

2013

# EMERGENCY MARKET MAPPING AND ANALYSIS

Report on Potato and Fertilizer Market Systems  
Buthidaung Township, Rakhine State



Steven Lanjouw and U Khin Maung U

DANTDALUN Management  
and Consulting Services Co,  
On Behalf of CDN  
(Consortium of Dutch NGOs)

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## **Disclaimer**

The views and ideas expressed herein are those of the authors and do not necessarily imply or reflect the opinion of ECHO or CDN.

## Table of Contents

Acknowledgements.....	2
Executive Summary.....	4
Chapter One: Emergency Context .....	7
Chapter Two: EMMA Methodology .....	9
Chapter Three: Target Population .....	10
Chapter Four: Critical Market Systems .....	13
Chapter Five: Market System Maps.....	16
Chapter Six: Key Findings of Gap analysis and Market analysis.....	21
Chapter Seven: Recommendations and Conclusions .....	24
Annex One: Village selection table and map of study sites.....	29
Annex Two: WFP market price data for Buthidaung Township.....	30

## Executive Summary

The peoples of Rakhine State have suffered a long history of inter-communal conflict. These antagonisms erupted into open strife in June and October 2012, resulting in massive population displacement and destruction of public and private properties with many persons injured or killed. The violence reverberated across Rakhine State and spread to other areas of Myanmar. The immediate causes of the initial violence were local, with antagonisms between Rakhine Buddhist and Muslim<sup>1</sup> populations escalating into open conflict. The Myanmar military responded to quell the violence, imposing a state of emergency, leaving a large number of population displaced into camps for internally displaced persons (IDPs) as well as spread out in host communities.

As a result, the economy has plummeted with trade and business seriously affected, unemployment widespread and many livelihoods lost, particularly in the fishing and agriculture sectors. Over the last twelve months, the Myanmar government and humanitarian agencies have collaborated to respond to the immediate emergency needs of the IDPs. Early recovery and livelihood support is of the essence given the breakdown of value chains and destruction of assets. The majority of the population has limited or no access to markets, basic services or employment options due to the general insecurity or as a result of movement restrictions.

In this context, CDN (Consortium of Dutch NGOs) has sought to support early recovery, food security, agriculture, livelihood and water and sanitation interventions so as to meet the basic needs of vulnerable communities in northern Rakhine. In 2013, out of considerations of “Doing No Harm” and program efficiency, CDN proposed undertaking an Emergency Market Mapping Analysis (EMMA) as part of its emergency livelihood project.

Together with CDN field staff and locally recruited enumerators, the study team undertook a rapid market analysis investigating two critical market systems, potatoes and chemical fertilizers. These two markets were studied from an angle of before and after the crisis as they are of importance in terms of supplying essential food, providing basic cash income and as “critical” agricultural input.

The EMMA assessment focused on three geographic hubs within Buthidaung Township, assessing the market-related realities for three socio-economic groups – those with cultivation rights to farm land, those that work as casual or day labour and those that are self employed. The key findings of this EMMA are that the food security and emergency livelihood situation of populations in Buthidaung Township are constrained or face bottlenecks as a result of the following important issues.

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<sup>1</sup> Terminology and names of groups carry strong value judgment in Myanmar. Without seeking to be accurate or politically correct, the authors of this study have decided to use of the terms “Rakhine Buddhist” and “Muslim” to identify the two communities, without implying that the conflict is necessarily religious in nature. The use of these terms is common in Myanmar language and sufficiently distinctive, terms such as “Rohingya”, “Kala” or “Bengali” for the Muslim population carry value judgments implying an acceptance or refutation of their origin within Myanmar.

Increased restrictions on movement for Muslim populations and a continuing climate of fear between and amongst Rakhine Buddhist and Muslim villagers has seriously disrupted the ability of local populations to secure food, cultivate crops, render services and assure themselves of a subsistence income.

The current state of emergency has depressed local employment opportunities, reduced credit and loans schemes for purchasing food items and farm inputs, led to lower income and expenditure levels, reduced demand for all essential goods and increased levels of indebtedness for target populations due to inability to repay past debt.

