

Food and Agriculture Organization of the United Nations



MYANMAR

Post-earthquake rapid needs assessment

DIEM-Impact report April 2025



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Food and Agriculture Organization of the United Nations and World Food Programme Rome, 2025

REQUIRED CITATION

FAO & WFP 2025. *Myanmar: Post-earthquake rapid needs assessment – DIEM-Impact report, April 2025*. Rome. https://doi.org/10.4060/cd5778en

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Abbreviations

DIEM	Data in Emergencies
FAO	Food and Agriculture Organization of the United Nations
QCA	qualitative comparative analysis
WFP	World Food Programme

Highlights

- > The Food and Agriculture Organization of the United Nations (FAO) and the World Food Programme (WFP) conducted a joint rapid needs assessment in 23 townships across five regions, building on initial impact analyses released immediately after the earthquake (FAO, 2025; WFP, 2025).
- > The March 2025 earthquake affected over 9 million people, disrupting agricultural activities, food access and income sources. This impact was particularly evident in Magway, Mandalay and Sagaing, where food insecurity increased, heightening reliance on humanitarian assistance.
- Market access and functionality have been severely affected, especially in Sagaing and Mandalay, due to the destruction of key infrastructure such as bridges and broader supply chain disruptions. Although basic supplies remain available, soaring transport costs and partial market closures have driven up the prices of food and non-food items, including construction material, and created local shortages, particularly in the immediate aftermath of the earthquake. Meanwhile, farmers have been compelled to sell harvested products at lower prices to local brokers.
- Community perceptions of food insecurity and food needs were highest in the most earthquake affected townships in Mandalay, Sagaing, and in Magway, despite Magway being less impacted by the earthquake itself.
- Casual labourers, small businesses and migrant workers are among the hardest hit.
 More than 60 percent of communities in Mandalay, Nay Pyi Taw and southern Shan expect a recovery time of over six months, reflecting widespread economic stress.
- Farmers face acute challenges accessing critical inputs such as seeds, fertilizer and credit for the upcoming monsoon season. About half of the surveyed communities report non-functional input markets, particularly in Sagaing and parts of Magway and Nay Pyi Taw.
- Crop losses between 20 and 60 percent were reported in key areas such as Sagaing and Amarapura (Mandalay), caused by field cracking, aquifer shifts resulting in drought and localized flooding. Irrigation infrastructure –particularly in the Central Dry Zone – has also been partially damaged, complicating the upcoming farming season.
- > Top priorities across various locations include cash assistance, food, seeds, fertilizer, livestock feed, veterinary inputs and shelter.

Introduction

Following the 28 March 2025 earthquake in Myanmar – which affected over 9 million people across 58 townships in multiple regions (UNICEF, 2025) – growing concerns have emerged regarding the availability of and access to food among the affected population. The earthquake also raised alarm over its impact on the agriculture sector and the capacity of crop, livestock and fish producers to sustain their productive activities during the upcoming monsoon season.

In response to the earthquake – and building on the findings of the Data in Emergencies (DIEM)-Impact assessment by the Food and Agriculture Organization of the United Nations (FAO, 2025) and the Food Security Initial Assessment by the World Food Programme (WFP, 2025) – FAO and WFP jointly carried out a rapid needs assessment. The assessment covered 23 of the most affected townships across Mandalay, Sagaing, Magway, Nay Pyi Taw, and southern Shan. Although some areas in Magway were outside the zone of highest earthquake intensity (see Figure 1), they were included due to the risk of damage to major irrigation infrastructure.

The methodological references for the assessment include the FAO Livelihoods Assessment Toolkit (FAO & ILO, 2009) and the WFP Emergency Food Security Assessment (WFP, 2009).

Coverage of the selected townships by state/region is presented in Appendix 1 and in Figure 1. The assessment was conducted from 1 to 10 April 2025.



Figure 1. Coverage area of the FAO and WFP rapid needs assessment

Note: Refer to the disclaimer on page ii for the names and boundaries used in this map.

Source: Myanmar Information Management Unit. 2025. Data & Databases. [Accessed on 29 April 2025]. https://themimu.info/5w-maps-and-reports

Findings

Markets

Markets – including their supply, accessibility and functionality – are among the most important factors affecting economic activity and food security. Overall, most markets remained accessible and functional following the earthquake.

However, approximately 70 percent of communities reported full market access, representing a decline from pre-earthquake conditions. This decline was particularly marked in Sagaing and Mandalay, where infrastructure damage severely disrupted transportation routes, leading increased prices and accessibility challenges in several regions.

By contrast, Magway reported comparatively better market access (see Figure 2). In Sagaing, Shwebo township experienced moderate access, while Tatkone and Pyinmana townships in Nay Pyi Taw also reported moderate market accessibility.

The specific difficulties in Sagaing and Mandalay can be traced to damage to the two main bridges connecting these regions.¹ At the time of this assessment, passage was erratic and restricted to vehicles weighing less than 15 tonnes, with traffic rerouted through the Yadanabon Bridge. Trucks were required to take a detour, causing significant delays.

As a result of these transportation disruptions, market prices in Sagaing have surged, and local communities are struggling to access sufficient goods at usual prices. Magway reported comparatively better market access than other regions. Farmers in Magway and Sagaing have been selling harvested paddy, sesame, pepper and legumes at lower prices to local brokers and crop exchange markets, as both areas primarily depend on traders from Mandalay for crop products. The recent earthquake has significantly impacted major urban traders in Mandalay, further disrupting the market.

