



World Food Programme

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DRY ZONE

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Key findings

Rainfall deficiencies in the early and late monsoon seasons have impacted key crop harvests and resulted in water shortages in various parts of the Dry Zone.

Yenangyaung and Chauk are amongst the hardest hit townships, with reports of groundnut, sesame and pigeon pea failures and multiple reports of premature depletion of many “rainwater collection ponds”.

As a result, the food security situation as well as the health and well-being of communities is deteriorating. Generally, food stocks and purchasing power are lower than normal and lack of water is impacting hygienic conditions and placing additional stress on health of livestock. WFP anticipates further deterioration as the summer season progresses.

Background on the Dry Zone

The Dry Zone covers more than 54,000km², encompassing 58 townships which span from lower Sagaing region, to the western and central parts of Mandalay region and most of Magway region. It is estimated that approximately one-quarter of the country's population live in this area.

Situated in the shadow of the Rakhine mountain range, the Dry Zone receives limited rains compared to country averages. This said, climate is not homogenous across the area, with conditions ranging from semi-arid (and even arid) in certain areas to semi-humid in others. Dry spells during the rainy season are frequent, but their intensities vary geographically and over time. Insufficient rain is not the only potential hazard, however, as decreasing forest cover and soil erosion place communities at greater risk of localized flash floods during times of heavy rain.

Food security context

According to the Food Security Information Network (FSIN), the food security situation in the Dry Zone has been a concern for the past 6 months, with more than half of monitored townships reporting high levels of food insecurity even in the post monsoon (and post-harvest) period (see Figure 1).

Overall, close to 35% of monitored households report severe food insecurity, which is little changed since the mid monsoon monitoring round (see Figure 2). Dietary diversity remains unsatisfactory with almost 30% of households reporting inadequate diets. Reliance on food-based coping mechanisms has risen post monsoon, with close to 35% reporting frequent dietary restrictions associated with food shortages (see Figure 3). Taken together, these findings suggest that, for at least a percentage of households, regular livelihood strategies remain insufficient to meet household food needs.

Erratic rains and crop failures

High levels of food insecurity are persisting in the post monsoon period as a result of insufficient rains in the early and late monsoon periods which damaged key crops. Myanmar Agricultural Department (MAD) and Department of Meteorology and Hydrology (DMH) data from certain townships in Magway illustrates these shortfalls.

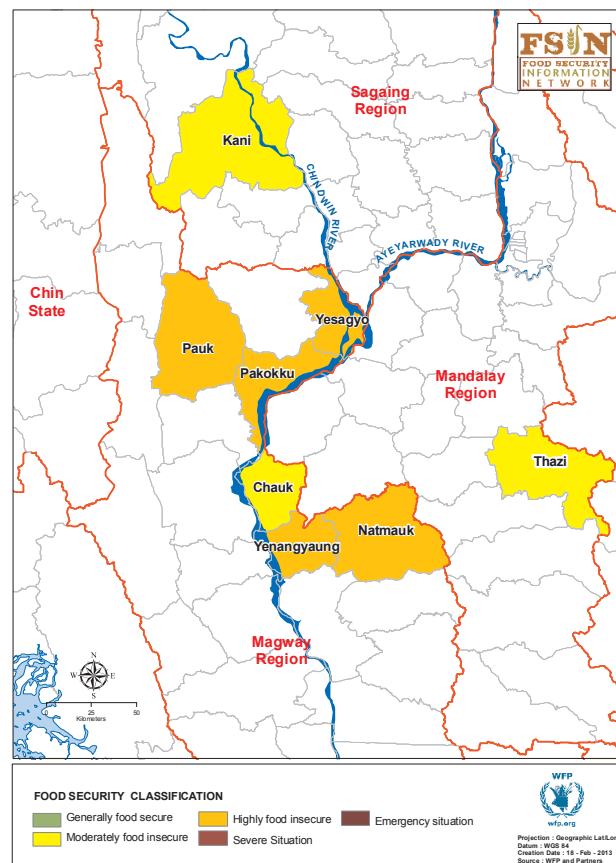


Figure 1: Post harvest FSIN food security classifications in the Dry Zone

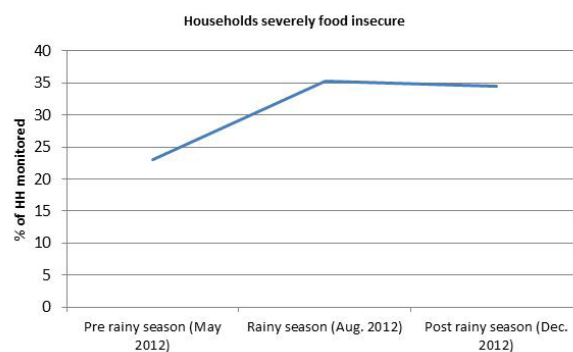


Figure 2: Changes in household food security status in monitored townships of the Dry Zone (FSIN monitoring)

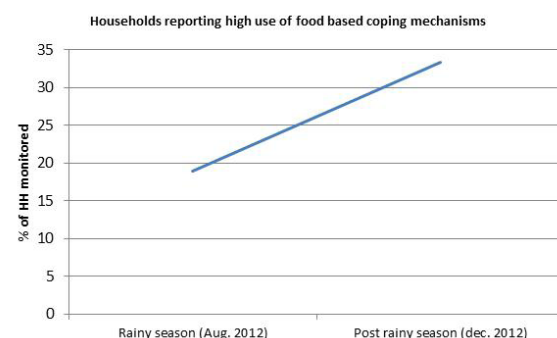


Figure 3: Changes in the use of food based coping mechanisms (FSIN monitoring)

