Food and Agriculture Organization of the United Nations

Chad

DIEM – Data in Emergencies Monitoring brief, round 4

Results and recommendations
March 2023

Data collection 16 December 2022 to 10 January 2023

Key highlights

- Eighty percent of surveyed households said they had been affected by one or more shocks in the three months preceding the survey (up from 74 percent in the previous round). The provinces of Logone Occidental (99 percent), Moyen-Kebbi Est (80 percent), Wadi Fira (74 percent) and Moyen-Chari (73 percent) were the most affected by shocks. Crop producers were more affected by shocks (82 percent), than livestock producers (77 percent) and households not involved in agricultural activities (67 percent).

- The main shocks reported by the surveyed households were economic in nature and concerned the rise in food prices (44 percent). This was followed by illness or death of a household member (41 percent), and flooding (30 percent).

- Of the households surveyed, 52 percent reported a decrease in their main income in the three months preceding the survey compared to the same period in a typical year.

- Seventy-four percent of crop producers reported production difficulties and 67 percent reported a significant decline in their crops. Among livestock households surveyed, 72 percent reported a decrease in livestock numbers and 68 percent reported difficulties in livestock production.

- The dietary diversity score is low for 11 percent of the surveyed households, compared to 9 percent in the previous round. Fifty-eight percent used negative coping strategies, and almost all surveyed households (99 percent) said they needed assistance.

Methodology

The Food and Agriculture Organization of the United Nations (FAO) conducted the fourth round of the Data in Emergencies household survey (DIEM-Monitoring) in Chad between 16 December 2022 and 10 January 2023 to assess agricultural livelihoods and food security.

Data was collected through face-to-face surveys in the provinces of Kanem, Lac, Moyen-Chari, Logone Occidental, Moyen-Kebbi Est and Wadi Fira. A total of 5 310 households were interviewed. Data collection took place after the rainy season, during the harvest period.

Figure 1. Countries with established DIEM-Monitoring Systems

Source of data: FAO. 2022. DIEM-Monitoring. In: *FAO Data in Emergencies Hub*. Rome. Cited 2 October 2022. data-in-emergencies.fao.org
Source of map: United Nations. 2022. *Map of the World.* Cited 2 October 2022. un.org/geospatial/content/map-world

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 Chad and other countries.

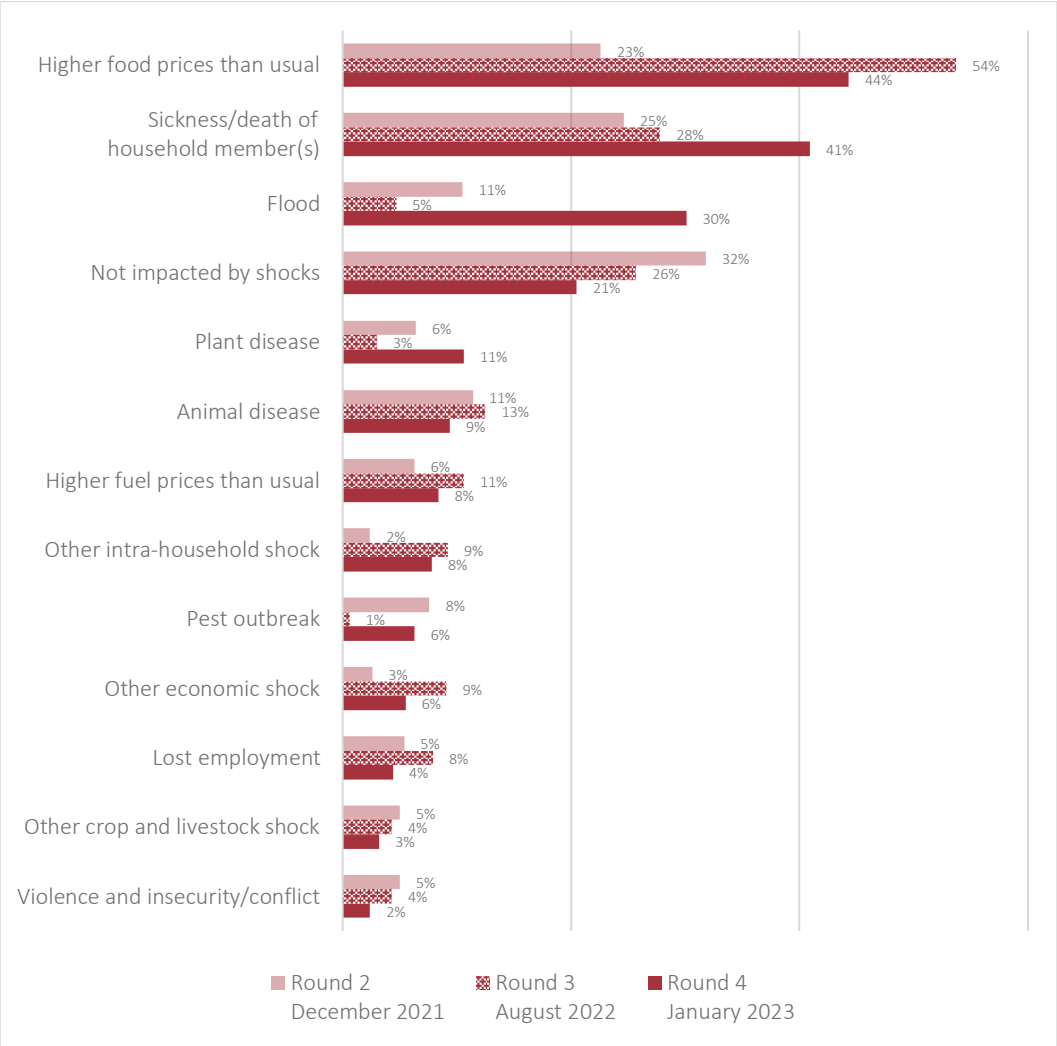
> Learn more at https://data-in-emergencies.fao.org/pages/monitoring

