Pakistan

DIEM – Data in Emergencies Monitoring brief, round 5

Results and recommendations

May 2024

Data collection 22 November to 31 December 2023
Key highlights

> The percentage of households facing much higher food prices remained high this round.

> The area planted was stable for most, but a higher proportion of smallholders reduced the farmed area (31 percent for rice and 29 percent for maize).

> Access to fertilizer was the most frequent problem, but plant disease, access to seeds, seed quality and waterlogging were very common, and on the rise.

> Agricultural marketing has improved, but not for pulses, fruit, cash crops and dairy products. For both crop and livestock products sold, farmers were more likely to receive a price that was less than typical when they had constrained physical access to market and were less well off.

> According to the Food Insecurity Experience Scale (FIES), moderate or severe recent food insecurity (RFI) was prevalent in 35 percent of households in the districts covered by the survey, with 5 percent experiencing severe RFI, an improvement from 49 and 9 percent reported in the previous round.

> More than 70 percent of households highlighted the need for food and cash assistance. There was significant demand for agricultural inputs such as crop seeds, fertilizer, and livestock inputs like animal feed and veterinary services.

> It is recommended to prioritize providing food and livelihood assistance to households experiencing food insecurity. Additionally, there is a need to ensure accessible agricultural inputs and services to support farmers in sustaining production. For long-term resilience, investment in sustainable practices, infrastructure, and market linkages is required to strengthen food security and mitigate the impacts of recurrent shocks.
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Methodology

FAO conducted a household survey in Pakistan through the Data in Emergencies Monitoring (DIEM-Monitoring) System to monitor livelihoods and food security. This fifth-round survey was conducted through face-to-face interviews from 22 November to 31 December 2023, reaching 11 584 rural households across three provinces: Balochistan, Khyber Pakhtunkhwa and Sindh.

The survey targeted 47 districts with two-step cluster sampling. Data were collected from 188 tehsils (administrative level 3). A total of 5 106 (44 percent) households were interviewed in 21 districts (administrative level 2) of Balochistan; 2 735 (24 percent) in 11 districts of Khyber Pakhtunkhwa; and 3 743 (32 percent) in 15 districts of Sindh. Because the districts covered by previous DIEM rounds were different, comparisons have been drawn to the third round conducted in April 2022 (for which the period is closer) and the fourth round conducted in February 2023 (which has a similar coverage to this round).

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 Pakistan and other countries.

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

Shocks affected households more frequently than in previous rounds, in particular agricultural households and those living in desert areas. Economic shocks were predominant, and floods were reported less compared to the fourth round (Figure 2).

Households with more income sources were more affected by shocks (except when a household had no active income). This suggests that poverty has not always made households more vulnerable to shocks. Shocks were more frequent among the least well-off segment of the population – economic and idiosyncratic shocks, in particular. Agricultural and climatic shocks were more location dependent. Across rounds, households reported experiencing shock fluctuations. The percentage of households facing much higher food prices is 46 percent in this round and peaked at 65 percent in the fourth round.

Figure 2. Main shocks reported (percentage of households)


Note: Changes to the questionnaire response options between the fourth and fifth rounds make it impossible to compare certain data with previous cycles.
Most income sources show an improvement compared to previous rounds, as the share of sources providing more income than 12 months ago has increased. This might be due to the rising costs of agricultural products benefiting producers. However, this improvement of agricultural income did not happen everywhere, and there are locations – probably more distant from markets – that are benefitting less from the increase in demand.

Crops

Figure 3. Pakistan agricultural calendar

The area planted was stable for most of the respondent households but there were two issues worth noting. In the fifth round, there was a slight increase of farmers reporting that they had increased the area planted by more than 50 percent (5 percent) compared to previous rounds. This suggests that high prices represented an incentive for farming. However, among smallholders, internally displaced persons (IDPs) and refugees, a higher proportion reduced the
farmed area (31 percent for rice and 29 percent for maize). This suggests that these incentives are not able to be exploited by everyone.

