Bangladesh

DIEM – Data in Emergencies Monitoring brief, round 8

Results and recommendations
November 2023
Key highlights

> Economic shocks were still prevalent like the seventh round. An increase in food prices was reported as the biggest shock.

> Floods affected Chittagong Hill Tracts, and crop and livestock-dependent households the most, while also disrupting market functionality.

> A decline in area planted was more prevalent in Barisal, Dhaka, and Rangpur, and the hotspots Barind and Drought-Prone Areas, Cross-Cutting Area, and Haor and the Flash Flood Areas (17–20 percent).

> Despite a decrease since the seventh round, pest outbreaks remained the most common agricultural production issue (35 percent). This difficulty was reported the most in Dhaka, followed by Sylhet, Cross-Cutting Area and Haor and the Flash Flood Areas.

> An increase in marketing difficulties (especially low selling prices) was reported by livestock producers this round.

> Crisis and emergency livelihood coping strategies increased this round compared to the last two rounds, particularly among crop and livestock production and marketing-dependent households.

> Moderate recent food insecurity (RFI) has deteriorated. The worst food security outcomes were observed in Rangpur followed by Chattogram, Khulna and Sylhet (as well as the hotspots Barind and the Drought-Prone Areas, Chittagong Hill Tracts, Coastal Zone, and Haor and the Flash Flood Areas).

> To make the effects of high food prices controllable, food price increases should be supported by regularly operated open market sales which encourage government-subsidized sales of essential food items, especially in divisions like Barisal and Rangpur where increased food prices have been reported.

> Promote extension services by training crop producers on how to deal with pest outbreaks and plant diseases with correct, judicial and efficient uses of pesticides, as well as modern and improved production techniques. These workings should teach crop producers how to face other crop production challenges and to counteract the decline in yield.
Methodology

The Food and Agriculture Organization of the United Nations (FAO) launched a household survey in Bangladesh through the Data in Emergencies Monitoring (DIEM-Monitoring) System to monitor agricultural livelihoods and food security. This eighth-round survey reached 3,129 households, representative at division level. The survey targeted 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,Chars, Chittagong Hill Tracts, Coastal Zone, Cross-Cutting Area, and Haor and the Flash Flood Areas. The results of this assessment have considered the impact of the recent flooding and landslides in Chittagong Hill Tracts.

Data were collected via computer-assisted telephone interviews between 29 July and 23 August 2023. The data collection occurred one month after the aus rice and kharif maize harvest. Respondent households were requested to use recall up to three months during the period of high risk for floods and cyclones (natural shocks). The sample was weighted by three wealth proxies: demographics, agricultural activity and 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 and the seventh round between 17 February and 21 March 2023. These four rounds have 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. The 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 Bangladesh and other countries.

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

Income and shocks

Economic and idiosyncratic shocks remain the most frequent across all divisions and hotspots. Food inflation was the most common shock in Bangladesh, although the households citing high fuel prices as a shock decreased significantly since the previous round (Figure 2). Food inflation reached 12.5 percent in August 2023, the highest level since October 2011 when it reached 12.8 percent. In rural areas, where food inflation has skyrocketed to 12.7 percent during the same period, the problem is more severe. Economists attribute the 12.5 percent increase in food inflation to cheap credit, manipulation of vested interests in the market, weak monitoring and problems in the banking industry.

Income declined more for agricultural households, compared to non-agricultural households, particularly casual labourers. However, income from cash crops and vegetable and fruit farming was frequently (more than 50 percent) reported as having increased from the previous year.
Figure 2. Main shocks reported (percentage of households)

Floods affected the Chittagong Hill Tracts and agricultural households the most. Both in Chattogram division and the Chittagong Hill Tracts hotspot, cultivation was severely impacted among the flood-affected households (Figure 3). In addition, market functionality was disrupted in the same area.
Figure 3. Cultivation affected by floods (percentage of flood affected households)

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barind and Drought-Prone Areas</td>
<td>44%</td>
</tr>
<tr>
<td>Chittagong Hill Tracts</td>
<td>96%</td>
</tr>
<tr>
<td>Coastal Zone</td>
<td>75%</td>
</tr>
<tr>
<td>Cross-Cutting Area</td>
<td>67%</td>
</tr>
<tr>
<td>Haor</td>
<td>52%</td>
</tr>
<tr>
<td>Chars</td>
<td>61%</td>
</tr>
</tbody>
</table>

