

Emergency Food Security Assessment in Southern Chin State



Key Findings

The 2011 monsoon harvest saw significant crop failures in Madupi and northern Paletwa. **Paddy and maize production fell by 48% and 54% in Madupi respectively, and by 58% and 45% in northern Paletwa.** Likewise, over 90% of communities in Madupi reported lower yields of beans and yellow millet, and over 60% in Paletwa reported lower yields of gamone, chilli, turmeric, mustard and sesame.

Crop losses may be affecting diets already, as **more than 75% report inadequate dietary diversity in both Madupi and Paletwa.** A typical diet in Paletwa is comprised largely of cereal and vegetable consumption, with meat and pulses consumed 1-2 days per week. Diets in Madupi are even more restricted with only cereals consumed daily. Vegetables are consumed on average 2-3 days per week and proteins are consumed fewer than one day per month on average.

Paddy and Maize production levels remained stable or increased in central Paletwa, Kanpetlet and Mindat. **Yields, however, remain less than half the national average and dietary diversity is still amongst the worst in the country.** Thus, ongoing livelihood and nutrition programmes should continue and the food security situation should continue to be monitored as the hunger gap approaches.

Crop losses have severely affected the food security situation in northern Paletwa and Madupi. Emergency food assistance, which began in March in northern Paletwa, is timely as food stocks will reportedly expire mid-month. Emergency assistance, in the form of a full food basket, will be needed shortly in Madupi. However, stocks will not reportedly expire until early-to mid-April.

Background

Despite projections of sufficient 2011 monsoon harvests, untimely rains reportedly impacted yields in various parts of the country. In southern Chin, early rains disrupted land preparation, preventing communities from engaging in typical slash and burn activities. Late, heavy rains from an October tropical storm complicated matters by damaging standing crops just prior to harvest.

In August 2011, initial reports of significant crop failures as well as impending food shortages emerged from representatives of the Mara ethnic group in Madupi and Paletwa townships. (See Figure 1). These reports were delivered first-hand to local authorities in Chin as well as WFP staff in Hakha. The WFP sub-office immediately moved to better understand the situation and

the magnitude of reported failures. Alerts over potential localized crop failures were first reported publicly in WFP's September Food Security Update 2011.

Concerns regarding the severity of the situation significantly increased in November as a result of an Action Contre la Faim (ACF) assessment in northern Paletwa, which overlapped somewhat with areas reporting crop failures. This food security assessment and nutrition screening was the first to quantitatively document reported crop failures, finding that 45% to 55% of paddies were lost, as were 40% of the gamone and sesame crops. Of greater concern were the results from the nutrition screening which indicated that up to 24% of children under 5 in assessed villages could be acutely malnourished.

Spurred by ACF assessment findings and continuing requests for assistance by affected communities, in December 2011 WFP requested a special meeting of the Chin Working Group to discuss the situation and determine next steps. Consensus was reached on the need for a more thorough assessment of the area to better understand the magnitude and extent of observed crop failures.

Simultaneously, in late December and early January, the Ministry of Border Affairs sent an official to Paletwa to assess the situation on behalf of the Government. The Ministry then convened a meeting with WFP and UNDP to discuss the results of this mission, to officially request assistance be provided to villages in northern Paletwa, and ask that WFP move forward with the planned assessment.