Although markets remain accessible, their functionality reflects the strain faced by affected populations in the earthquake's aftermath. Around 40 percent of communities reported that markets were functional, with Magway performing better, while Sagaing fared worst (see Figure 3).

¹ The Sagaing Old Bridge, which broke into six fragments, and the Yadanarpon New Bridge, whose supporting structural base beams and columns collapsed due to the earthquake.





Source: FAO & WFP. 2025. DIEM-Impact. In: DIEM Hub. Rome. [Cited 29 April 2025]. https://data-in-emergencies.fao.org/pages/impact



Figure 3. Market functionality among consulted communities (in percentage)

Source: FAO & WFP. 2025. DIEM-Impact. In: DIEM Hub. Rome. [Cited 29 April 2025]. https://data-in-emergencies.fao.org/pages/impact

As most food is purchased from markets, the market functionality index highlights the challenges in accessing food, despite the continued availability of supplies. This underscores disruptions in supply chains – particularly in the townships of Sagaing, Taktone, Pyinmana (Nay Pyi Taw), Kyaukse and Amarapura (Mandalay).

However, market analysis should extend beyond physical access and basic functionality. The following sections examine other key characteristics, including price trends, agricultural markets and labour markets.

Prices

Following the earthquake, an initial spike in vegetable prices was observed in Mandalay; however, within ten days, the prices of most food items had stabilized. In southern Shan, commodity prices remained stable, and the flow of goods continued without major disruption following the earthquake (see Table 1).

In Sagaing, traders have faced challenges sourcing rice from Kyaukse due to transportation difficulties and are currently relying solely on supplies from Shwebo township. Some traders are operating with limited stock, and if transport conditions do not improve soon, rice shortages may occur. Since the earthquake, traders have not placed new orders and are selling only from their existing inventory.

Demand for food and non-food items has recently decreased, as many affected households are temporarily relying on donations and humanitarian assistance to meet their basic needs.

Food items	Mandalay		Nay P	yi Taw	Man	dalay	Southern Shan		
(unit)	Before	After	Before	After	Before	After	Before	After	
Rice	2 853	2 953	2 115	2 214	2 567	3 156	4 323	4 323	
(per kg)	+3.	.5%	+4.	7%	+23	.0%	0	%	
Palm oil	7 723	7 938	7 497	7 918	6 800	8 425	7 956	7 956	
(per L)	+2.8%		+5.	6%	+23	.9%	0%		
Mixed oil	9 010	9 452	10 098	10 360	7 482	8 723	8 568	8 568	
(per L)	+4.9%		+2.6%		+16	.6%	0%		
Groundnut oil	11 258	12 457	11 769	12 021	8 796	10 974	11 628	11 628	
(per L)	+10	.6%	+2.1%		+24	.8%	0%		
Chickpeas	4 415	4 868	6 469	6 592	4 165	4 801	6 333	6 333	
(per kg)	+10	.3%	+1.	9%	+15	.3%	0%		
Salt	654	769	1 319	1 319	981	1 029	759	759	
(per kg)	+17	.6%	0	%	+4.	.9%	0	%	

Table 1. Food price comparison before versus after the earthquake (prices in MMK; percentage of change)

Agricultural markets

In most rural locations (60 percent), farmers can sell their produce through traders and across different townships as normal, although at lower prices (likely reflecting the increased cost of logistics). However, in 30 percent of villages, trade occurred only within the area (i.e. they did not access a larger regional market), and output markets were not accessible at all in 10 percent of villages. These are all in Sagaing township, and the cases coincide with locations where markets are inaccessible or difficult to access.

The market for agricultural inputs appears even more concerning. In about half the cases, farmers will generally be able to access inputs for the upcoming monsoon season. By contrast, all rural villages in the townships of Chauk, Magway, Natmauk, Yenangyaung (Magway), Pyigyitagon (Mandalay) and Shwebo (Sagaing) reported that farmers are unable to buy inputs. In addition, more than half of the locations reported these access challenges in Tatkone (Nay Pyi Taw), Taungdwingyi and Sagaing (Sagaing). These findings are consistent with a parallel survey of agricultural input dealers launched by FAO in the area, at the same time of the present assessment.

The agricultural input market in Myanmar faces severe disruptions due to conflict, inflation and logistical challenges. The earthquake has further compounded pre-existing market weaknesses, particularly in Sagaing. While Magway maintained relatively normal supply flows, other areas, particularly Sagaing, reported severe shortages. Price increases appear linked to conflict intensity, with earthquake-related disruptions further compounding supply chain challenges.

Dealers anticipate difficulties in replenishing stock for the upcoming monsoon season due to logistical challenges such as road blockages and fuel shortages. Supplier delays were also widely reported across all surveyed regions.

Although financial institutions are functioning in the affected area, one-fourth of communities in rural areas reported that agricultural credit could only be accessed through non-governmental organizations or subsidized loans. In 17 percent of cases, participants reported no challenges in accessing credit. For the majority (53 percent), this involved higher interest rates. For the remaining 7 percent, damage to assets and records made it impossible to meet collateral requirements in Patheingyi, Amarapura (Mandalay) and Sagaing township.

Labour markets

Following the earthquake, labour costs were reported to be increasing, but still at similar frequencies of "no effect", indicating a mixed impact. However, rural residents who typically work in Mandalay during the off-farming season are now returning home and facing unemployment and loss of income. Migrant workers are unemployed, while urban job locations in Mandalay and Sagaing are affected by the earthquake. Labour costs increased most in Magway (55 percent) and southern Shan (40 percent).