Income and shocks

Of the households surveyed, 52 percent reported a decrease in their main income in the three months preceding the survey compared to the same period in a typical year. Twenty-nine percent derived their main income from the production and marketing of staple crops while 18 percent relied on the production and marketing of livestock or livestock products. Nearly 70 percent of surveyed households derived their main income from agricultural activities (production or marketing). Sixty-two percent had a second source of income.

Eighty percent of surveyed households said they had been affected by one or more shocks in the three months preceding the survey (compared to 74 percent in the previous round). Overall, the main shock reported by the surveyed households was economic in nature and concerned rising food prices (44 percent) (Figure 2). This was followed by illness or death of a household member (41 percent) and flooding (30 percent).

Figure 2. Most commonly reported shocks (percentage of households)



Source of data: FAO. 2023. Chad: DIEM-Monitoring assessments results (December 2021, August 2022 and January 2023). In: *FAO Data in Emergencies Hub.* Rome. Cited 15 February 2023. data-in-emergencies.fao.org

Crop producers were more affected by shocks (82 percent) than livestock producers (77 percent) and households not involved in agricultural activities (67 percent).

In addition to the rise in food prices, explained by the international context, exceptional floods hit Chad between August and December 2022, destroying 435 149 hectares of agricultural land, or 30 percent of the land sown, with crop losses of up to 80 percent. Damage to the livestock sector has also been significant, with 171 374 livestock and 286 185 poultry lost. Overall, 13 percent of crop producers and 11 percent of livestock producers said they were no longer able to continue their activities without assistance (DIEM, 2023). Logone Occidental and Moyen-Kebbi Est are among the most affected provinces (69 and 63 percent of households respectively). Animal diseases, a direct consequence of the floods, were most reported in Ngourkosso (23 percent) and Kabbia (22 percent) departments.

In addition to flooding, the provinces of Logone Occidental (99 percent), Moyen-Kebbi Est (80 percent), Wadi Fira (74 percent) and Moyen-Chari (73 percent) were the most affected by shocks.

The increase in food prices in Wadi Fira province (reported by 48 percent of surveyed households) can be explained by the closure of the borders with the Sudan, from which a large proportion of food is imported. In Kanem, which sources its food from Lac province, 46 percent of households reported higher food prices. Lac has been affected by floods, which have reduced agricultural production.

The increase in food prices was experienced in all the departments targeted by the survey, as a result of the recent poor harvest following the floods that affected most of the production areas, combined with the adverse effects of the ongoing war in Ukraine (higher prices for imported foodstuffs).