Figure 1: Map of the Mara villages

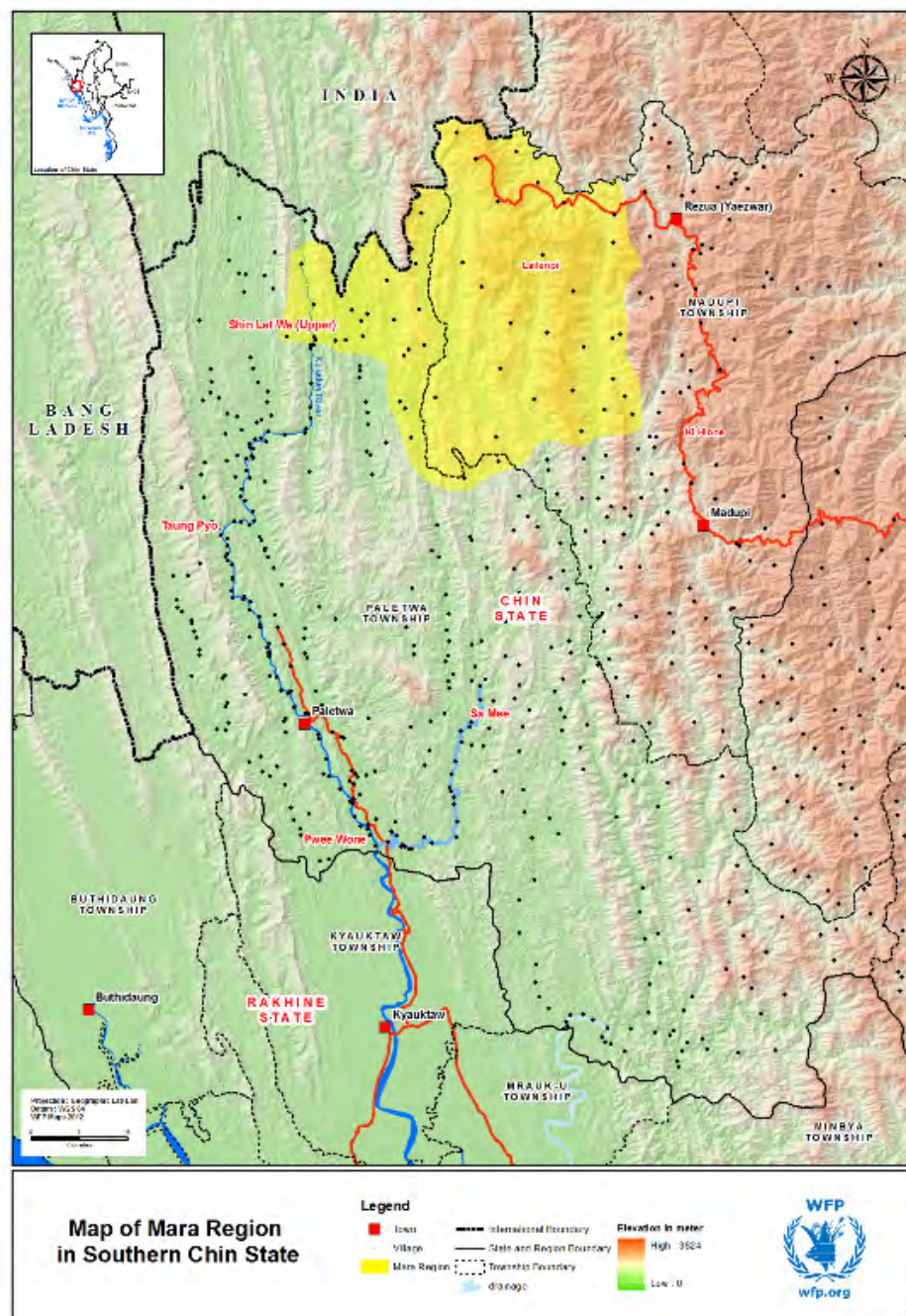


Table 1: Geographic areas assessed by partners

Township	Agency/ Organization	# of villages	Total population of surveyed villages
Kanpetlet	Solidarite International	20	3,013
Madupi	CAD	27	13,408
Mindat	Care International UNDP	13 6	2,750
Paletwa	IRC (Central) UNDP (Mara)	19 27	7,968 5,433

In response to this request, in February 2012 WFP, Solidarite International, Care International, International Rescue Committee (IRC), the Country Agency for Rural Development (CAD) and UNDP jointly conducted an Emergency Food Security Assessment of Mindat, Kanpetlet, Madupi and Paletwa townships in southern Chin State.

Methodology

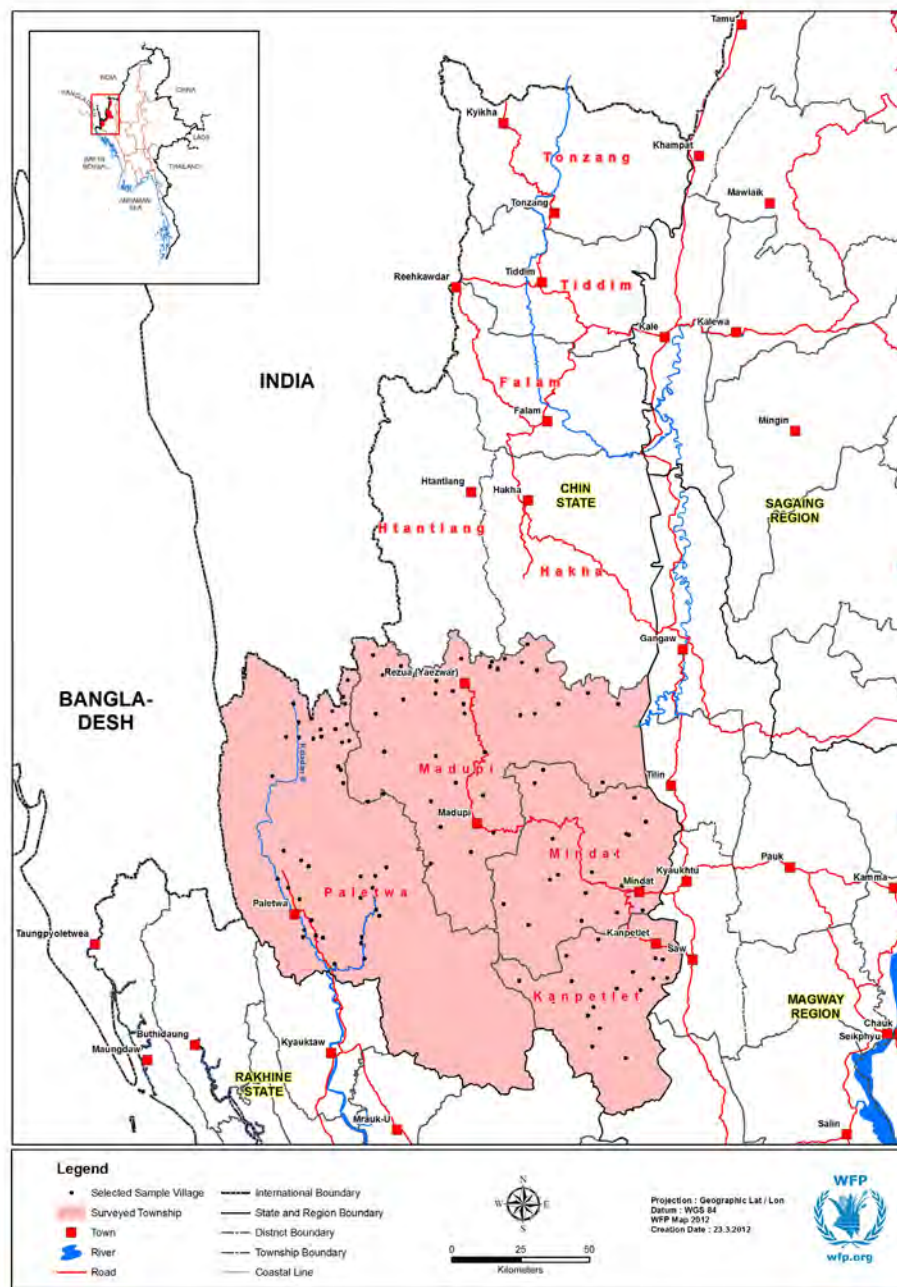
The objective of this assessment was to explore the extent and magnitude of crop failures and to determine to what degree they have impacted the current and near-term food security situation. Designed as a rapid assessment, each partner agreed to assess approximately 20 villages in their project townships. Villages were selected by the following criteria:

- geographic coverage
- feasibility of access

Interviews were conducted with one key informant and 10 households within each village, and questionnaires were agreed on by all partners in advance. Questionnaires were designed specifically to resemble information collected by WFP’s Food Security Monitoring System and surveys by other partners to ensure comparability. Notably, the survey was not designed to gather data representative of the townships surveyed. Rather, findings should be interpreted as indicative of the current situation. Assessment activities were carried out in the field by partner staff familiar with the general food security context. *Table 1* outlines the geographic area covered by each partner, and *Figure 2* shows the locations of villages surveyed.

Data collection started in early February and continued throughout the month. Data analysis was conducted by WFP in collaboration with partners and the Myanmar government.

Figure 2: Surveyed townships and villages in southern Chin State



Overview of post-harvest food security situation

Previous WFP and partner food security assessments indicated a particularly significant problem with chronic food insecurity in Chin State, particularly in southern Chin. Prior to this assessment, information from WFP's fourth quarter (Q4) Food Security Situational Analysis (2011) indicated the post-harvest situation was worse

than usual in southern Chin, with levels of food insecurity higher here than in any other WFP project area.

Findings from current assessments, as well as the ACF survey in November, provide additional evidence of an emerging food security crisis in parts of southern Chin. Findings indicate significant crop failures in Madupi and Paletwa as well as significant concern over coming food shortages. In Paletwa, problems appear to be localized, with the northern part of

the township (and particularly the Mara villages) most affected. As a result of the ACF survey, however, programmatic intervention has already been planned in this area. Food distributions throughout northern Paletwa (including the Mara villages) began in March.

Importantly, findings from the current assessment do not support expansion of currently planned emergency assistance into central Paletwa. Crop failures were not reported in this area and, generally, the food security situation in 2012 is quite typical of previous years (if not slightly better). Thus, a continuation of targeted livelihood and nutrition programming in central Paletwa is the best way forward.

Crop failures and deterioration in food security status in Madupi are more generalized than in Paletwa. Mara villages appear most affected, but significant crop losses and inadequate dietary diversity are prevalent throughout the township. Plans for emergency assistance are now being made, with food prepositioning already underway. Given these findings, emergency food distributions will need to begin in April or May in all accessible villages and continue until the next harvest. A full food basket is recommended given the extreme lack of dietary diversity.

The food security situation is considerably more stable in Kanpetlet and Mindat. Harvests in both townships are on par with previous years and current diets are more diverse than those seen in Madupi and northern Paletwa. As such, emergency intervention is not warranted. Rather, assistance in the form of ongoing livelihood interventions should continue.

Assessment Findings

Context

Communities in southern Chin are primarily agrarian, with at least 95% reliant on agriculture as the main livelihood. Cultivation systems are based largely on plot rotation, as well as slash-and-burn techniques. The destructive, impermanent nature of these cultivation techniques is often highlighted as a reason for chronic poor soil condition and overall low yields.

Types of crops cultivated in 2011 include upland and lowland paddies, maize and a mix of food or cash crops, namely red and yellow millet, gamone, castor, chili and aung laut (sulphur bean). Overall, 92% of surveyed communities produced either upland or lowland paddies, while 48% produced maize. Paddy cultivation was most common in Paletwa and Madupi, reported by close to 100% of communities surveyed. Upland paddy cultivation was more common in both townships than lowland cultivation, although lowland cultivation was far more common in Madupi than Paletwa (reported by 54% in Madupi, versus 9% in Paletwa). Maize cultivation was most common in Madupi and Mindat with over 80% reporting cultivation in both townships. Notably, only 11% reported maize cultivation in Paletwa. *Figures 3 and 4* show, in more detail, the cultivation patterns in 2011 for each township.

In addition to farming, other key sources of income and livelihoods include livestock rearing and casual labour activities (including migratory casual labour activities). Livestock rearing was most common in Kanpetlet (reported by 48% of communities) and least common in Madupi (reported by 21%). Non-agricultural casual

labour was reported by over 20% of communities in Kanpetlet, Madupi and Mindat, but only 13% in Paletwa. By contrast, agricultural casual labour activities were most common in Paletwa (reported by 20% of communities) while migratory casual labour was most common in Madupi (26%).