The *kharif* harvest was the same or more for most of the respondent households, except for sorghum, pulses, cash crops and vegetables. For cereals, a decrease in production was associated with wealth proxies suggesting that poverty plays a role in farming performances, IDPs, gender of the head of household (wheat only), access to fertilizer and lack of water. Poor harvest estimates were concentrated in the northwest of the country that received less rainfall than normal over the past season. It is relevant to note that in an inflationary context, the cost of inputs plays a critical role in the profitability of farming. Typically, the nominal cost of inputs increases with consumers’ prices, but as shown in other countries like Bangladesh (FAO, 2024), where selling price increases more than the cost of inputs, the latter tends to be less cited as a difficulty. In this round, access to fertilizer, fuel, seeds and pesticides, and quality of seeds were reported less frequently than in the previous round, but these issues remained very common. Although still infrequent, access to labour was reported with an increasing trend as a difficulty. Plant disease was the most frequent problem. Lack of water, a prominent difficulty in past rounds, was less common than previous rounds (Figure 4).

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

In an inflationary context, the marketing environment for outputs usually improves. This typically improves the profitability of farming even when the cost of inputs rises if it increases less than the market price of agricultural products. In the fifth round, access to inputs was frequently reported as a major production constraint, and the marketing environment improved for cereals, but not for pulses and fruit. The share of farmers reporting difficulties selling cash crops remained high. For cereals, it was the smallholders and the less well-off segment of the population that reported marketing difficulties more frequently. Chi-squared tests revealed that for both crop and livestock products sold, farmers were more likely to receive a price that was less than typical (Figure 5) when they had constrained physical access to market and were less well off – the association was positive for wealth proxies. The association was negative and statistically significant when citing higher food prices as a shock. This suggests that for both crop and livestock products, profitability decreased for less well-off and more isolated farmers even when they were less affected by food inflation.

**Figure 5. Crop and livestock products price comparison (percentage of households)**

The changing climatic conditions over the last 5 to 10 years has created significant concern for farming households. The predominant changes in climatic conditions reported included change in rainy season (63 percent), higher temperatures and heatwaves (32 percent), and reduced rainfall (23 percent). These changes pose considerable challenges for agricultural productivity and could exacerbate issues such as floods, water scarcity and susceptibility to droughts.

Around 33 percent of the respondent households reported incurring post-harvest losses for crops cultivated during the *kharif* season. Among those experiencing losses, the majority reported these losses primarily at the harvest stage, followed by the transportation from the field to storage and from home to the market stages. In the case of changes in post-harvest losses over the five years before the survey, 13 percent reported an increase in post-harvest losses, 36 percent reported a slight increase and 27 percent reported a slight decrease, suggesting fluctuations in post-harvest loss patterns that may impact the availability of agricultural products.

**Livestock**

A reduction in herd and flock sizes was reported mostly by medium to large producers (77 percent) compared to small producers (37 percent). During this round, cattle deaths (9 percent) were reported less frequently compared to other rounds, and there was an increase in the commercial and normal sale of goats (32 percent).

Cattle producers continued to face constraints accessing pasture and veterinary services (Figure 6). The most prevalent difficulty reported was purchasing feed (60 percent), which decreased slightly from the fourth round (68 percent). Difficulty accessing veterinary services showed minor fluctuations, while difficulty accessing veterinary inputs decreased from the fourth to the fifth round.

The same results identified for the marketing of crops were reported for livestock products. Prices have increased and the marketing environment has improved, but not everywhere, and like in the previous round, milk and dairy producers faced more frequent difficulties selling products. For these perishable products, the most frequent issue was increased transportation costs.
Figure 6. Livestock production difficulties (percentage of livestock producers)

Food security

In the surveyed districts, the prevalence of moderate or severe RFI was 35 percent (±1.6 percent) and the prevalence of severe RFI was 5 percent (±0.7 percent). This indicator, derived from the FIES, represents the best proxy for food consumption. On the other hand, proxies for dietary diversity (the food consumption score [FCS] and the household dietary diversity score [HDDS]) were more aligned. A fifth of the surveyed households fell into the most severe categories. Eighteen percent had poor FCS and 20 percent had low dietary diversity, while 23 percent had borderline consumption and 23 percent had medium dietary diversity (Figure 7). Both indicators consistently highlight Balochistan as the province with the highest prevalence of poor dietary diversity.