Reduced food stocks and insufficient food security provisions, particularly for vulnerable groups, has led households to consume the part of the potato crop that is normally kept for seedling supplies for the coming winter harvest season.

Agricultural policies and local government regulations whereby farmers are offered very low prices for market crops like potato at harvest time and which also oblige farmers to sell quantities of stock beyond their abilities to retain a surplus have distorted the local economy and increased food insecurity.

The current added demand for potatoes by IDPs in Sittwe IDP camps, although noteworthy as this demonstrates levels of market collaboration between Muslims and Rakhine Buddhists and is important for IDP populations seeking to diversify their food intake, also implies an increased pressure on local farmers to sell their potato crop beyond sustainability levels.

Intimately linked to the potato crop are chemical and organic fertilizers given the poor quality of the soil and local agricultural conditions. The biggest constraint in crop production that farming households face in Buthidaung is limited access to fertilizer as it is too expensive or credit is unavailable. The lack of money to buy necessary agricultural inputs underlines the current crisis within subsistence agricultural in northern Rakhine.

The self imposed segregation of market actors in the trading of fertilizers in northern Rakhine and in Buthidaung in particular has a negative effect on the local market for farm inputs and undermines opportunities for finding common ground and collaborative livelihood opportunities in an environment already deeply divided by inter-communal strife.

The levels of “facilitating services” have significantly increased -- checkpoints and other transit legitimization points require increased levels of money. The trade of all commodities by and through Muslim traders faces facilitation fees imposed by local authorities further depressing incomes earned through tradable commodities.

The politics of containment and internment of populations in IDP camps in townships such as Buthidaung and Maungdaw, is destabilizing and undermines economic development.

The impact of these issues on the three socio-economic groupings in Buthidaung has been different. Those most adversely affected have been the households that are exclusively

involved in casual labour; next are those that are self employed and lastly those that have access to land.

Recently developed guidelines on engaging in markets in humanitarian responses<sup>2</sup> suggest that there are three main strands in developing recommendations for market engagement:

- implementing short-term '*market-integrated relief*' to reach beneficiaries following emergencies;
- on a smaller scale, delivering '*indirect support through markets*', short-term targeted support to market actors that restore the market system after a crisis;
- and in the longer term, engage in '*market strengthening and development*' to build resilience and strengthen livelihoods.

The following are, in order of importance, the various options that are available.

- Distribution of vouchers for high energy food rations to vulnerable populations (young children, pregnant and lactating mothers and the elderly) for those households involved in casual labour and self employed in target villagers.
- Cash for work to those populations that are involved in casual labour; cash grants for households to access vegetables and vegetable seeds; cash grants for households with access to land for purchase of production inputs (tools, seeds and fertilizer).
- Model community saving and loan schemes or community micro-credit; Initiatives for both Rakhine Buddhist and Muslim villages.
- Support households that are self employed with small business grants both in Rakhine Buddhist and Muslim villages. Grants could be in kind in the form of various small tools and equipment.
- Support community livelihood centres where households with access to some land can be assisted with in kind production inputs (tools, seeds, fertilizers) to foster supply flow.
- Establish potato warehousing facilities in village tracts where potatoes are grown.
- Advocate with authorities for alleviating restrictions on movement and participation in economic activities for all population.
- Advocate with authorities that fair prices are negotiated for potato crop and that quotas on volume are respectful of farmer needs.
- More detailed assessment of market systems.
- Develop community education and development centres.

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<sup>2</sup> Executive Brief Engaging with Markets in Humanitarian Responses, WFP and Oxfam July 2013.

## **Chapter One: Emergency Context**

The roots of the conflict in Rakhine State stretch back many years and the peoples of Rakhine State have suffered a long history of inter-communal violence. These antagonisms erupted into open conflict in June and October 2012, resulting in massive population displacement and destruction of public and private properties with many persons injured or killed. The conflict reverberated across Rakhine State and spread to other areas of Myanmar. While the immediate triggers for the events were local, relations between Muslim and Rakhine Buddhist populations escalated beyond previous occurrences. The acts perpetrated were extremely violent in nature and resulted in entire villages and thousands of homes being destroyed thus displacing more than 100,000 people in the townships of Sittwe, Minbya, Myauk U, Kyaukphu, Kyauktaw, Pauktaw and Maungdaw.

