Afghanistan

DIEM – Data in Emergencies Monitoring brief, round 7

Results and recommendations

January 2024

Data collection 28 September to 17 October 2023
Key highlights

> Drought was the most common natural hazard. In some areas, both drought and floods occurred, although floods were most severe in the northeast. Seventy-six percent of households in Herat were affected by the October 2023 earthquakes.

> Female-headed and less well-off households were more affected by economic and idiosyncratic shocks. Female headed and livestock producing households more frequently reported a decline in their main source of income.

> Two main drivers are behind an observed disengagement from agriculture: external events (such as natural hazards) and the need for producers to manage risks in the context of increasing vulnerability to shocks.

> Harvest was often linked to shocks and specific difficulties (such as lack of water and plant diseases), as well as structural characteristics.

> The percentage of livestock producers reporting a decrease in herd size improved, but animal death and distress sales were two big challenges, although the latter has also shown an improving trend.

> A decrease in herd size was associated with quality of pasture. Pasture conditions have shown an improving trend since the fourth round, but they are still sub-par for most pastoralists, particularly sheep producers.

> As expected for a post-harvest period, food consumption indicators show an improvement since the last round. However, when compared to the same period in 2021, results show a deterioration of the most severe outcomes.

> The Household Dietary Diversity Score (HDDS) shows that rural non-agricultural households have deteriorated consumption and greatly increased decapitalization. Most non-agricultural households only consumed one or two food groups (mostly staples and vegetables) the day before the survey.

> To reduce the vulnerability to crop failure, increase the use of irrigation, drought-resistant varieties, plant protection and fertilizer alternatives. Promote aggregate procurement and marketing, and processing to diminish economic risks. Prepare livestock with winter protection and promote mobile veterinary services for transhumant animals. Ensure that agricultural assistance include non-agricultural households.
Methodology

The Food and Agriculture Organization of the United Nations (FAO) launched a household survey in Afghanistan through the Data in Emergencies Monitoring (DIEM-Monitoring) System to monitor agricultural livelihoods and food security. This seventh-round survey reached a random sample of 9,560 rural households in all 34 provinces of Afghanistan, representative at administrative level 1. Of the surveyed households, 15 percent were female-headed households.

The survey utilized two-step cluster sampling, equally selecting 27 clusters per administrative level 1, and randomly selecting 10 households per cluster. Rural households were surveyed face-to-face to monitor the impacts of shocks on livelihoods and food security.

Interviews for this seventh-round survey were conducted between 28 September and 17 October 2023 corresponding with a post-harvest period across the majority of surveyed areas. Data were weighted by demographics of rural areas. The third round, which reached 7,155 households, took place in August and September 2021, has been drawn from to make comparisons throughout this brief.

Figure 1. Countries with an established DIEM-Monitoring System


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

About DIEM-Monitoring

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

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

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

Almost all of the surveyed households reported shocks (Figure 2). While in previous rounds, economic shocks were predominant – especially food inflation – during the current round, natural hazards – drought, in particular – were more common.

Drought was the most frequently reported natural hazard, particularly in Farah, Faryab, Hirat, Jawzjan, Kandahar, Nimroz and Sar-e Pul. Floods were reported in Badakhshan, Laghman, Nangarhar and Nuristan. In some areas, both drought and floods were reported, although floods were most severe in the northeast (Badakhshan). In Herat, 76 percent of respondent households were affected by the earthquakes that occurred in early October 2023.

Food inflation was the most common economic shock, in Badakhshan, Faryab, Jawzjan, Kandahar, Paktika and Zabul, in particular. The same provinces had a higher frequency of households reporting high fuel prices.

Plant disease was the most common agricultural shock, particularly in Bamyan, Farah, Kabul and Sar-e Pul. Pest outbreaks were reported in Baghlan, Balkh, Faryab, Kunduz, Samangan, Sar-e-Pul and Takhar. Animal diseases were more common in Daykundi, Kunduz, Sar-e Pul and Zabul; access to pasture was most frequently reported in Badakhshan, Sar-e Pul and Zabul; and violence and conflict were cited by 29 percent of respondent households in Panjsher, and 7 percent in Balkh.