Livelihoods and sources of food

Overall, more than a third (38 percent) of the communities consulted relied on aid or support from friends and relatives for food. This was particularly common in the townships of Chanmyathazi, Yamethin, Amarapura (Mandalay), Yenangyaung, Taungdwingyi, Myittha, Chauk (Magway), Sagaing (Sagaing), Nyaung Shwe (Shan), Pyinmana and Lewe (Nay Pyi Taw).

Communities rely on external sources for food depending on whether food is produced in the area and whether the main livelihoods activities generate income. Relying on aid is the dominant source of food when farming is not common in the village and revenues from other activities are interrupted. This raises concerns about two key aspects: agricultural livelihoods and income flows. Except for Kyaukse, Myittha, Sintgaing and Tatkone, agriculture and livestock are the main activities in the states and regions surveyed.

Most of the agricultural income was not in season (as farming is typically not practised during the dry season), except for Amarapura (Mandalay), where it was significantly interrupted. Table 2 illustrates which income sources were discontinued by township. However, many livelihoods activities are seasonal in nature, so the fact that income was not interrupted does not mean it was unaffected. Typically, some activities yield income at a different time of the year, and future incomes from these activities (marked as 'Not in season') could still be reduced or interrupted as a result of the earthquake. A schema of the crop calendar is provided in Annex.

The differences in the seasonality of agricultural incomes result from the varying agroclimatic conditions in the affected areas, most notably, in the Central Dry Zone, an area shared by the states and regions of Magway, Sagaing and Mandalay. Pulses and groundnut are regarded by households in the Central Dry Zone as cash crops, rather than sources of household food. The main sources of income are the sale of pulses and groundnut, labour, cereal grains and profits from small businesses (LIFT, 2014). The Central Dry Zone includes an estimated 35 percent of Myanmar's grain cropping area (Cornish *et al.*, 2018).

Major crop types include pulses, oilseed legumes, sesame and sunflower. Rice is grown as a rainfed monsoon crop and under irrigation in the Central Dry Zone, with an estimated planted area of 1.1 million ha. Forty-six percent of Myanmar's pulses and oilseed legumes and 74 percent of sesame and sunflower are grown in the Central Dry Zone (Cornish *et al.*, 2018).²About 75 percent of cropping in the Central Dry Zone is upland during the monsoon (planted from March/April to August) and post-monsoon seasons (August to November, and August to January for pigeon pea). The long-duration pigeon pea is often intercropped with sesame, groundnut, green gram or cowpea, grown in succession in monsoon and post monsoon seasons (Cornish *et al.*, 2018). Intercropping has local variations according to the area, such as those described by Yee and Nawata (2014).

² A considerable share, also considering that Myanmar is the world's third largest pulse exporter (Ministry of Commerce & International Trade Centre, 2015).

Farming systems differ depending on whether cultivation is upland or lowland and follow different cropping calendars.³

Aquaculture is not a major activity in the earthquake-affected area outside Shan State; however, this activity was significantly impacted in Nyaung Shwe township, where all income from aquaculture was interrupted.

As for the viability of livelihoods (beyond these income-generating activities): only 18 percent of communities reported that livelihoods had fully recovered, and 13 percent of communities reported that they expected recovery within three months. This indicates the level of damage and economic stress the households are experiencing or will face in recovering from the disaster. In Sagaing (where humanitarian assistance was more common) and Magway (affected by a lesser magnitude of the earthquake), communities commonly reported a recovery. By contrast, more than six out of ten communities in Mandalay, Nay Pyi Taw and southern Shan estimated a recovery time of more than six months.

Income from the public and private sectors was not affected. Income from casual labour and small businesses, however, was more likely to be interrupted. In particular, casual labour is traditionally an important income source in the following townships, where it is currently no longer viable: Amarapura, Patheingyi, Chanayetharzan (Mandalay), Lewe, Pyinmana, Tatkone, Zeyar Thiri (Nay Pyi Taw), Sagaing, Shwebo (Sagaing) and Nyaung Shwe (South Shan). Small business revenues were interrupted in Amarapura, Chanayetharzan, Pyinmana, Sagaing, Shwebo and Nyaung Shwe.

Casual labour and small businesses were the activities most at risk of being discontinued or reduced, as reported by roughly half of the communities.

³ As the area receives substantially less rainfall, an average of around 700 mm and ranges between 500 and 1 000 mm annually, compared to 2 000–5 000 mm for the remainder of the country (Tun *et al.*, 2015; IWMI, 2015), farmers face uncertainties in the weather and managing soils that are mostly coarse-textured with low organic matter, low water holding capacity and little nutrient buffering (Birchall *et al.*, 2017; Guppy *et al.*, 2017).

