Bangladesh

DIEM – Data in Emergencies Monitoring brief, round 9

Results and recommendations

March 2024

Data collection 7 November to 16 December 2023
Key highlights

> Both tropical cyclone Hamoon which made landfall at the end of October, and tropical cyclone Midhili which made landfall in mid-November, affected 7 percent of households from Chattogram and the Coastal Zone. Cyclones were found to be associated with a decrease in income and food security.

> High food prices was the most commonly reported shock despite increased income from crop and livestock production which is consistent with high inflation.

> Among the most frequently reported crop production difficulties, there were higher reports of pests in Khulna, and waterlogging in Barishal and Mymensingh.

> Rice farmers estimating a reduction in harvest have doubled (43 percent) since October 2022, with a fifth of cereal producers expecting or receiving lower than typical prices.

> Animal diseases increased sharply for poultry producers (83 percent) across the country, unlike being concentrated in pockets during recent rounds.

> Constrained access to cattle feed (42 percent) was frequently reported in Rajshahi and Rangpur, while poultry feed was reported in Chattogram and Khulna.

> More than 75 percent of households engaged in fishing reported an improvement and the same level of production, though over 60 percent of coastal and maritime fisherfolk reported comparatively less seasonal catches.

> Though food consumption and livelihood coping show an improving trend, nearly one-third of households still experienced moderate or severe recent food insecurity (RFI) and asset-depleting strategies – associated with a decrease in crop production and planting.

> Outbreak surveillance mechanisms for livestock diseases should be strengthened. Alternative sources of soybean and maize should be identified and imported for animal feed production.

> Focus on marine spatial planning to support sustainable use of resources and nature-based solutions along with access to soft loan (low interest and long term) facilities for marginalized fisherfolk.
Methodology

The Food and Agriculture Organization of the United Nations (FAO) conducted a household survey in Bangladesh through the Data in Emergencies Monitoring (DIEM-Monitoring) System to monitor agricultural livelihoods and food security. This ninth-round survey reached 6,499 households. The survey was representative at district level, covering 64 districts across all eight divisions of the country: Barisal, Chattogram, Dhaka, Khulna, Mymensingh, Rajshahi, Rangpur and Sylhet. The survey also targeted the hotspots identified in the Bangladesh Delta Plan 2100: Barind and the Drought-Prone Areas, Char, Chittagong Hill Tracts, Coastal Zone, Cross-Cutting Area, and Haor and the Flash Flood Areas.

Data were collected via computer-assisted telephone interviews between 7 November and 16 December 2023. Data collection and the recall period covered the *aman* rice (including growing), jute and mungbean harvests; onion and potato growing seasons; minor crop lean season; shrimp and prawn aquaculture harvests; and peak riverine fishing. During the data collection and recall period, the respondents were affected by the fishing ban, fodder scarcity and common ruminant disease outbreaks. Weights were applied according to demographics, agricultural activity, and a wealth proxy (toilet facility).

The fourth-round survey was conducted between 16 October and 24 November 2021, the fifth-round survey between 17 March and 2 April 2022, the sixth round between 7 September and 8 October 2022, the seventh round between 17 February and 21 March 2023, and the eighth round between 29 July and 23 August 2023. These five rounds have been drawn from to make comparisons throughout this brief.

Figure 1. Countries with an established DIEM-Monitoring System
Income and shocks

Economic shocks continued to be frequently reported (Figure 2), but floods and loss of employment have also had an impact on food security. Seventy-one percent of households impacted by floods were affected by tropical cyclone Hamoon which made landfall at the end of October 2023, and 40 percent were affected by tropical cyclone Midhili which made landfall in mid-November 2023. The two tropical cyclones Hamoon and Midhili had an impact on assets (houses, orchards, etc.). Standing crop losses were frequent but minor. However, the timing played a role in farming as those affected by floods in December were more likely to plant less and decrease their herd and flock size.

Only 7 percent of respondent households were affected by cyclones. These households were concentrated in Chattogram and the central coastal area, such as Bhola district. Agricultural shocks were less frequent but had a geographic pattern: pests in Khulna, Mymensingh and parts of Sylhet and Barind; animal diseases in the Cross-Cutting Area and western Chattogram; and plant diseases in eastern Chattogram.