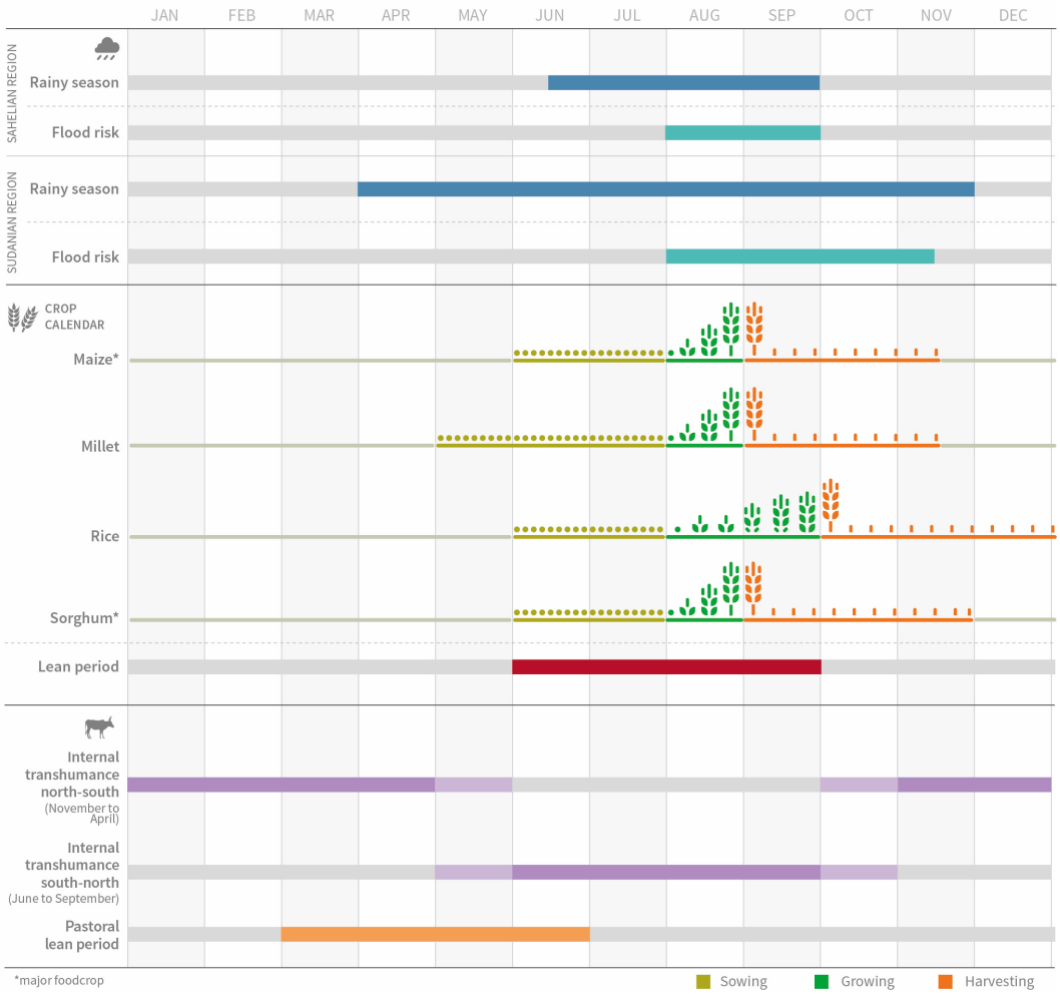
Recurrent fuel shortages as a result of the ongoing war in Ukraine have had an impact on prices in the departments of Lac province (Wayi 25 percent and Mandi 23 percent) and Kanem (Wadi Bissam 24 percent, Kanem 22 percent and Nord Kanem 20 percent), as these areas obtain fuel from N'djamena or, in the east of the country, from the Sudan or Libya.

Illnesses and accidents of a family member was the most frequently reported shock, and was most frequently cited by households in the departments of Logone Occidental (Dodjé 62 percent, Lac Wey 60 percent and Ngourkosso 67 percent), which were particularly affected by the floods and the resulting illnesses. In Moyen-Chari, 47 percent of households reported an illness, accident or death. The province has experienced significant inter-communal violence in recent months, with villages burned down and lives lost.

Insecurity is recurrent in the departments of Lac province, notably due to Boko Haram attacks (Kaya 20 percent and Fouli 7 percent). However, in the departments of Mont Illi (7 per cent), Mayo-Boneye (5 per cent), Lac Iro (5 per cent), Kabbia (4 per cent) and Dodjé (3 percent), some households reported being insecure.