Female-headed and less well-off households were more affected by economic and idiosyncratic shocks. Female-headed and livestock producing households more frequently reported a decline in their main source of income. Income from agricultural wages, the sale of livestock products and informal trade declined the most compared to other sources of income such as the sale of crops.
Figure 2. Main shocks reported (percentage of households)

This brief seeks to draw attention to the disinvestment in agricultural activities by farmers and livestock producers in Afghanistan, where agriculture is the main source of livelihood and alternative opportunities remain rare. This trend has been observed since the second round of DIEM-Monitoring conducted in Afghanistan in February and March 2021 and has been driven by two factors. On one hand, as a form of risk management: risk, the potential of occurrence of negative events, is inherent in livelihoods and their impacts can lead to a direct loss of the means by which households obtain food and income. The presence of risk has indirect costs for its management, such as suboptimal economic decisions, risk aversion (rather than profit maximization), slow adoption of innovation and under-investment – by altering return expectations. For example, before the de-facto authorities took over in August 2021, violence and conflict was statistically associated with the decision to plant less and de-stock animals. The incapacity of rural households to sustain the increasing costs of inputs in combination with more market decapitalization including forced migration, the sale of land and livestock, etc. was also identified as an important driver of disengaging in agriculture. In other terms, households planted less or de-stocked animals because they could not afford to mobilize assets as before. This has been especially observed since August 2021.

As Figure 4 demonstrates, the reduction in planted area has slightly improved since the third round, but the issue remains relevant for different reasons. The country is not only more
exposed than ever to a multitude of shocks including earthquakes, floods, drought and inflation, all of which have happened recently or are currently developing, evidence shows that people in Afghanistan are more vulnerable to these events, due to combining political, geographic, economic and social reasons (ND-GAIN, 2023). Afghanistan faces rates of warming higher than the global average and more extreme minimum and maximum temperatures will be more likely than higher averages, leading to more frequent dry conditions, less water in rivers and an expansion of arid-land coverage (World Bank Group, 2021). Second, as explained in the food security section of this brief, the percentage of households adopting decapitalizing coping strategies increased. These strategies deplete productive assets, which are usually very difficult to re-build. In addition, massive disengagement from agriculture may have a dramatic effect on rural and urban livelihoods, with negative consequences on food supply and price – Afghanistan is a net food importer and vulnerable to global commodity prices – and on labour opportunities and supply chains (FAO, 2023a). Data from the current round indicate that daily labour and informal trade are the income sources that most frequently declined since the fifth round conducted in September 2022 (83 and 90 percent, respectively).

Figure 4. Percentage of farmers reporting a decrease in area planted


For many rural households, not being able to sustain agricultural livelihoods precludes the possibility of an increase in income. Access to resources is often governed by informal networks, family ties and patronage systems (Secure Livelihoods Research Consortium, 2017). This social capital feeds off of mutual reciprocity, and must be maintained through a system of rewards and benefits. The disruption of these informal institutions – including for the provision of credit – is a vicious cycle.

The decision or capacity to plant depends on the crops. Over the past two years, this trend was particularly steep for rice and fruit farmers. In addition, 63 percent of wheat producers, nationwide, reported a decrease in the area planted (from 56 percent in the third round) (Figure 5). For rice, the reasons for the decrease in area planted were most often related to available land. For all other crops, the decrease in area planted was connected to water and access to inputs – many fruit producers also mentioned the lack of marketing opportunities.
For most crops, a decrease in planting was associated with difficulties accessing inputs, especially seeds. In 5 percent of cases, inputs were not available, and most farmers reported that the issue was related to having less money to spend or that the inputs had increased in price (95 percent). Other factors associated with a decrease in planting were idiosyncratic – loss of employment or sickness/death in the family – and economic shocks – especially inflation. Evidence indicate that it is the least well-off segments of the population that are more affected by these shocks. The impact of the depletion of assets and having less resources to dedicate to crops is also demonstrated by the higher percentage of farmers that reduced their planting area when they adopted coping strategies that reduced productive capacity, such as selling land and decreasing farming expenditures.