2011 Crop Failures

Assessment findings indicated significant crop failures in both Madupi and Paletwa townships in 2011. On average, paddy and maize production fell by 48% and 54% in Madupi, and by 12% and 45% in Paletwa. Notably, paddy failures in Paletwa were localized, affecting primarily the Mara villages in the north. Thus, aggregate figures of 12% paddy loss mask the severity of losses experienced in affected areas. For instance, Mara villages reported paddy losses of close to 60%, which is on par with ACF findings of 45% to 55% paddy loss in the same area. Communities in central Paletwa, by contrast, reported 5% increases in paddy production.

Examined by paddy type, losses in Madupi were the result of failing upland and lowland paddies, while losses in Paletwa were confined to upland paddies.

A look at crop loss among secondary crops revealed similar patterns. More than 90% of communities in Madupi reported lower yields of beans and yellow millet, while over 60% in Paletwa reported lower yields of gamone, chilli, turmeric, mustard and sesame.

Crop losses appeared more related to lower yields than lower acreage cultivated, suggesting that crop

losses were not driven (or acerbated) by altered cultivation behaviours which are common in Chin¹. The number of acres cultivated overall, for both maize and paddy, appeared relatively stable from 2010 to 2011 and yields were consistently lower, at least in areas which reported crop failures. In the few areas where cultivated acreage declined in 2011 (i.e. Madupi and upland paddies), information suggested that declines were not by choice but rather due to early rains which disrupted slash-and-burn activities, thus reducing land available for cultivation. This is supported, at least in part, by the current assessment which found that as many as 40% of the communities that reported fewer upland paddies (in Madupi) also reported being affected by irregular rains.

The primary reasons for paddy and maize loss in Madupi and Paletwa include irregular rains (50% and 35% respectively), pests (30% and 15%) and crop disease (20% and 12%). Irregular rains refer to both early rains (which disrupted slash-and-burn activities), and late rains associated with a tropical storm that hit Myanmar in late October. According to community reports and partner assessments, complaints regarding pests were not rodent-related, but instead referred to wild animals (including elephants, monkeys and wild pigs) as well as domesticated animals (i.e., mithum) which are allowed to graze freely. Animal trenches were identified by communities and partners as a way to potentially minimize their impact, and increase future yields.

Notably, the 2011 harvests outside of Paletwa and Madupi were relatively successful in southern Chin, at least in comparison to the 2010 harvest.

¹Communities in Chin cultivate on a plot rotation basis. Farmers also shift production from one crop to another, based on market value. ACF, in their November 2011 assessment, documented a shift from paddy to gamone production from 2010 to 2011. Farmers preferred to produce Gamone as its market price in 2010 was very high, yielding more than 1 million MMK per acre in value.

Figure 3: Percent of communities cultivating upland, lowland paddies and maize per township in 2011

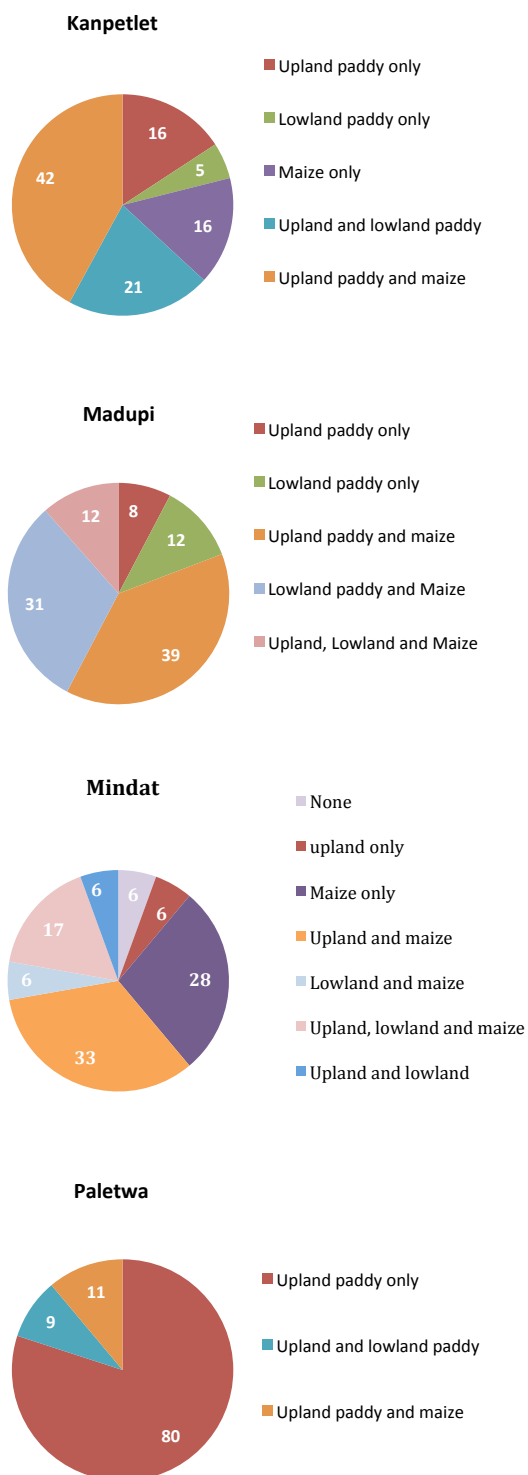


Figure 4: Percent of households cultivating other food or cash crops per township in 2011