### Crops

**Figure 4. Bangladesh agricultural calendar**

<table>
<thead>
<tr>
<th>Month</th>
<th>Hazard</th>
<th>Major Food Crop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>Flood, river erosion and landslides</td>
<td>Aat rice*</td>
</tr>
<tr>
<td>Feb</td>
<td>Flash flood</td>
<td>Boro rice*</td>
</tr>
<tr>
<td>Mar</td>
<td>Drought</td>
<td>Broadcast Aman rice*</td>
</tr>
<tr>
<td>Apr</td>
<td>Cyclone and storm</td>
<td>Cotton</td>
</tr>
<tr>
<td>May</td>
<td>Cold spell</td>
<td>Jute</td>
</tr>
<tr>
<td>Jun</td>
<td>Salinity instruction</td>
<td>Khapra maize</td>
</tr>
<tr>
<td>Jul</td>
<td></td>
<td>Lentil</td>
</tr>
<tr>
<td>Aug</td>
<td></td>
<td>Mungbean</td>
</tr>
<tr>
<td>Sep</td>
<td></td>
<td>Mustard</td>
</tr>
<tr>
<td>Oct</td>
<td></td>
<td>Onion</td>
</tr>
<tr>
<td>Nov</td>
<td></td>
<td>Potato</td>
</tr>
<tr>
<td>Dec</td>
<td></td>
<td>Rabi maize</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soybean</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transplant Aman rice*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wheat</td>
</tr>
</tbody>
</table>

*Major food crop:
- **Sowing**
- **Growing**
- **Harvesting**
- **Hazard** (darker tone indicates higher occurrences)

For most crop producers, the area planted remained stable. More than 15 percent of cash crop producers reported an increase in planted area, and for most rice, vegetables, fruit and pulse producers, it stayed the same or increased. Producers reported a drop in area planted more frequently in the divisions of Barisal, Dhaka and Rangpur (reported by 17–20 percent) and in the hotspots of Haor and the Flash Flood Areas (20 percent), Barind and the Drought-Prone Areas (17 percent), and Cross-Cutting-Area (17 percent) for other cereals and tubers.

Even with a decrease since the previous round, pest outbreaks remained the most common agricultural production difficulty, noted by 35 percent of crop producers (Figure 5). Plant diseases (31 percent) were the second most common difficulty reported. Difficulties accessing fertilizer have decreased in frequency from 26 percent in the seventh round to 20 percent in this round, though still higher than the fourth and fifth rounds. Even though this round was conducted in the rainy season, a significantly higher percentage of farmers reported insufficient irrigation or rainfall water, particularly in Khulna (47 percent), Rajshahi (44 percent) and Barind and the Drought-Prone Areas (52 percent).
Changes to the response options in the seventh-round survey make it impossible to compare certain data with previous rounds.

Overall, 34 percent of producers reported a decrease in harvest, representing an increase from the seventh round (21 percent). Plant diseases, high food prices, economic shocks and source of irrigation were associated with a decrease in harvest using the Chi-square test. Producers in Chittagong Hill Tracts anticipated the most significant drop in harvest, though not a greater drop in plantation.

Fruit producers reported marketing difficulties more commonly than others. Low selling prices saw a big jump from the previous round – 50 to 66 percent – which exceeded the highest rate found in the fourth round (61 percent during COVID-19 restrictions) – particularly for those selling to intermediary traders. Although reports of high marketing costs have reduced, this was more frequently cited among producers involved in direct marketing.
Livestock

Livestock disease or death was the most reported difficulty across all livestock types (Figure 6). Cattle producers reported difficulties accessing feed and veterinary services. The latter was cited more frequently for cattle and poultry, compared to the previous round (increasing from 6 percent to 23 percent, and from 5 percent to 18 percent, respectively).

Figure 6. Livestock production difficulties (percentage of livestock producers)

Looking at the reasons for variation in herd or flock size, there has been an increasing trend of mortality for poultry producers (30 percent in the seventh round, 22 percent in the sixth round) who also reported commercial sales more often (22 percent in the seventh round and 27 percent in the sixth round). However, distress sales increased for cattle, goats and poultry (7 percent, 6 percent and 2 percent, respectively, in the seventh round) which exceeded the levels of the fifth round. The current round saw increased marketing difficulties reported (especially low selling prices) by livestock producers.

Almost two-thirds of offshore sea fisherfolk and 42 percent of coastal fisherfolk reported difficulties finding fish compared to previous years in the same season (Figure 7). In addition, two-thirds of the aquaculture respondents cited fish pests and diseases as a major challenge. Fish capture presented worse results for freshwater fisherfolk compared to aquaculture fish producers.
Figure 7. Fishery and aquaculture production difficulties (percentage of fishery and aquaculture producers)


Food security

The experience-based food security indicator at the household level, the Food Insecurity Experience Scale (FIES), 1 exhibits some deterioration from the seventh round, specifically the moderate RFI. Moderate RFI increased from 31 percent in the seventh round to 34 percent this round, despite a sustained decline over the previous two rounds.