As mentioned earlier, the most reported shock over the preceding agricultural season was well-below normal precipitation. Fifty-seven percent of farmers reported insufficient water (irrigation or rainfall) for crops as an atypical difficulty. Farming systems are increasingly more vulnerable despite this external factor. Droughts can be meteorological due to a deficit in precipitation, and hydrological due to a deficit in surface or subsurface run-off. The combination of farming practices leads to these agricultural droughts. For example, the wheat producers who reduced their farming area were found (84 percent in rainfed areas) among those relying on constructed water points, such as canals, which demonstrates dependency on communal infrastructure. Furthermore, follow-up questions confirmed that the lack of water was not only related to the availability, but also to the risk aversion of farmers: 38 percent of wheat producers and 74 percent of maize producers who decreased the area planted reported that they did so in order to not run the risk of losing their investments if their crops fail or if there is another drought.

The trends described have resulted from the effects of shocks, vulnerabilities to these shocks and decapitalization. However, they are often combined, and it is difficult to isolate the impact of one or another across livelihood activities or areas. Disengagement has been observed across all profiles, but evidence suggests that these drivers affect different people: those who have

![Figure 5. Increase in the proportion of farmers planting less compared to the third round (by crop)](image-url)
more assets tend to manage them by consciously investing less; households that are less well-off were more likely to have depleted their assets due to the effects of economic and idiosyncratic shocks over a period of years and for a number of reasons (including forced migration).

A growing number of families are landless with limited access to resources, and are living on labour and remittances. For example, 70 percent of farmers cultivating more than 2 ha reported a decrease in area farmed, compared to 63 percent among farmers with less than 1 ha. Almost no farmer with less than 0.2 ha and no livestock holdings decreased the area farmed, probably because of the lack of livelihood alternatives. This explains how, if decapitalization reduces as farmers increase the number of crops farmed, the share of those planting less has a more complex pattern. Other household characteristics, associated with the adoption of decapitalizing strategies, are linked to farming less and reducing herds, such as residency status (migrants have access to less resources and inputs for production) and poverty proxies (76 percent of farmers accessing water from unsafe sources reduced the area cropped, compared to 31 percent among those with a private tap from piped water, for example).

There are additional geographical factors as the western and northern parts of the country seem to show higher disengagement (Figure 6). For wheat, a key crop farmed in all of the provinces, the difference is striking – 83 percent of wheat farmers in the west reduced the area farmed, compared to 23 percent in the east.

Figure 6. Crop producers reporting a drop in the area planted (by location)

Crop production difficulties were heterogeneously reported, depending on the crop, although, in general, their frequency decreased compared to the same period in 2021, except for challenges accessing fertilizer and seeds. The most common difficulties for wheat producers
were access to fertilizer, water and seeds. Water was the most frequently reported difficulty for potato production. Producers with larger areas to plant reported difficulties more frequently, especially accessing inputs and water. Access to seeds was an issue for vegetable producers and plant diseases for pulse producers. Fruit producers frequently cited a wide array of challenges. Plant diseases (the most common production difficulty) varied in frequency by location and crop: fruit producers in the southwest cited both plant disease (89 percent) and pest outbreak (83 percent), along with lack of seeds (50 percent). For wheat producers, plant diseases were more common in the southwest and east (80 percent). In the northeast, 65 percent of farmers cited no access to fertilizer.

Chi-squared tests identified shocks and difficulties such as lack of water and plant diseases, as well as structural characteristics such as land size and accessing seeds as meaningful associations with farmers reporting a decrease in production (Figure 7). For example, 93 percent of fruit farmers who were affected by economic shocks reported a decrease in production, compared to 66 percent among those not affected. Eighty-nine percent of wheat farmers who faced water-scarcity for crops reported a decrease, compared to 75 percent of those not affected by this difficulty.

Figure 7. Percentage of farmers expecting a decrease in harvest

Wheat and maize producers with larger areas to plant reported that they expected a decrease in production more frequently. Wheat producers who had difficulties accessing fertilizer and water reported a decrease in harvest more frequently (96 vs 84 percent, and 89 vs 75 percent, respectively). Fruit harvest depended largely on being affected by shocks (94 vs 74 percent for
idiosyncratic shocks, 88 vs 77 percent for economic shocks, 93 vs 66 percent for agricultural shocks, and 87 vs 73 percent for natural hazards).