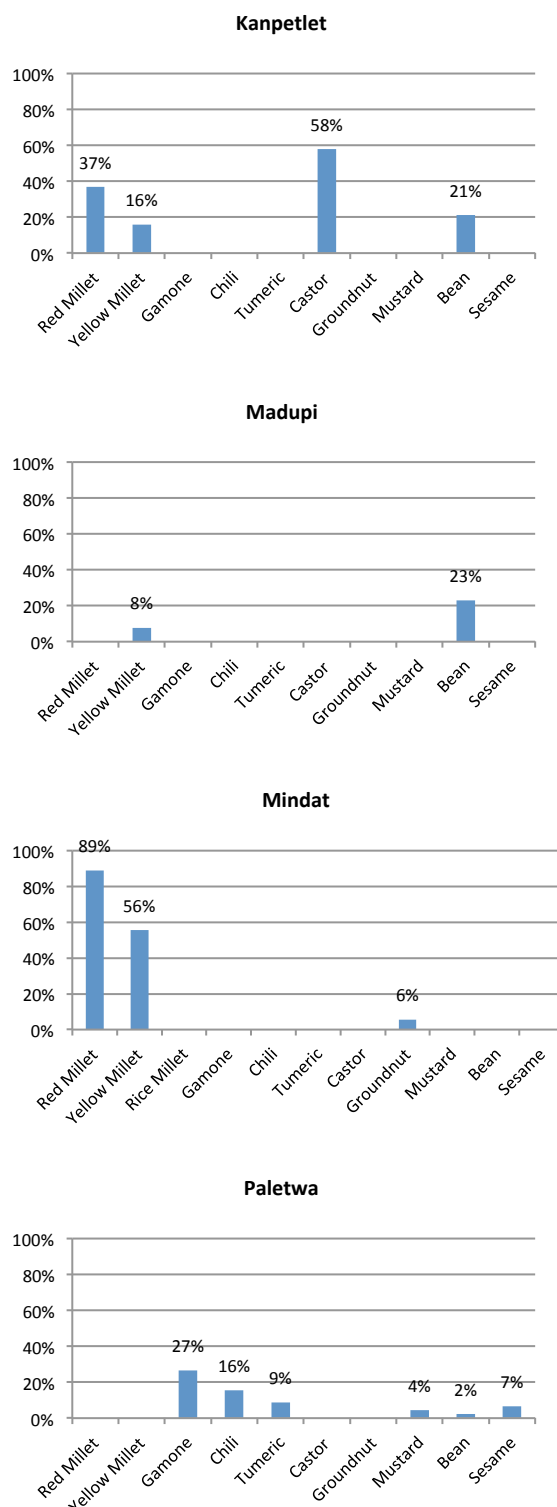
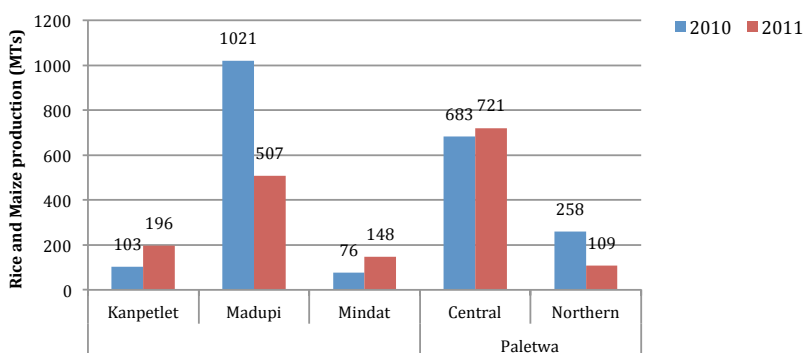


Figure 5: Percent of households cultivating other food or cash crops per township in 2011

In both Kanpetlet and Mindat townships, maize production more than doubled (increasing by 162% and over 300% respectively), while paddy production either increased (by 80% in Kanpetlet) or remained stable (decreasing by less than 3% in Mindat). Overall improvements in yields were largely due to the diminishing effects of the cyclical rodent infestation, which reportedly disrupted the 2010 harvest throughout southern Chin, and impacted Kanpetlet in particular.

Despite a relatively successful harvest in Mindat and Kanpetlet, it is notable that paddy yields are still less than half the national average and remain lower than overall Chin averages, as estimated by WFP's Food Security Monitoring System. Thus, the situation in both Kanpetlet and Mindat should be viewed realistically. Much work remains in both townships to improve farming systems and productivity which, over time, will hopefully alleviate chronic poverty conditions.

State of current food stocks

Current food stocks available in each township were calculated by examining:

- reported staple food harvest stocks
- estimated household food stock duration as well as the projected hunger gap for 2012

Harvest stocks

Examining estimated production figures from the 2011 harvest, staple cereals were projected to last more than 5 months on average in all townships. Harvest stocks were projected to last longest in Mindat, with households reporting production sufficient to cover 5 months (until May).