The Myanmar government responded by imposing a curfew and deploying troops into the region. A state of emergency was declared by President H.E.U.Thein Sein and the military was called in to administer the State. Up till August 2013, approximately 140,000 people remain displaced across Rakhine State in 76 camps and camp-like settings. In addition, as many as 36,000 other persons remain isolated in host communities in numerous townships. The entire northern Rakhine State has been badly impacted, socially and economically, with travel restrictions and reduced or no access to basic services including markets, education and health care.

Whilst a majority of those displaced are Muslim, and entire Muslim neighborhoods of Sittwe and Kyaukpyu have been burned and destroyed, it should be recognized that Rakhine Buddhist communities in some areas also suffered both directly and indirectly from the crisis and continue to face increased hardships. The months of clashes not only claimed lives and many homes, but also wrecked the economy that is still struggling to recover from the worst outbreak of violence in decades. Reportedly, trade and business has dropped by half in northern Rakhine, unemployment is widespread, livelihoods have been lost and continuing insecurity has affected everything from fishing and agriculture to transport and construction.

Many of the Muslim population living in coastal villages in northern Rakhine have been moved into IDP camps. There has been a sharp decrease in the supply of shrimp, fish and crabs since June 2012. Agriculture too has suffered, as many farmers stay away from their fields for fear of being targeted. Border trade with Bangladesh has also been hit. A curfew imposed under Regulation 144 further limits movement and travel between the two countries. The scarcity of commodities to trade and Bangladesh's determination to keep out Muslim refugees fleeing from the violence has brought cross-border commercial activity almost to a standstill.

Against this background, it is important to remember that Rakhine State before the recent conflict was one of the least developed parts of Myanmar, characterized by high population density, malnutrition, low income, poverty and weak infrastructure, conditions which have been further exacerbated in recent years by two major natural disasters

Furthermore, Rakhine State consists of a mosaic of ethnic and religious groups, with approximately 800,000 Muslims who are primarily residing in northern Rakhine in an extremely precarious situation given the lack of clarity over their legal status and the longstanding citizenship dispute with the Myanmar government.

Over the last twelve months, the Myanmar government and humanitarian agencies have collaborated to respond to the immediate emergency needs of the IDPs. They have worked together to seek short, medium and longer term interventions and continue to make efforts aimed at reducing tensions as well as resolving the longstanding conflict. These efforts have taken place amid a climate where the perception of bias in the delivery of assistance towards one particular group or beneficiaries over others, has led to recriminations, obstructions and the need for all partners local or international to operate in full respect of the basic humanitarian principles of humanity, impartiality, and neutrality.

The Revised UNOHCA Rakhine Response Plan for July 2012 to December 2013 aims to ensure a smooth transition from the humanitarian phase to early recovery and development. The plan advocates for durable solutions of peace-building, reconciliation between affected communities, and safe and voluntary return of IDPs to their places of origin. The document reports that a year after the violence, the collaboration between Government and humanitarian partners has resulted in the delivery of substantial humanitarian aid.

And while early recovery and livelihoods aspects have been initiated, the large displacement of populations in Rakhine State has resulted in the breakdown of value chains and destruction of assets, along with limited access to markets, basic services, livelihood options and employment services.

Economic recovery in this context is crucial, with both the government as steward and civil society actors to play a crucial role in the recovery and in promoting social cohesion. Access to farm lands, fishing opportunities and markets, and removal of movement restrictions are seen as key to creating an enabling environment for recovery in Rakhine State. Several UN assessment studies<sup>3</sup> have recommended that early recovery activities in Rakhine State take a strategic, integrated and holistic approach, ensuring that important gaps between humanitarian actions and development are met, laying foundations for longer term recovery and development. The core of the strategy has been to focus on economic recovery through provision of livelihoods support, restoration of production capacity in agriculture and fisheries asset replacement.