The livelihood coping strategy index (LCSI) indicates that decapitalization (crisis and emergency coping strategies) increased this round when compared to the last two rounds. However, LCSI remains below the levels of the fourth round (57 percent) which was conducted during the peak of COVID-19 restrictions. Rangpur had the worst food security outcomes, followed by Chattogram, Khulna and Sylhet, and the hotspots Chittagong Hill Tracts, Barind and the Drought-Prone Areas, Coastal Zone, and Haor and the Flash Flood Areas. There are few differences in prevalence of FIES (moderate and severe RFI) between divisions (Figure 8). Rangpur has the highest FIES prevalence (moderate RFI is 44 percent) and Rajshahi has the lowest FIES prevalence (moderate RFI is 26 percent). Although decapitalization is still significant, dietary diversity is better in certain places than others.

1 FIES results are subject to change, until the country scale is established for more consistent comparability across rounds.
Figure 8. Moderate or severe RFI (by location)

The household dietary diversity score (HDDS) is sensitive to seasonality. The current round was conducted a month after the harvest when consumption improves. The HDDS improved when compared to the same period over the last two years (Figure 9).

The rate of poor HDDS is lower among crop and livestock production and marketing dependent households, however, with high rates of decapitalization. In some areas, dietary diversity is better than in others, but decapitalization is still high. For example, in Barisal division, low and medium dietary diversity has a prevalence of 17 percent, but a much higher proportion adopted crisis and emergency coping strategies (53 percent) (Figure 10). Purchasing power has been restricted by the country’s rising food prices, particularly those in the lower income bracket who
have already had difficulty making ends meet over the previous year. This could be the reason for the high rate of decapitalization.

Figure 9. HDDS

<table>
<thead>
<tr>
<th>Round</th>
<th>November 2021</th>
<th>March 2022</th>
<th>October 2022</th>
<th>March 2023</th>
<th>August 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDDS</td>
<td>18%</td>
<td>11%</td>
<td>22%</td>
<td>5%</td>
<td>29%</td>
</tr>
<tr>
<td>3-5</td>
<td>55%</td>
<td>49%</td>
<td>30%</td>
<td>37%</td>
<td>57%</td>
</tr>
<tr>
<td>6-8</td>
<td>21%</td>
<td>34%</td>
<td>38%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>9 above</td>
<td>6%</td>
<td>5%</td>
<td>10%</td>
<td>13%</td>
<td>13%</td>
</tr>
</tbody>
</table>


Figure 10. Food security measures (by location)


Needs

Beyond cash assistance, crop input needs were most frequent among farmers (cited by 61 percent in Dhaka, Rangpur and Sylhet). The need for livestock feed was reported in
Mymensingh, Rangpur and Sylhet more frequently. Fish inputs were cited in Khulna and Barisal (9 percent and 8 percent, respectively). The need for food was reported by about 7 percent (15 percent in Chittagong Hill Tracts, and 10 percent in Barind and the Drought-Prone Areas).
Recommendations

Short-term recommendations

> To make the effects of high food prices controllable, food price increases should be supported by regularly operated open market sales which encourage government-subsidized sales of essential food items, especially in divisions like Barisal and Rangpur where increased food prices have been reported.

> Governmental organizations, international non-governmental organizations and non-governmental organizations should use their resources to target those who are food insecure to combat the recent increase in food prices.

Long-term recommendations

> Promote extension services by training crop producers on how to deal with pest outbreaks and plant diseases in Barisal, Sylhet and Dhaka divisions with correct, judicial and efficient uses of pesticides, as well as modern and improved production techniques. These trainings should teach crop producers how to face crop production challenges and counteract the decline in yield.

> Agricultural extension officers, especially in Khulna and Rajshahi divisions, should take measures to explain how surface water can be used for irrigation.

> Prevent livestock distress sales due to floods through the provision of livestock shelters along with stocking and destocking facilities particularly during periods of stress and shocks.

> Enhance extension services to ensure that feed and fodder are available to small-scale and low-income farmers before and during shocks, and that livestock producers are trained on better animal farming practices.

> Disseminate knowledge about managing and preventing poultry and goat diseases. Provide livestock producers with better access to veterinary services and immunizations.

> Prioritize needs to facilitate short- and long-term policy planning to address frequently reported needs like food and financial assistance.