By contrast, harvests stocks were reportedly sufficient to cover 4.5 months in Madupi (until mid-April). Villages in Paletwa and Kanpetlet reported stocks sufficient for just over 4.5 months (until mid-April). Importantly, significant regional differences were seen again in Paletwa, with Mara villages reporting between 1 to 2 months of stock, and central Paletwa reporting a full 6 months of stock. Mara villages in Madupi appeared slightly better off than their counterparts in Paletwa, reporting close to 3.5 months of stock. Non-Mara villages in Madupi reported just over 5 months of stock.

Notably, when compared to stocks from 2010, only northern Paletwa and Madupi showed substantial differences with harvest stocks projected to last less than half as long in both areas (5.1 versus 10.5 months in Madupi, and 1.5 versus 3.5 months in northern Paletwa).

Duration of household food stocks and hunger gap

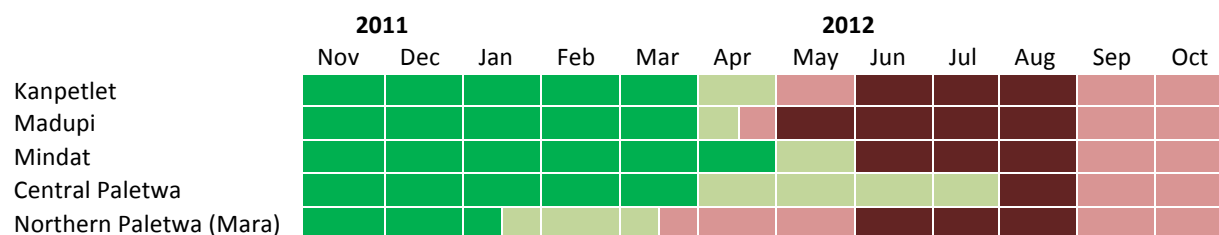
Current household food stock estimates, and projections on months with significant food shortages, largely complement harvest food stock projections. As of mid-February, communities reported food stocks of close to two months on average, indicating food will remain available until mid- to late-April. This corresponds well with the expected hunger gap, as households expect to experience food shortages starting in May or June, depending on the township.

Household food stocks in Mindat are not surprisingly projected to last longer than reported stocks in any other township. Households in Mindat reported food stocks sufficient to last until June. This corresponds well with harvest stock projections. Likewise in Madupi, food stocks are estimated at almost two months (lasting until mid April); the same time harvests stocks are expected to be exhausted. Notably, in Madupi, communities seem quite aware of the impending food shortages as the hunger gap here is projected to start in May, a full month earlier than surrounding townships.

Interestingly, food stocks in northern Paletwa will reportedly expire in March, validating decisions to begin food assistance at that time. Food stocks in central Paletwa and Kanpetlet will reportedly be exhausted sooner than expected given the harvests. Reasons for this were unclear but it is suggested, given these projections, that food stocks be monitored starting early April despite the fact that harvest stocks should last until mid-May.

Triangulating the information above, *Figure 6* projects the duration of food stocks throughout southern Chin State.

Figure 6: Estimated number of months households will have cereal stocks



Dietary diversity

The quality of diets differs substantially in southern Chin, but data from all townships show concerning percentages of households with inadequate dietary diversity. (See Figure 7) This is particularly true given that the survey was conducted immediately following the post-harvest period.

Overall, assessed villages in Kanpetlet and Mindat reported the most diverse diets, with households consuming cereal 7 days per week, vegetables 4 to 5 days per week, meat/ fish 2 days per week and pulses 1 to 2 days per week. (See Figure 8) This said, 58% of households in Kanpetlet still reported inadequate consumption while 64% did so in Mindat. Also, more than one-third of households reported moderate hunger in Mindat. Put in context, the percent with inadequate consumption in both townships, while less than in Madupi and Paletwa, remains amongst the highest observed in WFP project areas. Likewise, the percent hungry in Mindat is a concern.

The lack of dietary diversity in Paletwa and Madupi is alarming, with more than three-quarters of households in Paletwa, and close to all (98%) in Madupi, reporting inadequate diets. Notably, the current assessment in Paletwa only collected dietary data from the central part of the township, as household level data was not

collected from the Mara villages in the north. ACF findings from the survey in November, however, show a very similar level of dietary inadequacy in this region.

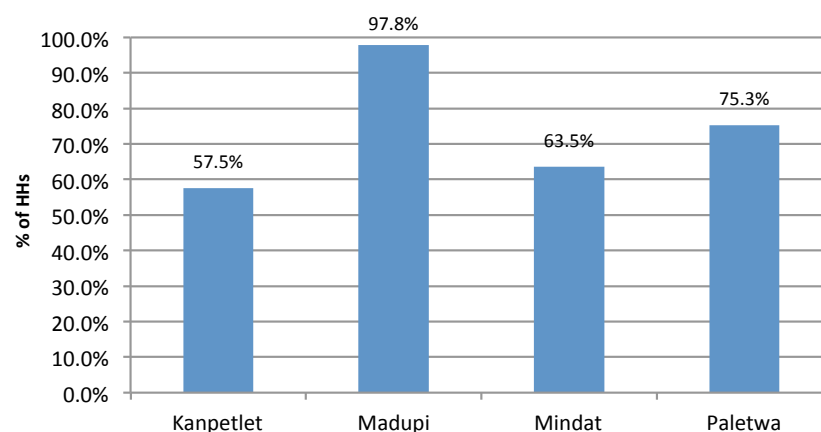
In practice, the level of observed dietary diversity in both Madupi and Paletwa translates to a diet heavy in cereal and vegetable consumption only, with little else consumed on a regular basis. Notably, however, households in Paletwa still report weekly consumption of both pulses and meat/fish. This is in stark contrast to dietary patterns in Madupi, which show protein consumption to be less than one time per month on average. Diets in Madupi appear to be so minimal, in fact, that the only regular food item consumed appears to be cereal, as vegetables are only consumed 2 days per week on average.