The strategy also aims to focus on community confidence-building interventions in the short term, while laying the foundations for more long-term peace building and conflict prevention. Plans include development and implementation of joint activities to engage both communities, capacity-building of community members as well as members of multi-

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<sup>3</sup> The Rakhine Post-Crisis Livelihood and Early Recovery Sector Assessment, UNDP, 2013, the Rapid Assessment of Non-Displaced Populations in Sittwe Township, WFP, 2013 and the Rakhine Community Crisis Needs Assessment Mission, FAO, 2013.



stakeholder committees currently being established on facilitation, dialogue, mediation and conflict prevention.

UN agencies and NGOs are aiming to support village-based livelihood interventions and cash-for-work programs by injecting monies for the repair and construction of key rural infrastructure, including jetties, embankments, dams and bridges, as well as access-road and pond renovations. Longer-term programs are seeking to restore livelihoods, increase resilience by combining participatory approaches to improve access and management of land and fisheries, promoting producers' groups for seed production and participatory agricultural extension. Improving access to markets is to be supported by the direct restoration of productive assets and capacity-building.

In this context, the role of CDN (Consortium of Dutch NGOs) in northern Rakhine includes support for early recovery, food security, agriculture, livelihood and water and sanitation in the townships of Pauktaw, Maungdaw and Buthidaung, Sittwe, Minbya, Myauk U to fulfil the needs of vulnerable communities. Having signed a Memorandum of Understanding (MOU) in March 2009 with the Myanmar Agricultural Services(MAS), CDN works with the Ministry of Agriculture and Irrigation and is implementing activities that support the development of rice banks, multi-storey gardens, introducing disease and drought resistant potato varieties, encouraging small business development, supporting water and sanitation activities, food distribution and the construction of irrigation dams. In northern Rakhine, CDN is working in 48 villages in Buthidaung and Maungdaw, implementing a cash for work program focusing on the construction of dams for agricultural purposes and rehabilitation of roads, distributing chemical fertilizer and seeds as well as providing tree seedlings, Auratia and Beetle nut.

## **Chapter Two: EMMA Methodology**

In May 2013, out of considerations of "Doing No Harm" and program efficiency, CDN proposed undertaking an Emergency Market Mapping Analysis (EMMA) as part of its emergency livelihood project for Buthidaung township in Maugdaw District, Rakhine State. The terms of reference suggested an independent study team be hired that could facilitate and implement an assessment together with CDN field staff, analyse the data and draft a report. Following submission of an expression of interest, DantDaLun Management Consulting Services Co. was contracted for the assignment and proposed implementing the assessment through a team of two consultants, U Khin Maung U and Steven Lanjouw, both with past experience in Rakhine State and well versed in food security and livelihood issues in Myanmar. The study team proposed implementation of the field work in three hubs of Buthidaung Township focussing on 12 villages out of the 29 villages that are in the CDN Buthidaung program area. (See Annex 1 Village selection table and map of study sites)

Together with CDN field staff and several locally recruited enumerators, the study team undertook a rapid market analysis investigating two critical market systems. The team gathered data through household interviews in designated villages, semi structured interviews with key market informants and government officials and held focus group discussions with various groups of villagers, such as with farmers, women, casual labour and small scale entrepreneurs.

The EMMA approach is designed, “to be used in the aftermath of a sudden-onset crisis and is premised on the rationale that a fuller understanding of critical markets in an emergency environment enables decision makers to consider a broader range of responses based on market realities. The EMMA methodology focuses on analysis of specific, existing market systems which have been impacted by an emergency but are nevertheless critical for providing goods, services, or income for a target population in a defined geographical area.”<sup>4</sup>

The methodology used for this study adopted the standard EMMA approach following closely the EMMA 10-step process including a focus on two critical market systems and a combined gap, market, and response analysis. For each of the critical market systems, there is a comparison of the “before” the crisis market system and an “after” the crisis market system to establish a baseline and enable the identification of key constraints on the market systems brought on by the conflict in June and October 2012. Additionally, to a limited extent, the EMMA looks forward over the coming period to anticipate what market based program opportunities may be possible that favour economic recovery and livelihood development.