Crops

Figure 3. Chad agricultural calendar



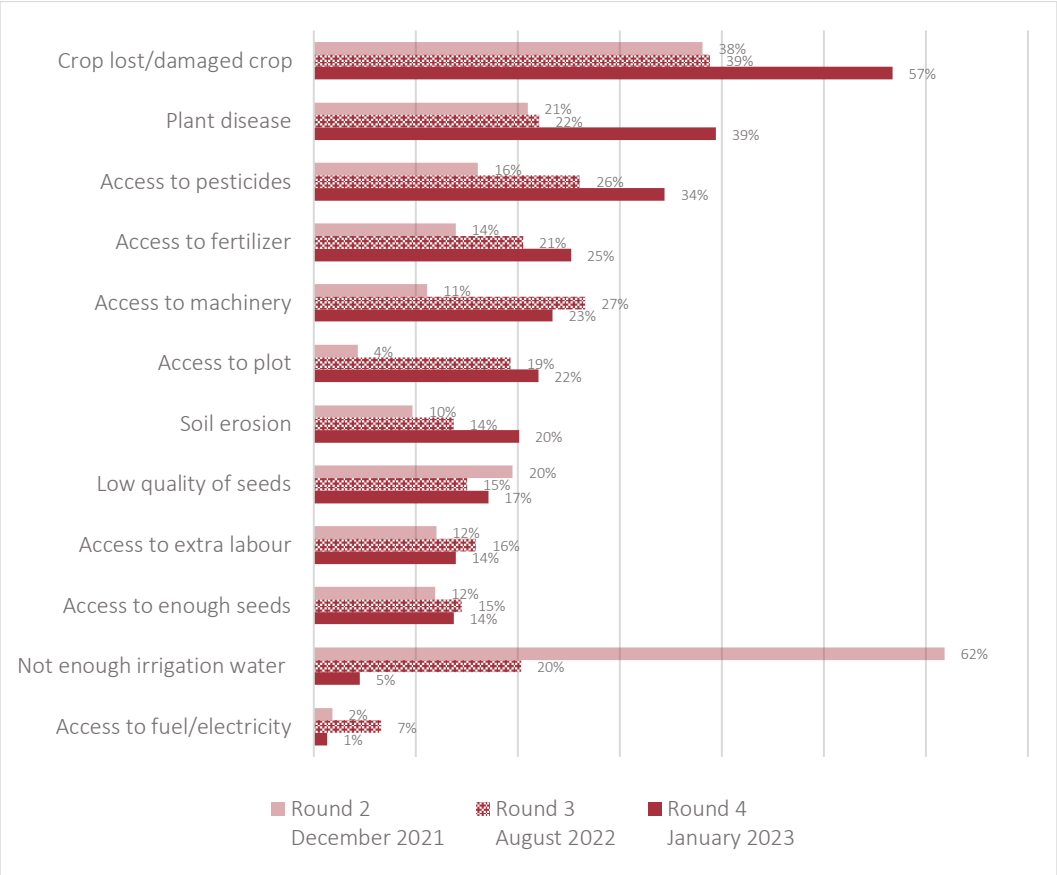
Source of data: FAO. 2022. GIEWS – Global Information and Early Warning System: Country briefs – Chad. In: *Food and Agriculture Organization of the United Nations*. Rome. Cited 25 January 2023. fao.org/giews/countrybrief/country.jsp?code=TCD&lang=en

The main crops grown by the farmers surveyed are millet (49 percent), groundnuts (15 percent), sorghum (10 percent) and rice (9 percent). The area under cultivation has increased for 35 percent of farmers compared to the previous season, is stable for 36 percent and is decreasing for 28 percent (34 percent in the third round).

In contrast, 67 percent of surveyed crop producers reported a significant decline in their harvests. This rate reaches 87 percent in Logone Occidental, 83 percent in Moyen-Kebbi Est (as a result of floods and fertilizer shortages), 82 percent in Lac and 52 percent in Wadi Fira.

Seventy-four percent of crop producers reported production difficulties related to damage during the crop growth phase (57 percent), plant diseases (39 percent) and access to pesticides (34 percent) (Figure 4).

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



Source of data: FAO. 2023. Chad: DIEM-Monitoring assessments results (December 2021, August 2022 and January 2023). In: *FAO Data in Emergencies Hub.* Rome. Cited 15 February 2023. data-in-emergencies.fao.org

Crop damage (other than disease, i.e. pests, birds, damaged fields) was reported in all departments. The departments of Dodjé, Mégri, Biltine and Kobé were the most affected, with rates of 77, 85, 90 and 90 percent respectively. In the departments of Biltine and Dodjé, the destruction of fields by animals has led to inter-community violence.

Access to fertilizer is more problematic in the departments of the southern provinces including Lac Wey, Ngourkosso, Kabbia and Mayo-Boneye, with more than 40 percent of households facing this difficulty. This situation is a direct consequence of the ongoing war in Ukraine, as most of the fertilizer is imported from Ukraine and Nigeria. Access to pesticides remains a major concern for households in Kanem (41 percent), Nord Kanem (54 percent), Kabbia (58 percent), Mayo-Boneye (60 percent), Mont Illy (51 percent), Dar Tama (47 percent) and Kobé (56 percent) departments.