	Township	Agriculture		Fisheries	Live	Livestock		Small/medium enterprises		Casual labour		Public employment	
Region		Not in season	Interrupted	Interrupted	Not in season	Interrupted	Not in season	Interrupted	Not in season	Interrupted	Not in season	Interrupted	
	Chauk	100	0	0	100	0	0	0	100	0	0	0	
	Magway	0	0	0	0	0	0	0	0	0	0	0	
Magway	Myothit	100	0	0	50	0	0	0	100	0	100	0	
IVIAgway	Natmauk	0	0	0	0	0	0	0	0	0	0	0	
	Taungdwingyi	50	0	0	50	0	0	0	50	0	0	0	
	Yenangyaung	50	0	0	50	0	0	0	50	0	0	0	
	Amarapura	0	30	0	0	0	0	50	0	100	0	0	
	Chanayetharzan*						0	100	0	100	0	0	
	Chanmyathazi*						0	33	0	33	0	33	
	Kyaukse	20	40	0	0	0	60	0	40	0	0	0	
Mandalay	Mahaaungmyay*						0	40	0	40	0	0	
wandalay	Myittha	100	0	0	0	0	100	0	20	0	0	0	
	Patheingyi	0	25	0	0	0	0	0	0	50	0	0	
	Pyigyitagon*						0	25	0	25	0	25	
	Sintgaing	80	0	0	0	0	100	0	0	0	0	0	
	Yamethin	100	0	0	0	0	0	0	0	33	0	0	
	Lewe	83	0	0	0	33	0	0	0	83	0	0	
New Dui Terri	Pyinmana	50	0	0	0	0	0	75	0	100	0	0	
Nay Pyl Taw	Tatkone	80	0	0	0	20	0	20	0	100	0	0	
	Zeyar Thiri	75	25	0	0	0	0	25	0	50	0	0	
Co on in a	Sagaing	45	0	0	0	0	9	64	0	73	0	18	
sagaing	Shwebo	100	25	0	50	0	0	75	0	100	0	0	
Shan (southern)	Nyaung Shwe	80	0	100	40	0	0	80	0	100	0	0	

Table 2. Share of villages reporting off-season or disrupted incomes (in percentages)

Note: *This urban area does not engage in agricultural practices, fisheries or livestock production. As a result, all residents depend on off-farm employment for their income and interrupted due to earthquake.

Food security

Participants were asked a perception-based question to indicate whether their communities were "severely food insecure", "moderately food insecure", "marginally food secure" or "food secure". An indicative list of criteria was used by enumerators to assist participants in evaluating the food security outcomes of their community. The question was explained as referring to at least 20 percent of the community members falling into the category, with the characteristics of each category further explained. The section below discusses the findings by area.

Across the states and regions, there was some variance in the perceptions of food insecurity in the assessed communities and in the impact of the earthquake on food security and related needs.

In Mandalay, around 40 percent of communities reported severe or moderate food insecurity within their communities. Food assistance was ranked as the top priority need by the communities, followed by cash assistance. In Sagaing, 30 percent of communities reported severe or moderate food insecurity within their communities. Cash assistance and seeds and agricultural inputs were mentioned as the top two priority needs, followed by food assistance.

Two-thirds of the communities in Magway reported severe or moderate food insecurity. The higher proportion compared to other areas may in part be due to the communities capturing more of the underlying food insecurity and needs in rural areas of Magway, rather than the acute impact of the earthquake. Cash assistance and seeds and agricultural inputs were mentioned as the top two priority needs, followed by food assistance.

In Nay Pyi Taw, just over one-third of communities reported severe or moderate food insecurity in their communities. Food assistance was mentioned as the priority need, followed by cash assistance.

In southern Shan, the communities reported minimal food insecurity in their communities. This may have been mitigated by food assistance that had already been provided following the earthquake. Cash assistance was reported as the priority need, followed by seeds and agricultural inputs.

A qualitative comparative analysis (QCA) was conducted to model food security outcomes, specifically when communities reported that at least 20 percent of their population met the conditions for severe food insecurity. QCA is a method used to identify patterns and combinations of conditions that lead to specific outcomes by systematically comparing multiple cases. It uses Boolean logic to determine which sets of factors are necessary or sufficient for an outcome, making it useful for complex, real-world situations with limited quantitative data. The minimized solution implies two main pathways (configurations) leading to food insecurity in communities, both conditional on farmers' output markets being affected, a necessary condition for severe food insecurity.⁴ The first pathway represents a set of conditions: the community is relying on food aid, is experiencing interruption of its main income sources, and faces a sharp (i.e. 20 percent or more) price increase for rice. This pathway captures a dependency and market-shock dynamic, where the combination of aid dependence, income loss and price hikes critically impair access to food. The second pathway arises when communities produce their own food but are unable to sell surplus produce and suffer from interrupted income. This reflects a production-dependent vulnerability, where even those who grow their own food fall into food insecurity when income is lost and market channels are cut off.

Impact on agriculture

Large-scale irrigation infrastructure was unaffected, with the exception of water tanks in Chauk, Magway township (Magway, where this is particularly concerning, as the area falls within the Central Dry Zone), and Lewe (Nay Pyi Taw).

The retention dam in Taungdwingyi (Magway) and other retention works in low-lying areas are in need of repair. By contrast, the damage to the river retention work in Shwebo (Sagaing) flooded adjacent fields (see Picture 1).

Low (<20 percent) to moderate (20–50 percent) damage to stored inputs was also reported in Amarapura (Mandalay), Sagaing, Shwebo (Sagaing), Nyaung Shwe (southern Shan).