Like for production difficulties, marketing challenges were mentioned less frequently, compared to the third round – except for low prices. Transportation costs were less of a challenge for products traded locally (small-grain cereals), but it was the most common difficulty for all other crops. Fruit producers frequently reported the interconnected issues of low demand and low price, but also processing – like for maize. For wheat farmers, the most common problem was the increase in marketing costs mentioned by 68 percent of farmers. Shocks and structural characteristics – land size and gender – were associated with marketing difficulties.

Livestock

As mentioned earlier, the percentage of livestock producers reporting a decrease in herd size showed an improving trend but was still 68 percent in the current round. Animal death and distress sales were two big challenges associated with maintaining animals, although the latter has shown an improving trend when compared to the fifth round (Figure 8).

Figure 8. Livestock sales (percentage of livestock producers)

During the current round, distress sales were particularly frequent in Jawzjan (92 percent), Samangan (75 percent) and Kunar (68 percent) provinces. While in the fifth round, which took place in August 2022, distress sales were concentrated in Nimroz (100 percent), Jawzjan (96 percent), Helmand (93 percent), Maidan Wardak (93 percent) and Bamyan (91 percent).

For many households reducing herds, external causes were important. During the current round, about half of the respondent households affected by floods reported flooding as the main cause of livestock mortality. Of those households affected by the earthquakes in Herat in October 2023, 7 out of 10 reported a decrease in herd size. Additional evidence about the
The impact of the January 2023 cold wave on livestock was provided in a DIEM produced StoryMap (FAO, 2023b). Across rounds, the condition of pastures has supplied a strong basis for explaining the decrease in herds and even mortality (Figure 9).

**Figure 9. Share of livestock producers reporting on the condition of their pasture**

![Graph showing the share of livestock producers reporting on the condition of their pasture across rounds.](https://data-in-emergencies.fao.org)

Although difficulties accessing feed, water, veterinary services and inputs, and livestock diseases were statistically associated with a decrease in herd size, the availability of normal or good pasture was found to have a larger impact (Figure 10). Pasture conditions indicated an improving trend since the fourth round, but they are still bad for most pastoralists, particularly for sheep. In general, livestock producers were more vulnerable to external events.

**Figure 10. Percentage of livestock producers reporting decreased herd size by pasture conditions**

![Bar chart showing the percentage of livestock producers reporting decreased herd size by pasture conditions.](https://data-in-emergencies.fao.org)

The frequency of cattle producers with less animals compared to one year preceding the survey was much higher among those who had more than five animals (80 percent) than those with
less (50 percent). Buying livestock after harvest and selling it during the lean period is a well-established livelihood coping strategy and, in itself, does not erode a household’s productive capacity. When these sales go beyond the level under which the livelihood cannot be sustained, they become asset-depleting. Commercial sales for all species are more frequent when households adopt stress coping strategies or no coping strategy at all, rather than crisis or emergency mechanisms. Distress sales followed the opposite trend, reaching 35 percent and 49 percent among cattle and goat producers adopting crisis strategies. The higher proportion of producers decreasing their herd size was found among those adopting specific coping strategies such as the sale of all productive animals, migration or a decrease in expenditures in livestock inputs, suggesting, like for crops, that disengagement from livestock is also the effect of decapitalizing productive resources.

Various constraints to livestock production were identified in the current round. Difficulties accessing feed continued to be the most frequent challenge, particularly in the northeast, west, central and southeast. Despite a decrease in diseases, access to veterinary inputs has had a deteriorating trend since the fifth round.

Similar to crops, livestock marketing difficulties decreased in frequency since the last round, except for low prices. Higher transportation costs, lower selling prices compared to input prices and lower trader demand were the most common challenges.

**Food security**

As expected for a post-harvest period, the Food Insecurity Experience Scale (FIES), food consumption score (FCS), HDDS and the reduced Coping Strategy Index (rCSI) show an improvement in food consumption. However, when compared with the same period in 2021 (even if the coverage was partial at that time), results show a marked deterioration of the most severe outcomes including the prevalence of severe RFI which increased from 8 to 17 percent (Figure 11).