Contrary to previous rounds, income from crop and livestock production increased for most producers, which is consistent with high inflation. This was likely the main driver leading to the improvement of food security outcomes, as a decrease in main income was highly associated with moderate and severe recent food insecurity (RFI).

In addition, income from fishing, cash crops and non-agricultural professions has decreased for more than a third of the respondent households, and floods and cyclones have been observed to have a greater impact on agricultural incomes.
Figure 2. Main shocks reported (percentage of households)

- **Unusually high food prices**
- **Sickness or death of household member(s)**
- **Flood/riverbank erosion**
- **Unusually high fuel prices or transport prices**
- **Lost employment**

Crops

Figure 3. Bangladesh agricultural calendar

The most common difficulties in crop production (Figure 4) — waterlogging, pests and plant diseases — were more frequent in Chattogram and to a lesser extent in Khulna, although waterlogging was also reported in Barisal and Mymensyngh. Pests were reported more heterogeneously across the country (Figure 5).

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


Changes to the questionnaire response options between rounds 6 and 7 make it impossible to compare certain data with previous rounds.
Only a small proportion of farmers reported difficulties accessing fertilizer, representing an improvement from previous rounds. In almost all cases this round, the issue was price, not availability. Access to fertilizer was more challenging in Haor, Rajshahi and Sylhet. There were also availability problems among flood-affected farmers with 47 percent reporting that their typical input market was not functional. Seventeen percent reported that their market was partially functional.

Planting less rice was associated with floods, pests and plant diseases, and idiosyncratic shocks. The area planted decreased for a particularly high percentage of farmers from the districts of Sunanganj and Sylhet (Sylhet); Kurigram (Rangpur); Siraiganj (Rajshahi); Nettrakona
There was a slight improvement in reported harvest estimates compared to the eighth round, except for fruit and vegetables. However, the share of rice farmers estimating a reduction in harvest increased from 23 percent during the sixth round to 43 percent this round. Shocks, including floods and cyclones, which co-occur with waterlogging, have had the largest effect on the reduction of harvest. A particularly high percentage of farmers reported a decrease in production in the districts of Bhola, Comilla, Dhaka, Mymensingh, Netrakona, Pirojpur and Tangail.

Similar to previous rounds, cash croppers reported marketing difficulties more frequently. This was also the case with farmers selling directly to markets, but a smaller proportion (Figure 6).

Figure 6. Farmers reporting marketing difficulties (percentage of crop producers) by crop (left) and marketing channel (right)

Fifty-three percent of cash croppers that sold to wholesalers at the market instead of intermediaries, expected or received a lower price (Figure 7). For other crops, selling prices remained stable or increased which explains the improvement in income. A fifth of cereal producers also expected or received less and consisted of mostly less well-off households. In flood-affected areas, output markets were reported as not functional by 40 percent and partially functional by 25 percent.
Other marketing difficulties were related to high transportation costs, which are less and less common, and were reported by 24 percent of vegetable producers and 27 percent of fruit producers. Lack of demand was also reported as a marketing difficulty less frequently but with an increasing trend particularly for fruit producers and cash crop producers. Twenty-four percent of vegetable producers also reported markets that were flooded with products.

**Livestock**

Among the livestock production difficulties (Figure 8), two are of cause for concern. The first is the increasingly frequent challenge accessing livestock feed which was reported by 42 percent of cattle producers and could be due to increasing import costs. Accessing cattle feed was more challenging in Barind and the Drought-Prone Areas, and Rajshahi and Rangpur divisions. Accessing poultry feed was more challenging in Chattogram and Khulna. In almost all cases (more than 98 percent across all species), the reported issue was price, not availability. The second production difficulty of concern was animal diseases, in particular poultry diseases. Poultry diseases, which were particularly frequent in Dhaka division in previous rounds, were now reported frequently across the country consistently by more than eight out of every ten producers.
Livestock diseases or injury