Picture 1. Collapsed retention work in Shwebo, Kanthar Kone village (Sagaing)

⁴ In Boolean algebra: $FO \times [S(3) \times (I * R) + S(1) * I]$ where:

- FO: Selling products for farmers is affected
- *S*(1): Source of food is own production
- S(3): Source of food is reliance on aid
- I: Main income is interrupted
- *R*: Price of rice increased by 20 percent or more

Key crops planted in the Sagaing region at the time of the earthquake include sesame and paddy, which were observed to be in the seedling and early vegetative stages, alongside groundnut, green beans, pigeon peas, rice and vegetables. Similarly, the Mandalay region cultivates sesame, vegetables and rice. The Magway region's primary crops (groundnut, sesame and pulses) were harvested in the January–February period, coinciding with the earthquake that disrupted sales for farmers. Additionally, some paddy in the seedling stage was affected by the seismic activity. In Nay Pyi Taw, the primary crop is paddy, with some areas also cultivating watermelon, maize, tomatoes, various vegetables and legumes, though specific growth stages as of March 2025 are not detailed. Southern Shan cultivation includes tomatoes and seasonal vegetable crops, with no specific growth stages identified in the data.

All villages in Sagaing township reported damage to standing crops, mostly major or large (between 20 and 60 percent of production). Other damage was reported from the Amarapura, Patheingyi (Mandalay), Lewe (Nay Pyi Taw) and Shwebo (Sagaing).

Although vegetable production is not the main activity, many farmers are engaged in horticulture for their own consumption and income generation. These crops reportedly suffered the most from the earthquake, and it is estimated that about 20 percent of vegetable production was lost or damaged in the field.

The main challenge was the movement of the aquifer, provoking a sudden drought and wilting, as in Patheingyi (Mandalay) (see Picture 2). On other cases, such as Amarapura (Mandalay), the earthquake provoked localised floods (see Picture 3). In addition to the loss of income, major damage include cropland: in Amarapura (Mandalay), Lewe (Nay Pyi Taw), Shwebo and Sagaing (Sagaing), a sizable share of fields were destroyed by cracks, debris or landslides, and cannot be planted for the next monsoon season (see Picture 4 and Picture 5).

Seeds, cash and fertilizer are the most urgent needs for the crop subsector, especially due to the market dysfunctionality discussed above (see Figure 4). The parallel survey of agricultural input dealers in the affected area also confirms the urgent need for inputs, given the next monsoon season.



Picture 2. Vegetable field in Patheingyi Tsp, Kangyi VT, Kangyi village (Mandalay)



Picture 3. Flooded field in Amarapura Tsp, Yintaw VT, Yintaw village (Mandalay)



Picture 4. Sesame losses due to irrigation failure and ground water depletion, Tsp, Pabae Tan ward (Sagaing)



Picture 5. Cracked field in Sagaing Tsp, Yae Khar VT, Yae Khar village (Sagaing)



Figure 4. Reported priorities in the crop subsector (in percentage)

Source: FAO & WFP. 2025. DIEM-Impact. In: DIEM Hub. Rome. [Cited 29 April 2025]. https://data-in-emergencies.fao.org/pages/impact

In addition, a QCA sheds some light on the conditions under which inputs are reported as a priority.

Inputs are the top priority and become a critical enabler for recovery where agriculture is central, and when the possibility to farm during the next dry season (October 2025– April 2026) is uncertain due to damage to irrigation infrastructure, or due to physical access and economic integration.⁵ It is worth noting the more complex set of conditions under which inputs are reported as a first or second priority.

The analysis identified four alternative pathways. In the first (access to the motorway is more than 30 minutes and there is no loss of inputs), it is suggested that isolation alone leads to a demand for inputs. The second pathway (agriculture is a main livelihood activity in the community, and markets are accessible) highlights that in areas with agricultural concentration, market access becomes a decisive enabler, and implies that economic integration is critical where agriculture dominates livelihoods. The impact of the earthquake in this second pathway lies in accessing markets. The third pathway indicates that the loss of inputs alone, is a necessary condition for stating agricultural priorities. The fourth pathway (agriculture is a major livelihood, farmers can buy inputs, but they have no market access or are more isolated) emphasizes the interplay of economic capacity, sectoral relevance, and market access.

Inputs were reportedly in high need in the townships of Magway, Chauk, Natmauk, and Taungdwingyi, Yenangyaung, all located in Magway.

The affected livestock consisted of predominantly cattle, buffaloes and swine. In comparison, small ruminants were much less affected. In most areas, livestock mortality was limited, but in Yenangyaung (Magway), 15 percent of the cattle or buffaloes died as a result of the earthquake, with losses in both cattle and small ruminants also reported in Pyigyidagun (Mandalay). Mortality of nearly 30 percent of the swine population was reported in Talote Kone village, Taungdwingyi (Magway). In the surveyed areas, animal shelter collapses were reported widely. More than half of the damaged structures recorded were in the township of Nyaung Shwe (southern Shan), which was less exposed to the earthquake, but hosts an important livestock population. Other affected areas tended to be those more exposed to the earthquake's magnitude, such as Sagaing (see Picture 6).

- *II*: Damages to irrigation infrastructure
- *MW*: Access to motorway
- A: More than 50 percent of the population is involved in agriculture
- *M*: Farmers are able to buy inputs next season

Inputs were not a top priority if either market access or access to roads was good, or when agriculture was not the dominant livelihood:

(MW / MA) + a

⁵ In Booleyan algebra:

II * A + MW * M

where:

where MA denotes roads within a 30-minute walk from the village.



Picture 6. Collapsed animal shelter in Sagaing Tsp, Kyauk Tar VT, Kyauk Tar village (Sagaing)

The most concerning finding for the livestock subsector is that veterinary services are not available or operate with limited functionality, particularly in Pyigyidagun (Mandalay), as well as in Nyaung Shwe and Lewe (Nay Pyi Taw).