For example, MAD data from three areas in Yenangyaung township (Figure 4) show less than usual rainfall throughout the monsoon season (as compared to 5 year averages). The largest differences were observed in both the early and late monsoon periods, both of which are crucial times for key crops, including sesame, groundnut and pigeon pea. Notably, rainfall was less than 2 times the average temperature in both periods which is a key threshold when soil water retention levels are impacted, placing significant stress on crops. If not compensated by irrigation, poor water retention can lead to significant crop losses which explain consistent reports of sesame and pigeon pea failures in Yenangyaung in early 2013.

Data from meteorological stations in Pakokku and Chauk show similar rainfall deficiencies. As a result, the late 2012/ early 2013 pigeon pea crop in Chauk was impacted, with yields ranging from a low of 1-2 tins per acre in certain villages (reportedly in the majority of villages) to a high of 4-5 tins per acre in others. Normal pigeon pea yields are reportedly 5-6 tins per acre in Chauk.

Notably, observed rainfall deficiencies were likely localized, as other sources of climate information point to a “normal” rainy season in parts of the Dry Zone. In fact, the 9th Monsoon Forum, convened by DMH with technical support from RIMES and funded by UN ESCAP, indicates “normal” or “above average” precipitation in the peak and late monsoon periods in both Magway and Mandalay as well as “normal” rains in early monsoon in Magway. Rainfall was only “below average” in both Mandalay and lower Sagaing in the early monsoon period.¹ Likewise, Tropical Rainfall Measure Mission (TRMM) data indicates above average rainfall throughout the monsoon season in Magway (Figure 5).

Reports of water shortages

WFP assessment teams investigated widespread reports of water shortages in Yenangyaung and Chauk townships in March 2013. While water shortages are typical in the Dry Zone, an assessment mission was triggered due to both the extent of shortages and the speed at which water sources have been depleted.

Overall, most visited villages reported water shortages, with many “rainwater collection ponds” either already dry or very close to dry (see Picture 1 and 2). To cope with shortages, many villagers reported accessing water by walking to surrounding villages where water was available or being forced to purchase water from tube well owners. While water purchases are not unusual in the Dry Zone, they are happening earlier than usual this year, which could have financial impacts on households as the dry season continues. While there were no reports of increased migration due to water scarcity, deterioration in hygienic conditions were noted in some communities and the well-being of livestock is increasingly a concern.

Outlook for remainder of dry season

Available food security information points to a concerning situation for areas that received lower than normal rainfall in 2012. Crop failures will increasingly impact both food stocks and household purchasing power while water shortages are already threatening the health and well-being of communities and livestock. This situation will worsen as the summer season progresses with improvement likely only when the rains start.

WFP will closely monitor the situation in the coming months. WFP, in collaboration with Save the Children, also plans a more detailed food security and nutrition assessment in May.

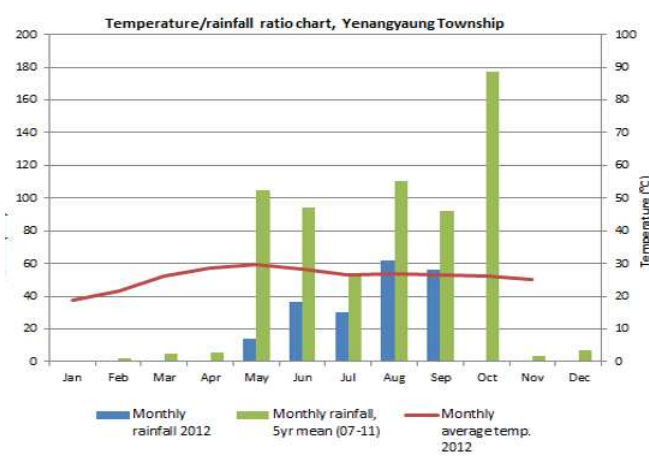


Figure 4: Temperature and rainfall data, Yenangyaung Township (Myanmar Agriculture Department)

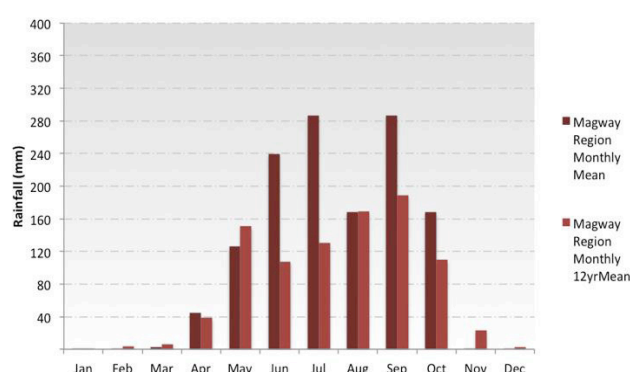


Figure 5: Extrapolated TRMM data, Magway Region



Pictures 1&2: Dry water ponds in San Myaing Lal village, Yenang Chaung Township (March 2013)

1. RIMES, 2012. 9th Monsoon Forum. Nay Py Taw, Myanmar 16 October 2012.