Not surprisingly, given the lack of dietary diversity, moderate or severe hunger² was reported most

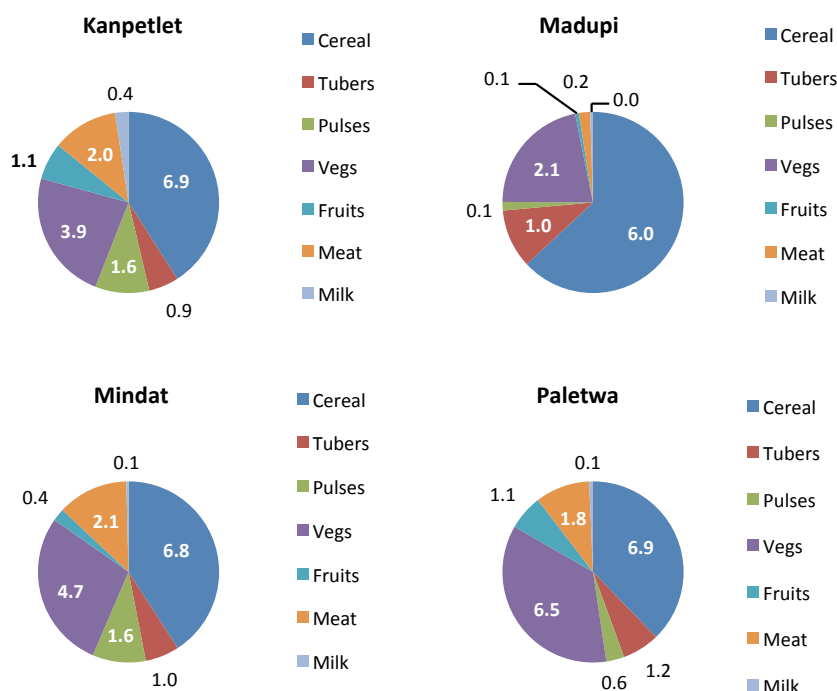
often in Madupi, affecting more than 50% of households. Severe hunger was reported by almost 9% of households. In central Paletwa, hunger was less commonly reported, despite only slightly better diets. Overall, 8% of households reported moderate hunger, while only 1% reported severe. The level of hunger in northern Paletwa, while not documented in this survey, is likely to be significantly higher. Findings from ACF's November survey indicated that 34% were experiencing moderate hunger, while 4% were reporting severe.

The level of inadequate dietary diversity and hunger in Madupi points to an immediate need to verify the information and be ready to provide assistance as required. Assistance should consider the concerning lack of protein consumption, as this suggests a need for provision of a full food basket rather than cereals alone.

Figure 7: Percentage of households reporting inadequate food consumption



²Hunger is measured using the internationally recognized Household Hunger Scale (HHS). The HHS measures household perceptions of hunger.

Figure 8: Dietary diversity of households in Southern Chin (number of days each food item consumed per week)

Emergency food assistance began in northern Paletwa in March. The situation in central Paletwa should be monitored, but there is little indication that emergency assistance is needed. Assistance in some form can be considered, however, as stocks expire and the hunger gap approaches.

Market access and source of foods

Market access is known to be difficult in southern Chin. In fact, only one of the villages surveyed reported a village-level market. This said, 75% did report being able to access markets via the nearest road, if necessary. Markets were most accessible in Kanpetlet (100% reported access) and least accessible in Mindat (where only 56% reported access). Overall, 92% and 65% reported access in Madupi and Paletwa respectively. Market access was lower in Mara villages in both Paletwa and Madupi, as these villages are more remote.

Given crop failures, rice prices in Madupi and Paletwa were reportedly higher than prices seen in Kanpetlet and Mindat. Purchasing power, on the other hand, was low throughout the region, with the price of a basic food basket more than 100% of typical daily wage labour rates in each township. These findings corroborate WFP's monthly market price monitoring, as the price of a typical food basket in February 2012 was significantly more than daily wage labour rates in monitored areas of southern Chin.

Importantly, household purchasing power in 2010 and 2011 was traditionally better off post-harvest and during the first quarter of the year. Beginning in April or May, there would be a general deterioration with households unable to afford a basic food basket for most of the second and third quarter. Current purchasing power estimates, however, indicate that deteriorations are occurring sooner than would be typically expected. This may have severe implications later in the year.

With limited access to village level markets and low household purchasing power, own production was a more important source of rice than market purchases for 40% of households. Market purchases, by contrast, were reported by less than 33% of households. Notably, the Mara villages in Madupi reported own production as a majority source of rice, while less than 16% reported market purchases. The majority of households in Kanpetlet also reported own production as the primary rice source.

Rice purchased on credit was reported most often in Paletwa (17%), though roughly 9-11% of households reported accessing rice this way in surrounding townships. Indicative of ongoing programming in parts of Madupi, 17% of households here reported food assistance as a source of rice. However, receipt of food assistance was limited to certain parts of Madupi with the Mara villages, which have traditionally not received assistance, forced to rely more heavily on own production and food gifts from relatives.