Access to land was identified as a major difficulty in all three departments of Kanem province for more than 40 percent of surveyed households.

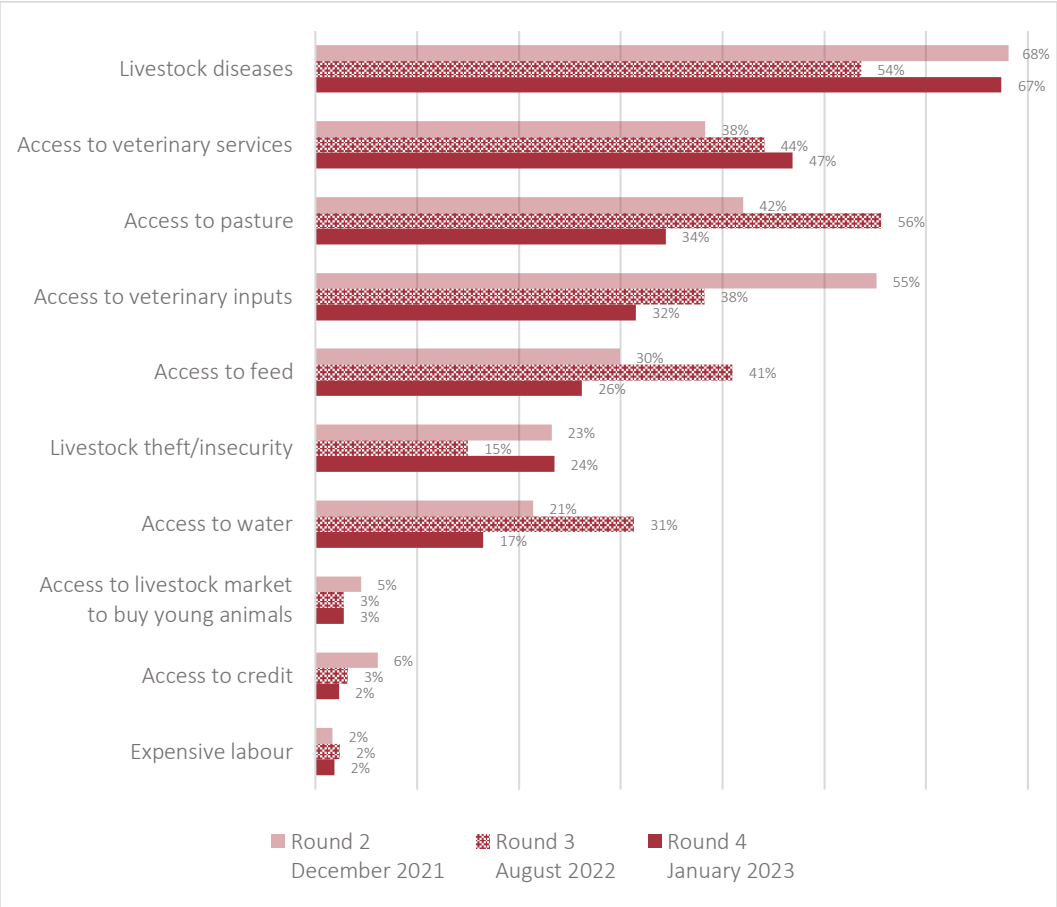
Difficulties in marketing agricultural products was reported by 36 percent of producers, including increased transportation and other marketing costs (85 percent, up from 61 percent in the previous round) as well as lower selling prices (41 percent) and customer demand (39 percent).

Livestock

The main livestock species raised in the surveyed areas were goats (46 percent), cattle (23 percent) and sheep (14 percent).

Of the farmers interviewed, 72 percent reported a decrease in their livestock population and 68 percent reported difficulties in livestock production. The latter were related to the illness or death of their animals (67 percent), as well as access to veterinary services (47 percent) due to the lack of health centres and their remoteness. The lack of supervision and knowledge of livestock keepers remains a problem in Chad. The state, despite its efforts on the ground, has difficulty controlling the health of animals, given the constant movement of livestock farmers. Indeed, access to pasture remains a problem for 34 percent of herders. Some of them, formerly sedentary or semi-nomadic, have become transhumant, resulting in high concentrations of livestock in the same area, whose resources are rapidly exhausted.