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1 FIES results are subject to change, until the country scale is established for more consistent comparability across rounds.
In addition, despite a reduction of the proportion of households adopting crisis strategies and more adopting stress strategies, the livelihood coping strategies index (LCSI) shows an increase in the prevalence of emergency coping strategies, from 23 percent in the sixth round to 30 percent in the current round (Figure 12). Female-headed households adopted emergency livelihood coping strategies more frequently when compared to male-headed households, and the frequency of reduced coping strategies was also high among female-headed households (Figure 13). Crop producers adopted emergency coping strategies more frequently than other households (Figure 14).
Given the high prevalence of severe outcomes, it is difficult to highlight areas which are more food insecure than others. Nevertheless, the provinces of Badghis, Baghlan, Farah, Ghazni, Ghor, Hilmand, Paktya and Zabul have a higher prevalence of food insecurity consistent across all assessed indicators.

Chronic issues seem to be the most important drivers of food insecurity. Households that are less well-off, more isolated and less educated face worse outcomes. Female-headed households, despite an improvement in consumption since the sixth round, were consistently facing more severe food insecurity.
Agricultural households show improved consumption, but more adopted emergency coping strategies. Rural non-agricultural households’ consumption has deteriorated and decapitalization has increased greatly. These households mostly live off of remittances and informal trade, and are often migrating households. Considering the distribution of the HDDS, most non-agricultural households consumed only one or two food groups (mostly staples and vegetables) the day before the survey.

Looking at the distribution of the same indicators for agricultural profiles, it is worth noting that, they were all flat, signaling high inequality of dietary diversity. Secondly, for those living off of livestock production only, the peak is at a low score of 3, meaning that three food groups were consumed the day before the interview, and the frequency drops dramatically after 6, meaning that more than six food groups were seldomly consumed (Figure 15).

Figure 15. HDDS distribution by agricultural activity

Compared with these households’ characteristics, shocks had a lesser impact on food security even considering drought and its effects, such as lack of water for crops, bad pasture, etc. The disengagement from agriculture – planting less and selling more animals – is associated with a higher prevalence of RFI both severe, and moderate and severe, but it is, in particular, mostly affected by violence and conflict – a shock narrowly concentrated in specific areas – which seem to have a greater effect. Affected households had a 29 percent prevalence of severe RFI and 89 percent of moderate and severe RFI, compared to, respectively, 23 percent and 77 percent among those not affected by violence and conflict.

Needs

All of the surveyed households reported a need for assistance. The needs reported included: food (89 percent); cash (84 percent); inputs for crop and/or vegetable production (53 percent); livestock feed (34 percent); infrastructure for crop and/or vegetable production (34 percent); veterinary services (21 percent); training and technical knowledge (19 percent); infrastructure for livestock (16 percent); environmental or infrastructure rehabilitation (8 percent); cold storage, and marketing or sales support (5 percent and 6 percent, respectively).
Recommendations

Albeit drawn from the drivers of disengagement identified, recommendations combine ways to offset these issues while recognizing that all food security interventions are about managing risks.

> Assess the sustainability of different breeds of livestock and productive systems to protect livestock against shocks – especially considering the upcoming winter – and maintain rates of reproductivity. Specific productive systems should be targeted for risk management, such as mobile veterinary clinics for pastoralists or hay making for winter protection.

> Rebuild irrigation, storage and processing infrastructure with a culturally-sensitive approach and through value chain interventions to minimize economic risks by encouraging collective procurement and marketing. Value-chain interventions can increase rural incomes and restore social capital by forming collective actions.

> Agricultural credit programmes should incorporate the role of informal institutions. Within Afghanistan’s socially embedded economy, informal credit is a key mechanism through which markets operate. Formal credit interventions should seek to complement existing practices by offering what informal institutions cannot: helping farmers procure seeds and other inputs, and lease land.

> DIEM data indicate that 46 percent of fruit producers cited the unavailability of seeds as a production constraint. The problem of the availability of seeds is less frequent than their affordability, in particular for cereals. Farmers who received this type of assistance were much less likely to decrease the area planted. Therefore, interventions must be focused around what the data indicate.

> In order to reduce the vulnerability to crop failure, increase the use of irrigation, drought-resistant varieties, plant protection and fertilizer alternatives.

> Promote aggregate procurement and marketing, and processing to diminish economic risks.

> Prepare livestock with winter protection and promote mobile veterinary services for transhumant animals.

> Ensure that agricultural assistance include non-agricultural households.
Notes


