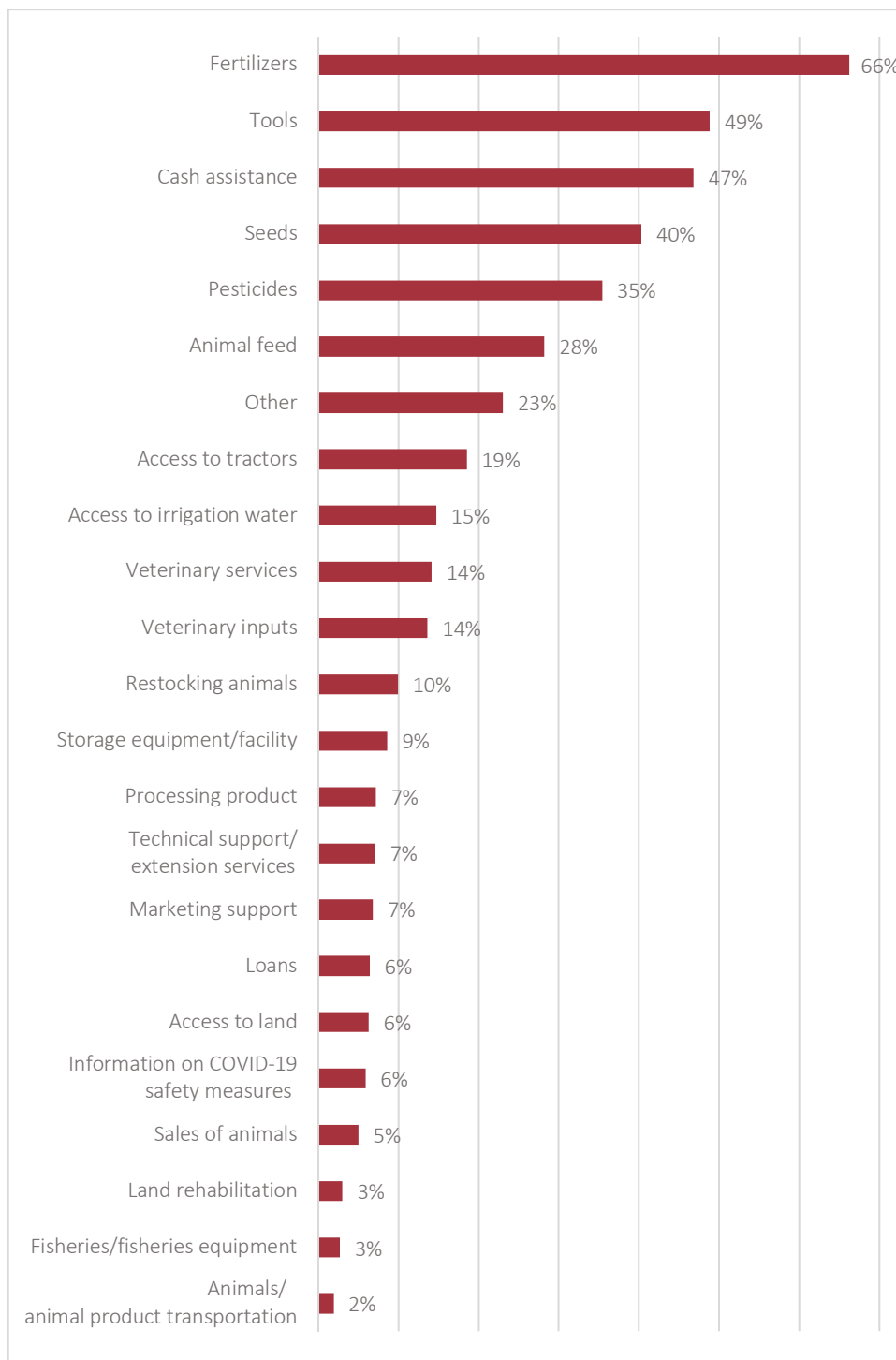


Source of data: FAO. 2022. Mali: DIEM-Monitoring assessment results (February–March 2022).

Needs

Almost all households surveyed (98 percent) reported a need for assistance to support agricultural production in the six months following the survey. The needs reported were fertilizer (66 percent), tools (49 percent), seeds (40 percent) and pesticides (35 percent) (Figure 9). Households, particularly in the north of the country, also reported needing animal feed (28 percent), services (14 percent) and veterinary inputs (14 percent). In addition, 47 percent of households requested cash or food assistance.

Figure 9. Main needs expressed (percentage of households)



Source of data: FAO. 2022. Mali: DIEM-Monitoring assessment results (February–March 2022).

Recommendations

Short-term recommendations (next three months)

- > Support in the form of cash transfers and food aid to the most vulnerable households is advisable in all regions, taking into account security, logistics, and the do no harm principle. Targeting beneficiaries should take into consideration those households most at risk of food insecurity, due to household composition (female-headed, widow-headed, or widower-headed households), livelihoods, or vulnerability to shocks – particularly in the northern regions of the country, Ménaka, Timbuktu, Gao and Kidal.
- > Market gardening and off-season crops (riverbanks, oases, etc.) should be encouraged to increase local food production, develop sources of income and limit price increases.
- > In the livestock sector, access to vaccines and veterinary services should be promoted, particularly in regions affected by disease and animal deaths – Timbuktu, Kidal, Ménaka and Sikasso – and by difficulties accessing veterinary services and inputs – Timbuktu, Kidal and Ménaka.

Medium and long-term recommendations (four to seven months)

- > As part of the development of a diversification and resilience support strategy, the supply of inputs, particularly seeds, should be combined with technical support and extension services (promotion of innovative cropping practices and integrated crop-livestock systems), particularly in areas that do not yet benefit from these services. The regions to be targeted first are Gao, Ménaka, Sikasso and Timbuktu.
- > Agro-forestry practices that contribute to the preservation of biodiversity and soil fertility, mitigate the impacts of drought and promote resilience should be encouraged, particularly in the Sikasso region where deforestation is increasing. In addition, agroforestry practices can provide an alternative source of livelihood and additional food and income.
- > Youth employment and women's empowerment through the development of income-generating activities must be encouraged.

- > Access to inputs (price and availability) must be promoted for crop producers who are made aware of new cultivation techniques and who will benefit from more sustained supervision and advisory support.
- > In order to strengthen the cohesion of the population around activities related to food production and resilience, and to fight against the proliferation of conflicts, projects financed by the Peacebuilding Fund should be encouraged. The areas affected by conflict – Gao, Timbuktu, Ménaka, Mopti, Kidal and Segou – should be targeted.
- > Projects and institutional measures that promote transhumance and pastoral mobility for access to pasture and water – avoiding excessive exploitation of local resources – should be developed. Intercommunity conflicts between herders and farmers should be limited, particularly in the regions of Gao, Kayes, Ménaka, Mopti and Timbuktu.



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Contact

FAO Representation in Mali

FAO-ML@fao.org
fao.org/Mali | @FAOMali
Bamako, Mali

Office of Emergencies and Resilience

OER-Director@fao.org
fao.org/emergencies | @FAOEmergencies
Rome, Italy

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FAO. 2022. *Mali: DIEM – Data in Emergencies Monitoring brief, round 3. Results and recommendations, May 2022*. Rome. <https://doi.org/10.4060/cc0495en>