Figure 5. Livestock production difficulties (percentage of livestock producers)



Source of data: FAO. 2023. Chad: DIEM-Monitoring assessments results (December 2021, August 2022 and January 2023). In: *FAO Data in Emergencies Hub.* Rome. Cited 15 February 2023. data-in-emergencies.fao.org

Livestock farmers in Wayi, Lac Wey, Ngourkosso and Mamdi departments are very vulnerable to animal deaths due to disease (more than 80 percent of households reported this difficulty). This is due to limited access to veterinary centres, which are too far away, and the availability of veterinary inputs at these centres. In addition, during the post-flood needs assessment in Lac Wey and Ngourkosso departments, sporadic cases of land-based diseases such as anthrax,

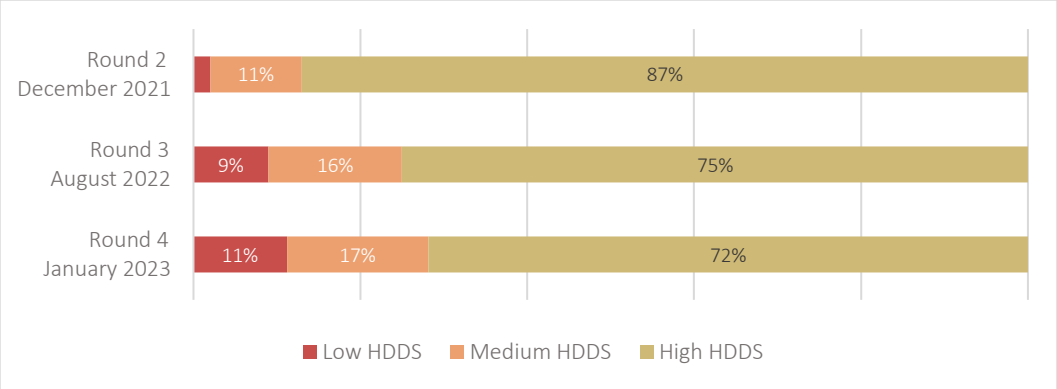
symptomatic anthrax, pasteurellosis and peste des petits ruminants, as well as Newcastle disease (affecting poultry) were reported.

Marketing difficulties affected 22 percent of the farmers surveyed, including low selling prices (69 percent), high marketing or transportation costs (64 percent) and declining demand (43 percent).

Food security

The dietary diversity score is low for 11 percent of households surveyed, medium for 17 percent and high for 72 percent, compared to 9, 16 and 75 percent respectively in the previous round.

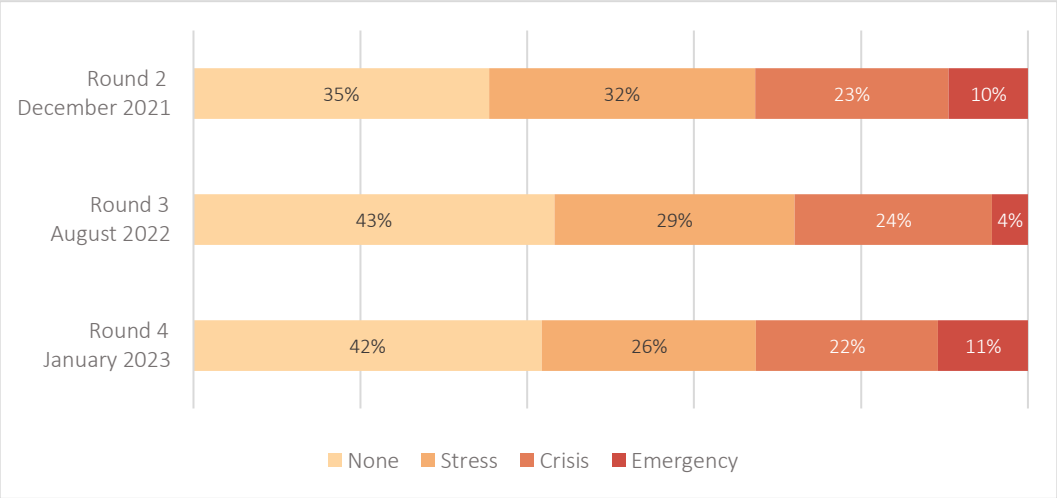
Figure 6. HDDS by main source of income (percentage of households)



Source of data: FAO. 2023. Chad: DIEM-Monitoring assessments results (December 2021, August 2022 and January 2023). In: *FAO Data in Emergencies Hub.* Rome. Cited 15 February 2023. data-in-emergencies.fao.org

Fifty-eight percent of households surveyed used negative coping strategies: 11 percent used emergency strategies (up from 4 percent in the previous round), 22 percent used crisis strategies (up from 24 percent) and 26 percent used stress strategies (up from 29 percent).