The most urgent needs for livestock are cash, feed and veterinary inputs (see Figure 5). The demand for veterinary inputs is high in the townships of Chauk, Lewe and Taungdwingyi. In Magway township and across Mandalay, needs for animal feed appeared more urgent (see Figure 6).

There was damage and loss to the fisheries subsector, mostly in southern Shan State. All communities in Nyaung Shwe township, in particular, reported that more than half of the fishponds were damaged, estimated at more than 250 in total, resulting in more than half of the fishers losing their fish stock. In addition, more than half of the boats and other fishing equipment were reportedly damaged. The priorities reported by the affected communities were cash assistance, feed and gear or nets (see Figure 7).



Figure 5. Reported priorities in the livestock subsector (in percentage)



Figure 6. Reported priorities by township (index value)

Source: FAO & WFP. 2025. DIEM-Impact. In: DIEM Hub. Rome. [Cited 29 April 2025]. https://data-in-emergencies.fao.org/pages/impact



Figure 7. Reported priorities in the fisheries subsector (in percentage)

Needs

At both the community and household levels, the assistance related to the earthquake was reported to be moderate to low. It could be due to access challenges or hard-to-reach locations (see Figure 8).

Communities were asked to prioritize profiles for humanitarian assistance. In general, poor households, subsistence farmers and households led by women or with elderly members were frequently reported as priority profiles. Poor households were mentioned as top priority in 27 percent of communities, subsistence farmers in 18 percent, housing characteristics (such as semi-pucca) in 17 percent, and women-led households and households with elderly members in 16 percent each. Looking at the socioeconomic profile of the affected area, these characteristics often co-occur in the same households, suggesting that assistance should focus more generally on the poorest segment of the population. Other associated characteristics include single-member households; households where the head is a minor; households with children under 5 years of age; pregnant or lactating women; households whose head has no education; and those relying on daily casual labour.

Anxiety about safety at the current shelters is widespread: not only was this the most common concern expressed by women and children, but the absence of safe buildings and an early warning system was also identified as a key factor of vulnerability to earthquakes.



Figure 8. Earthquake assistance received at household and community levels (in percentage)



Figure 9. Priority needs expressed by communities (in percentage)

Source: FAO & WFP. 2025. DIEM-Impact. In: DIEM Hub. Rome. [Cited 29 April 2025]. https://data-in-emergencies.fao.org/pages/impact

The top three overall priority needs reported were cash assistance, food assistance and shelter (see Figure 9).

Perspectives regarding the near future are poor, particularly in relation to shelter. Access to cash and price hikes are expected to further disrupt already affected lives. The most frequently reported issue (mentioned by more than half of the communities) is uncertainty and loss of hope. It should be noted that in many areas affected by the earthquake, the ongoing conflict has posed and continues to pose a threat to lives and livelihoods. The March earthquake likely compounded this trend.

Conclusions

The 28 March 2025 earthquake in Myanmar significantly exacerbated pre-existing vulnerabilities across a wide area already affected by conflict, economic instability and weakened infrastructure. While the earthquake's direct impacts on physical infrastructure – such as irrigation systems and agricultural land – are visible, the broader consequences are deeply intertwined with disrupted livelihoods, strained markets and food insecurity.

Most affected communities rely on agriculture and casual labour for income and food, but both activities have been disrupted. Although public employment remained largely unaffected, income from agriculture, small businesses and informal work have been widely interrupted. Agricultural production during the upcoming monsoon season is at risk due to input market dysfunctionality, loss of productive assets, damaged infrastructure and decreased access to credit. Meanwhile, small- and medium-sized enterprises and casual labourers face severe constraints, further deepening the vulnerability of already at-risk households.

Access to markets, while physically possible in most areas, is often undermined by limited functionality, high prices and disrupted supply chains. This is particularly alarming given the strong reliance on markets for food access. Furthermore, hotspots of food insecurity – with high community perceptions of severe and moderate food insecurity –were reported in Magway, Mandalay and Sagaing, indicating a need to further assess and address urgent food needs in these areas.

The pressing needs are inputs for crop and livestock production, cash and food assistance, and support for shelter and essential services. Targeting must be inclusive of the most vulnerable profiles – female-headed households, those with elderly or disabled members, subsistence farmers, casual labourers and other socially or economically marginalized groups.

In addition to emergency assistance, early recovery and rehabilitation efforts must address systemic challenges in the food and agriculture sectors. This includes restoring market functionality, ensuring access to affordable food, inputs and services, and rebuilding confidence among affected populations. Without coordinated and timely interventions, there is a high risk of prolonged food insecurity, deepening poverty and disrupted agricultural cycles as the monsoon season approaches.

Ultimately, a multisectoral, conflict-sensitive and community-driven approach is urgently needed to support the recovery and resilience of affected populations – both in the immediate aftermath and in the critical months ahead.