The livelihood based coping strategy index (LCSI) measures the level of coping and depletion of assets that are important for livelihood sustainability. Seven percent of households in the surveyed districts have engaged in emergency coping strategies and 35 percent have engaged in crisis coping strategies, both of which involved decapitalization (Figure 7).

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1 FIES results are subject to change, until the country scale is established for more consistent comparability across rounds.
The incidence of shocks to food insecurity was minimal and other characteristics seemed to play a role, with the exception of the floods that affected relatively few households. For flood-affected households, 12 percent adopted emergency coping strategies and 41 percent faced moderate or severe RFI. Balochistan had the highest prevalence of moderate or severe RFI (46 percent) and 8 percent experienced severe RFI. Sindh closely mirrored the overall average with 34 percent facing moderate or severe RFI, with 6 percent experiencing severe RFI. Khyber Pakhtunkhwa followed with 30 percent experiencing moderate or severe RFI, and 3 percent severe RFI (Figure 8).
Figure 8. Prevalence of recent moderate or severe household food insecurity (FIES), rounds 4 and 5

**Round 4**
Prevalence of recent moderate or severe household food insecurity (FIES)
- 0–20%
- 20–40%
- 40–60%
- 60–80%
- 80–100%

**Round 5**
Prevalence of recent moderate or severe household food insecurity (FIES)
- 0–20%
- 20–40%
- 40–60%
- 60–80%

Results by wealth proxies are consistent in identifying the worst food security outcomes among less well-off households. Female-headed households are facing the most severe outcomes (12 percent severe RFI compared to 4 percent for male-headed households). IDPs and refugees face a particularly severe situation. The percentage of permanent resident households in crisis/emergency, as measured with LCSI, and severe RFI is 3 and 5 percent, respectively. These proportions reach 5 and 10 percent among IDPs, and 12 and 9 percent among refugees, respectively. Non-agricultural households are facing a higher prevalence of food insecurity and are decapitalizing more frequently. The situation is better among those engaged in crop production, reflecting the recent harvest. However, households experiencing reduced incomes, especially from non-agricultural sources, and those relying on assistance or gifts, tend to report worse outcomes in terms of dietary diversity and food consumption gaps.

Needs

The most reported needs included food (70 percent) and cash (74 percent), indicating significant concerns regarding basic sustenance and financial stability. Additionally, inputs for crop and/or vegetable production (46 percent) and livestock feed (39 percent) were highlighted as crucial needs for agricultural activities. While irrigation infrastructure and rehabilitation for crop and/or vegetable production (27 percent), and veterinary services (28 percent) were also recognized needs, they were reported at lower frequencies. Training and technical knowledge/advice for both crop (23 percent) and livestock (17 percent) production were identified as areas requiring attention, reflecting the importance of capacity-building initiatives.
Recommendations

Short-term recommendations

- Implement cash and voucher assistance programmes for households experiencing moderate or severe food insecurity. This will improve their access to healthy and nutritious food.

- Address access barriers to essential agricultural inputs such as seeds, fertilizer and veterinary services to mitigate production difficulties.

- Implement targeted training programmes to enhance agricultural knowledge and skills among farmers, focusing on effective crop and livestock management practices.

- Establish emergency support mechanisms to assist livestock producers in managing distress sales and mitigating losses during economic shocks.

Long-term recommendations

- Develop sustainable agricultural practices to enhance resilience against recurring shocks, including floods and economic downturns.

- Invest in infrastructure development for improved water management, reducing water scarcity and enhancing agricultural productivity.

- Strengthen market linkages and value chains to provide farmers with better access to markets, thereby improving income opportunities and reducing vulnerability.

- Promote diversified livelihood strategies to reduce dependence on agriculture and enhance household resilience to shocks.

- Establish comprehensive social protection programmes targeting vulnerable households to provide long-term support and resilience-building measures.
Notes