Figure 7. Livelihood coping strategies index (percentage of households)



Source of data: FAO. 2023. Chad: DIEM-Monitoring assessments results (December 2021, August 2022 and January 2023). In: *FAO Data in Emergencies Hub.* Rome. Cited 15 February 2023. data-in-emergencies.fao.org

Needs

Almost all households surveyed (99 percent) said they needed assistance, most of which was in the form of food or cash distribution (76 percent), seeds (53 percent), tools (52 percent), fertilizer (42 percent) and pesticides (35 percent).

Most households (87 percent) had not received any assistance in the three months preceding the survey. Only 9 percent had received food aid and 3 percent had received cash transfers.

Recommendations

Short-term recommendations

- Subsidize the prices of basic foodstuffs by the state.
- Provide food assistance to the most vulnerable households (in crisis or emergency situations).
- Assist the provinces of Logone Occidental, Moyen-Kebbi Est and Lac with seeds, tools and pesticides.
- Provide veterinary services and food supplements for livestock in the most vulnerable pastoral areas.
- Revitalize transhumance corridors.
- Build additional pastoral wells.

Medium/long-term recommendations

- Increase national food production.
- Diagnose the markets and set up social protection mechanisms in the identified areas.
- Provide medium- and long-term assistance to populations affected by the latest floods.
- Improve and popularize early warning of droughts.
- Provide support for crop and pastoral resilience: improve seed quality and the availability of short-cycle varieties and provide inputs to develop more intensive crops.

Annexes

Table 1. Main shocks reported by households, by department (in percentages)

	Animal diseases	Floods	Food price increases	Fuel price increases	Diseases or accidents	Violence and insecurity
Kanem						
Kanem	3	1	46	22	23	0
Nord Kanem	15	0	51	20	15	0
Wadi Bissam	1	0	40	24	16	0
Lac						
Fouli	3	11	18	4	13	7
Kaya	1	19	22	8	15	20
Mamdi	0	32	42	23	39	0
Wayi	0	32	47	25	51	0
Logone Occidental						
Dodjé	13	73	35	2	62	3
Lac Wey	12	65	62	4	60	0
Ngourkosso	23	72	48	2	67	0
Moyen-Kebbi Est						
Kabbia	22	60	57	10	30	4
Mayo-Boneye	18	73	61	7	48	5
Mont Illi	18	54	44	6	14	7
Moyen-Chari						
Bahr-Köh	1	19	26	1	49	0
Grande Sido	0	9	25	0	53	0
Lac Iro	1	10	25	0	39	5
Wadi Fira						
Biltine	9	0	45	7	44	0
Dar-Tama	13	3	49	4	45	1
Kobé	3	0	57	4	49	0
Mégri	16	0	38	4	34	0

Source of data: FAO. 2023. Chad: DIEM-Monitoring assessment results (January 2023). In: *FAO Data in Emergencies Hub.* Rome. Cited 15 February 2023. data-in-emergencies.fao.org

Table 2. Difficulties in crop production, by department (percentage of farmers interviewed)

	Lack of irrigation water	Crop damage	Access to fertilizer	Access to pesticides	Access to labour	Access to machinery	Access to plots	Access to seeds	Plant disease	Seed quality
Kanem										
Kanem	14	54	11	41	5	30	60	8	0	20
Nord Kanem	11	33	27	54	7	54	52	8	10	31
Wadi Bissam	1	57	5	33	4	19	40	2	5	11
Lac										
Fouli	1	72	9	1	5	2	10	11	72	48
Kaya	1	69	9	2	1	2	22	10	56	56
Mamdi	1	65	7	5	16	9	18	11	55	28
Wayi	1	64	16	23	17	24	14	17	79	13
Logone Occidental										
Dodjé	2	77	31	43	7	4	11	20	46	37
Lac Wey	12	62	43	37	14	1	37	30	33	17
Ngourkosso	3	46	49	39	16	6	50	46	37	47
Moyen-Kebbi Est										
Kabbia	1	48	40	58	28	45	20	18	41	16
Mayo-Boneye	0	48	48	60	32	31	29	20	33	12
Mont Illi	1	23	23	51	22	45	21	10	55	14
Moyen-Chari										
Bahr-Köh	1	29	6	1	10	4	2	6	45	3
Grande Sido	3	50	1	2	1	0	1	1	53	2
Lac Iro	2	58	2	3	1	1	1	0	34	3
Wadi Fira										
Biltine	11	90	25	29	11	25	6	9	16	3
Dar-Tama	3	67	29	47	1	43	33	3	40	25
Kobé	1	90	22	56		55	40	6	28	39
Mégri	43	85	21	18	11	22	6	7	15	8