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Appendices

Annendix 1	Townshin	coverage	hy state	region
Appendix 1.	TOwnship	LUVELAGE	by state/	region

State/region	Township
	Chauk
	Magway
Manual	Myothit
wagway	Natmauk
	Taungdwingyi
	Yenangyaung
	Amarapura
	Chanayetharzan
	Chanmyathazi
	Kyaukse
Mandalau	Mahaaungmyay
wandalay	Myittha
	Patheingyi
	Pyigyitagon
	Sintgaing
	Yamethin
	Lewe
New Duri Terry	Pyinmana
Nay Pyl Taw	Tatkone
	Zeyar Thiri
Cogoing	Sagaing
Sagaling	Shwebo
Southern Shan	Nyaung Shwe

State/region	Township	Village/ ward/ camp	No safe drinking water	Severe impact on housing: (>50%)	Market and shops mostly closed	Severe impact on food insecurity risks and needs	Moderate impact on food insecurity risks and needs	No power for lighting	Full recovery time (6 months and above)	Priority needs: food	Priority needs: cash assistance
	Taungoo	Kyun Kone	-	-	-	-	-	-	Х	Х	Х
		Та Руау	-	-	-	-	-	-	Х	Х	Х
Bago (East)		Ward (19)	-	-	-	-	-	-	Х	Х	Х
		Ward (22)	-	-	-	-	-	-	Х	Х	Х
		Ward (23)	-	-	-	-	-	-	Х	Х	Х
		A Lae Chaung	-	-	-	-	Х	-	Х	Х	-
		Kya Mine	-	-	-	-	Х	-	Х	Х	-
Kayin	Thandaunggyi	Mg Nwae Kyi	-	-	-	-	-	-	Х	Х	Х
		Si Pin Gyi	-	-	-	-	-	-	Х	Х	Х
		Thandaunggyi	-	-	-	-	-	-	-	Х	Х
		Swei Pauk Kan village	Х	-	-	Х	-	-	-	Х	Х
	Chauk	Thanbo village	Х	-	-	Х	-	-	-	Х	Х
		Kan Thar Gyi village									
	Magway	Tei Pin Kan Pauk village									
	N 4	Lay Taing Sin village	-	-	-	Х	-	-	Х	-	Х
Magway	iviyotnit	Myo Lu Lin village	-	-	-	Х	-	-	Х	-	Х
	Natmauk	Ywar Mun village	-	-	-	-	-	-	Х	Х	-
	T	In Kone village	-	-	-	Х	-	-	Х	Х	Х
	raungdwingyi	Ta Loke Kone village	-	-	-	Х	-	-	Х	Х	Х
	Verener	Be Seik village	-	-	-	Х	-	-	Х	Х	Х
	Yenangyaung	Bu Kyun village	-	-	-	Х	-	-	Х	Х	Х

Appendix 2. Multidimensional impact of earthquake in Myanmar

State/region	Township	Village/ ward/ camp	No safe drinking water	Severe impact on housing: (>50%)	Market and shops mostly closed	Severe impact on food insecurity risks and needs	Moderate impact on food insecurity risks and needs	No power for lighting	Full recovery time (6 months and above)	Priority needs: food	Priority needs: cash assistance
		A Mhite Su (North)	Х	-	-	-	-	-	Х	-	Х
		A Mhite Su (south)	-	-	-	-	Х	-	Х	Х	Х
	Amarapura	Bone Oh	-	-	-	-	-	-	-	-	-
		Dandapin	-	-	-	-	Х	-	Х	Х	-
		Dawnywae	-	-	-	-	-	-	-	-	Х
		Kyay Oak	Х	Х	Х	Х	-	-	-	Х	Х
		Kan Taw Ward	-	-	-	-	Х	Х	-	Х	-
		Nge Toe village	-	-	-	-	Х	-	-	Х	Х
		Pan Yan	-	-	Х	-	-	-	-	-	Х
		Yin Taw	Х	-	-	-	-	-	Х	Х	Х
N 4 a sa al a la sa		871 Ward	-	-	-	-	Х	-	-	-	-
wandalay		902 Ward	-	Х	-	-	Х	-	-	Х	-
	Chanmyathazi	Kyun Lone Oak Shaung	-	-	-	Х	-	-	-	Х	Х
		680 Ward	Х	Х	-	-	-	-	Х	-	Х
		681 Ward	Х	Х	-	-	-	-	Х	-	-
		Hpyauk Seik Pin	-	-	-	-	-	-	Х	Х	Х
		Pattar	-	-	-	-	-	-	Х	Х	Х
	Куаикѕе	Pauktaw	-	-	-	-	-	-	Х	Х	-
		West AyeMyaKyiLin	-	-	-	-	Х	-	Х	-	-
		Ku Lar Kyaung	-	-	Х	-	Х	-	Х	Х	Х
		390 Ward	-	Х	-	-	-	-	-	-	-
	Mahaaungmyay	Let thamar	-	Х	Х	-	Х	-	-	Х	Х
		Mantawtar	Х	Х	-	-	Х	-	-	Х	-