Difficulty purchasing feed

Access to veterinary services

Access to pasture

Access to veterinary inputs


Animal diseases are associated with producers decreasing their herd and flock size, but the percentage of livestock producers with less animals has been decreasing since the previous rounds (Figure 9). For poultry producers, mortality is the most common reason for decreasing the number of birds, but an improving trend has been identified. Commercial sales are decreasing for all species (39 percent for goats, 38 percent for cattle and 24 percent for poultry during the eighth round). In addition, distress sales are increasing for cattle and poultry. Distress sales can be attributed to the high prevalence of poultry deaths due to disease or parasites given the higher than usual reporting of killing and giving away animals. It is possible that this is being done as a coping strategy to protect healthy animals and avoid financial losses.
Marketing difficulties have increased for poultry, from 7 percent of producers reporting challenges in the eighth round to 15 percent this round. The sale price for poultry has decreased for 18 percent of producers and was the most frequently reported issue across species, especially when relying on market intermediaries or middlemen — although not for goats. Lack of demand has had a deteriorating trend for goats and was cited by 33 percent of goat producers.

While more than 75 percent of fisherfolk reported improved conditions, a significant portion of coastal and maritime fisherfolk — above 60 percent — reported less fish catches than they did at the same time the previous year. Finding fish was the main fishing challenge noted by coastal and maritime fisherfolk, and cyclones were reported to have significantly reduced the opportunity to catch fish during the fishing season. Another barrier for marine fisherfolk was payment delays from traders and buyers which was referred to as the marketing difficulty most associated with fishing.

**Food security**

Food consumption and livelihood coping show an improving trend although 31 percent are categorized in moderate or severe RFI and 36 percent of households engaged in asset-depleting coping strategies.
However, this improvement did not happen everywhere nor for all groups. The Food Insecurity Experience Scale (FIES),\(^1\) indicates that the prevalence of RFI has improved in Chattogram, Khulna, Sylhet and Rangpur since the previous round. However, this deteriorated in Mymensingh (albeit within the margins of error). Households engaged in crop production had a more diversified diet, and non-agricultural households were more likely to decapitalize. Food insecurity was associated with a decrease in crop production and planting (Figure 10).

![Figure 108. Food insecurity (FIES) by planted area and harvest](image)

Food insecurity was associated with some structural characteristics but was also driven by shocks (Figure 11). A stronger association was found with wealth proxies — toilet type and education — suggesting that less well-off households are more likely to decapitalize and face food consumption gaps. A weaker but positive association was also found with the number of income sources.

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\(^1\) FIES results are subject to change until the country scale is established for more consistent comparability across rounds.
Shocks have also had an impact on food security, in particular floods and household-specific shocks like loss of employment, sickness, etc. These shocks have also had an impact on production, particularly harvest. Economic shocks, such as food inflation, also demonstrate a notable difference between affected and non-affected households. This was also because these shocks were positively associated with the least well-off strata of the population which is more vulnerable to purchasing power deterioration.

**Needs**

Cash and crop inputs were the most reported needs by households affected by tropical cyclones Hamoon and Midhili. Apart from cash, crop inputs were the most frequently reported need among farmers. Among divisions, more than 65 percent of respondents in Mymensingh and Rajshahi reported the need for crop inputs. Respondents in Barind reported the need for crop inputs more than any other hotspot. Livestock feed was another need reported significantly across all hotspots. Food and livestock feed were reported slightly more by female-headed households.
Recommendations

Short-term recommendations

> Heighten market surveillance, fair pricing, subsidized procurement from producers, and sales to consumers to curb price hikes and maintain access to food commodities.

> Strengthen outbreak surveillance activities for livestock diseases as well as identification and importation from alternative sources like soyabean and maize for animal feed production.

> Scale up coverage of shock-responsive social safety net programmes for vulnerable households in Chittagong Hill Tracts and Chars in Rangpur division, along with Sylhet and Barisal divisions, while ensuring efficient and equitable targeting.

> Stimulate purchasing power and economic resilience through targeted interventions such as cash injections or employment programmes to bolster income opportunities and economic activities in Chittagong Hill Tracts and Chars in Rangpur division, along with Sylhet and Barisal divisions.

Medium- to long-term recommendations

> Focus on marine spatial planning to support sustainable use of resources and nature-based solutions along with access to soft loan (low interest and long term) facilities for marginalized fisherfolk.

> Develop stronger early warning systems and a robust digital database management system to guide disaster response planning.

> Expand investment in research, development, promotion and the adoption of stress tolerant crop varieties and climate smart agriculture.