Source of data: FAO. 2023. Chad: DIEM-Monitoring assessment results (January 2023). In: *FAO Data in Emergencies Hub.* Rome. Cited 15 February 2023. data-in-emergencies.fao.org

Table 3. Difficulties in livestock production (percentage of farmers interviewed)

	Access to pasture	Access to water	Access to veterinary inputs	Access to veterinary services	Access to feed	Livestock disease/death	Access to labour	Access to credit	Access to livestock markets	Livestock theft
Kanem										
Kanem	38	53	14	50	21	75	13	3	4	11
Nord Kanem	46	67	16	42	16	75	3	1	3	9
Wadi Bissam	39	58	15	30	31	65	13	4	-	11
Lac										
Fouli	65	2	48	37	63	40	2	17	4	25
Kaya	66	-	61	22	66	24	-	17	2	24
Mamdi	16	4	26	70	48	80	-	-	-	2
Wayi	43	1	50	67	45	97	-	-	1	2
Logone Occidental										
Dodjé	19	7	45	50	20	86	-	3	5	25
Lac Wey	17	9	33	66	9	93	1	5	2	36
Ngourkosso	18	5	45	63	14	94	-	15	5	27
Moyen-Kebbi Est										
Kabbia	52	12	40	61	1	68	2	2	10	36
Mayo-Boneye	55	6	39	58	3	79		1	2	38
Mont Illi	50	7	24	49	12	64	1	1	3	41
Moyen-Chari										
Bahr-Köh	17	2	25	22	73	28	3	-	-	14
Grande Sido	15	-	37	21	46	41	1	-	-	12
Lac Iro	5	-	35	18	63	25	1	-	1	14
Wadi Fira										
Biltine	15	40	33	37	44	46	-	1	1	6
Dar-Tama	27	9	13	28	28	88	2	1	1	32
Kobé	48	16	16	44	30	63	-	3	-	28
Mégri	21	39	42	49	27	45	2	1	2	5

Source of data: FAO. 2023. Chad: DIEM-Monitoring assessment results (January 2023). In: *FAO Data in Emergencies Hub.* Rome. Cited 15 February 2023. data-in-emergencies.fao.org

Table 4. Main needs expressed (percentage of households interviewed)

	Access to irrigation water	Access to land	Access to machinery	Animal feed	Cash or food aid	Fertilizer	Loans	Marketing aid	Pesticides	Animal restocking	Seed	Tools	Veterinary inputs	Veterinary services
Kanem														
Kanem	27	11	2	22	94	16	55	67	13	26	24	28	16	20
Nord Kanem	33	11	10	44	89	25	54	42	23	27	29	33	38	46
Wadi Bissam	15	2	3	17	98	2	33	85	2	23	37	46	13	21
Lac														
Fouli	25	11	8	7	87	36	48	26	13	35	62	51	23	17
Kaya	20	10	4	2	86	27	46	28	23	25	57	79	16	9
Mamdi	1	2	32	8	68	23	14	26	42	1	58	62	25	16
Wayi	1	3	44	11	76	32	18	47	37	3	51	58	38	29
Logone Occidental														
Dodjé	9	10	21	20	65	71	19	17	72	14	94	73	22	31
Lac Wey	6	10	20	12	79	58	23	9	39	31	86	67	20	28
Ngourkosso	6	17	16	15	84	60	16	15	50	24	90	64	16	29
Moyen-Kebbi Est														
Kabbia	6	1	30	4	86	53	33	24	51	32	38	59	25	34
Mayo-Boneye	8	1	28	1	94	58	41	24	54	32	21	56	15	20
Mont Illi	6	1	21	5	86	46	28	22	37	21	49	51	27	31
Moyen-Chari														
Bahr-Köh	0	2	3	5	40	36	2	40	14	15	46	23	6	5
Grande Sido	0	1	3	1	35	35	0	20	11	40	45	42	5	1
Lac Iro	0	0	4	2	52	36	1	20	12	20	47	39	2	1
Wadi Fira														
Biltine	20	7	41	22	56	49	51	9	51	2	68	56	22	34
Dar-Tama	36	11	28	2	87	44	11	18	38	2	61	57	9	5
Kobé	38	8	29	2	97	42	34	27	44	1	57	71	8	7
Mégri	22	10	17	31	57	32	33	15	36	2	56	37	37	35

Source of data: FAO. 2023. Chad: DIEM-Monitoring assessment results (January 2023). In: *FAO Data in Emergencies Hub.* Rome. Cited 15 February 2023. data-in-emergencies.fao.org

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