State/region	Township	Village/ ward/ camp	No safe drinking water	Severe impact on housing: (>50%)	Market and shops mostly closed	Severe impact on food insecurity risks and needs	Moderate impact on food insecurity risks and needs	No power for lighting	Full recovery time (6 months and above)	Priority needs: food	Priority needs: cash assistance
		Shwe Ku/ block 413	Х	Х	-	-	Х	-	-	Х	Х
		Thanhlyetmaw west	-	Х	-	-	-	-	Х	-	-
		Myinywarkyi	-	-	-	-	-	-	-	Х	Х
		Myinywarlay	-	-	-	-	-	-	-	Х	Х
	Myittha	No (1) Ward	-	-	-	-	Х	-	Х	Х	Х
		No (2) Ward	-	-	-	-	-	-	Х	Х	Х
		Ywar Khaing Gyi	-	-	-	-	-	-	-	Х	Х
	Patheingyi	Kan Gyi	-	-	-	-	Х	-	Х	Х	-
		Myauktawtwin village	-	-	-	-	Х	-	Х	-	Х
		New Ni village	-	-	-	-	-	-	Х	-	Х
		Ywe Su (West) village	-	-	-	-	Х	-	Х	-	-
		Ngwe Taw Kyi Kone Ward	-	-	-	-	-	-	Х	Х	Х
	Pyigyitagon	Ta Khun Taing Ward	-	-	-	-	-	-	-	Х	-
		Thin Pan Kone Ward	-	-	-	-	-	-	-	Х	-
		(Za Myin Zwe) Ward	-	-	-	-	-	-	-	Х	Х
		Myoma	-	-	-	-	-	-	Х	Х	Х
		Sae Ywar	-	-	-	-	-	-	Х	Х	Х
	Sintgaing	Seik Ta Ra	-	-	-	-	Х	-	Х	Х	Х
		Taungkin	-	-	-	-	-	-	Х	Х	Х
		Ywar Naing Ward	-	-	-	-	-	-	-	Х	Х
	Yamethin	Kyi Inn	-	-	-	-	-	-	Х	Х	Х
		Pinsu (North)	Х	Х	-	Х	-	-	-	Х	-
		Thee Gone Village	-	Х	-	-	-	-	Х	Х	Х

State/region	Township	Village/ ward/ camp	No safe drinking water	Severe impact on housing: (>50%)	Market and shops mostly closed	Severe impact on food insecurity risks and needs	Moderate impact on food insecurity risks and needs	No power for lighting	Full recovery time (6 months and above)	Priority needs: food	Priority needs: cash assistance
		MaAutaw	-	-	-	-	-	-	х	Х	Х
		NakwinAing	-	-	-	-	-	-	Х	Х	Х
	Lewe	Pyauk Myaing	-	-	-	-	Х	-	Х	-	-
		Tatar Kyi Village	-	-	-	-	Х	-	Х	Х	Х
		Thar Si Village	-	-	-	-	-	-	-	Х	-
		Ze Kone	-	-	-	-	Х	-	Х	-	Х
	Pyinmana	(14) Ward	-	Х	-	Х	-	-	-	Х	Х
		Wae Gyi Village	-	-	Х	Х	-	-	-	Х	Х
		Yan Aung (2)	-	-	-	-	-	-	-	Х	-
Nay Pyi Taw		Zeephyupin	-	-	-	-	-	-	-	Х	-
		Alae Kyune	-	-	-	-	-	-	Х	Х	-
		Gwae kyee	-	-	-	-	-	Х	-	Х	Х
	latkone	Kyu Inn	-	-	Х	-	Х	-	-	Х	-
		Myawat Myat east	Х	Х	-	-	Х	-	-	Х	Х
		Sayar San Ward	-	-	-	-	-	-	х	Х	Х
		Aung Zay ya (1 + 2)	-	-	-	-	-	-	Х	Х	Х
	Zeyar Thiri	Aung Zeya	-	-	Х	-	-	-	-	Х	Х
		MaAutaw	-	-	-	-	-	-	-	Х	Х
		Yay Sin	-	-	-	-	-	-	Х	Х	-
		Ahr Laung	Х	-	Х	-	-	-	-	Х	Х
Sagaing	Sagaing	Aung Thar village	-	-	Х	-	-	-	-	-	-
Sagallig	Sakallik	Kyauk Se village	-	-	Х	-	-	-	-	-	-
		KY auk Tar village	Х	-	Х	Х	-	-	-	Х	Х

State/region	Township	Village/ ward/ camp	No safe drinking water	Severe impact on housing: (>50%)	Market and shops mostly closed	Severe impact on food insecurity risks and needs	Moderate impact on food insecurity risks and needs	No power for lighting	Full recovery time (6 months and above)	Priority needs: food	Priority needs: cash assistance
		Min Lan	-	Х	Х	-	-	-	-	Х	Х
		Myoe Thit	Х	-	Х	-	-	-	Х	Х	Х
		Pan Be Dan Ward	-	-	Х	Х	-	-	-	Х	Х
		Poe Tan Ward	-	Х	-	-	-	-	-	-	Х
		War Chet	-	-	Х	-	Х	Х	-	Х	Х
		Yae Khar village	-	-	Х	Х	-	-	-	Х	Х
		YwarHtaung Ward	-	-	Х	-	Х	-	-	Х	Х
	Shwebo	Kan Thar Kone village	-	-	-	-	-	-	Х	-	Х
		No (5) Ward	-	-	-	-	-	-	-	Х	Х
		Shar Taw	-	-	Х	-	-	-	х	-	Х
Southern Shan	Nyaung Shwe	Ai Htauk Gyi	Х	Х	-	-	-	-	Х	-	Х
		Kay Lar	Х	Х	-	-	-	-	-	-	Х
		Kyae Sar Kone	-	-	-	-	-	-	Х	-	Х
		Nan Pan	Х	Х	-	-	-	-	-	-	Х
		Tar Lel Oo Inn	Х	Х	-	-	-	-	Х	-	Х



Annex. Myanmar agricultural calendar

Source: FAO. 2025. GIEWS – Global Information and Early Warning System Country Briefs: Myanmar. In: FAO. Rome. [Cited 29 April 2025]. https://www.fao.org/giews/countrybrief/country.jsp?code=MMR

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