Household coping strategies

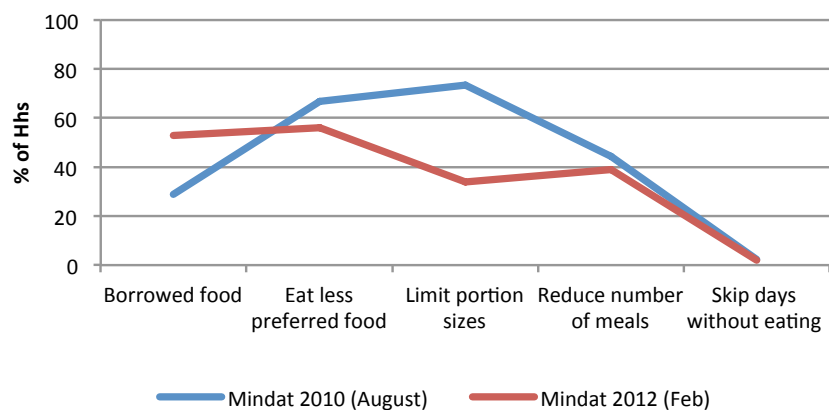
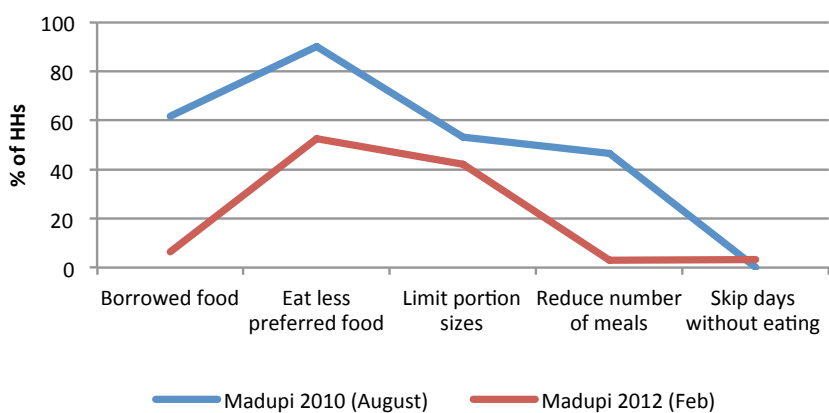
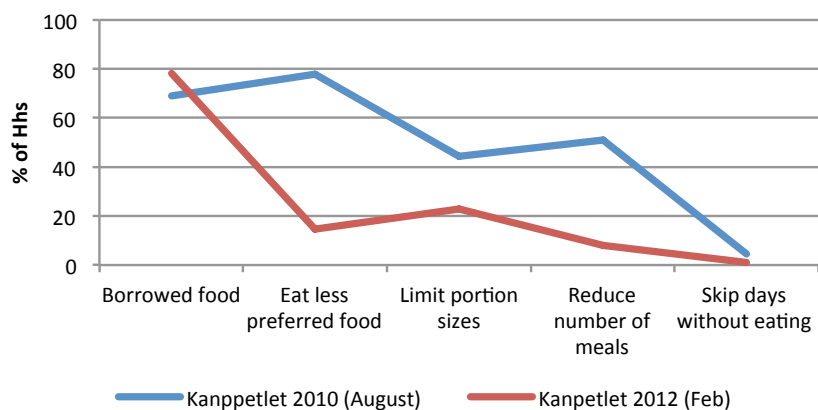
In their November assessment, ACF warned that households would soon begin to borrow money or food and alter eating behaviours in response to crop failures. Findings from the current assessment bear this out. In southern Chin, more than 40% of households are currently borrowing either food or money with interest, with majorities (between 50% and 75%) reporting this in Kanpetlet, Mindat and Paletwa. Altering dietary patterns is also prevalent in certain areas. Reportedly, 40% to 50% of households are reducing the number of meals per day in Mindat and Paletwa, and almost 65% are

Figure 9: Percent of households utilizing coping mechanisms in August (height of hunger gap) versus February

reducing the quantity of food in Paletwa. Likewise, almost 5% are skipping meals in Paletwa.

Figure 9 shows the percentage of households currently utilizing certain key coping mechanisms in comparison to the percentage relying on the same coping mechanisms at the peak of the hunger gap. In Kanpetlet, utilization of coping mechanisms remains below the levels displayed during times of extreme food stress. This is not surprising given a relatively successful harvest. However, the very high percentage of households already borrowing food may serve as a warning for further deteriorations as the hunger gap approaches.

By contrast, food-based coping mechanisms in Madupi and Mindat, particularly in relation to limiting portion sizes or reducing the number of meals per day, indicate levels of food stress commonly seen during times of food shortage. This is not surprising given the high percentage of households reporting hunger in both townships. This situation should be monitored in the coming months as food availability and access will only worsen until the next harvest.



The emergency assessment in southern Chin State was a joint exercise, conducted by the World Food Programme (WFP), the United Nations Development Programme (UNDP) and Non Governmental Organizations (NGOs) present in the area, including the International Rescue Committee (IRC), Acion Contra la Faim (ACF), Care International, Solidarite International and Country Agency for Rural Development (CAD).

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