A two step approach was used for identifying and then prioritizing two markets that are perceived to be critical for supplying goods or income for the targeted conflict-affected population for this study. First, prior to the launch of the EMMA assessment, a feasibility visit was undertaken to Buthidaung Township by one of the consultants to assess the markets in which the population is currently engaged. Secondly together with senior staff at the CDN office in Sittwe, a selection was made of two markets that potentially offer the best options to CDN for market system engagement.

### **Chapter Three: Target Population**

The EMMA assessment focused on three hubs within Buthidaung Township (population 149,377 with 46,192 households) in areas where CDN has undertaken its emergency livelihood project. This included the San Hnyin Wai hub on the east side of Buthidaung town, Let Wea Det hub on the west and along the Maungdaw-Buthidaung car road and the Sein Hnyin Pyar hub south of Buthidaung town on the Mayu river. Within these geographic areas, the assessment sought to assess the market-related realities for three socio-economic groups – those that have cultivation rights to farm land, those that are landless and work in both agriculture and non-agriculture sectors as casual or daily labour and those that are self employed. The self employed included fishermen, those collecting forest products, those involved in household agro-based manufacturing, artisans (carpenter, craftsman), those in the trade business (market, shop keeping), and in livestock trade.

According to a CDN baseline survey undertaken in Buthidaung and Maungdaw in October 2011, of all households (n=288), 46.2 % have access to some land, 35.5 % are exclusively involved in casual labour, and households partly or exclusively self-employed represent

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<sup>4</sup> Lebanon Emergency Market Mapping and Analysis (EMMA) Executive Briefing for Analyses of the Construction, Service Sector and Agricultural Labour Systems, April 2013.

about 72 % of the population. In the area surveyed in 2011, 25.3% were Rakhine Buddhist, 2.1% Kamee and 74.3% were Muslim with 55.6% of Rakhine Buddhist accessing land and 47.3% of Muslims accessing land. Among school aged children, 68.5% of those aged 6-16, are going to school. Of the children not in school, 68.9% are not in school due to economic reasons. The overall literacy rate among adults is 15.8% and for women only 6.6%.

<b>Box 1 Characteristics of target population</b>				
<i>Target groups</i>	<i>Female</i>	<i>Male</i>	<i>Location</i>	<i>Essential Characteristics</i>
1. Households with access to land	46.2%	46.2%	29 villages in 5 village tracts of Buthidaung Township	Typically have some cultivation rights to farm land in one or both the monsoon and winter season. Rely on production of food staples.
2. Households involved in casual labour (exclusively)	35.5%	35.5%	29 villages in 5 village tracts of Buthidaung Township	Typically rely on casual or day labour for income, rely on relatives, neighbours for charity, badly affected by crisis
3. Households that are self employed (partially or exclusively)	72.2%	72.2%	29 villages in 5 village tracts of Buthidaung Township	Typically rely on self employment, fishing, firewood collection, artisanal work, trade and small business, Often involved in multiple activities.

Of all households only 25.3% indicated being food secure all year round. 27.4% mentioned they were moderately food insecure (between 1 and 3 months), 39.6% mentioned they were severely food insecure (between 4 and 7 months) and 6.9% said they were extremely food insecure (between 8 and 12 months food insecure per year). In a Participatory Rapid Appraisal (PRA) conducted by Agro Business Development, a wealth ranking was undertaken in the same geographic area of Buthidaung and out of a total of 2571 households participating in the PRA, 5% considered themselves rich, 12% consider themselves better off, 31% considered themselves poor and 52% considered themselves poorest.

In terms of seasonal calendars, the three tables below provide a consolidated view of how villagers understand time, seasonal variation, workload, income, migration, food security, and livelihood conditions.

<b>Table 1 Consolidated seasonal calendar for 3 Hubs Buthidaung Township</b>												
Crisis affected economic areas	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Temperatures			low					High				
Rainfall/flooding	Low									High rain		
Potato crop cycle			Planting		Harvest							
C. Fertilizer cycle	High Utilize				High Utilize					High Utilize		
Vaccinations			Vet						Vet			
Tourism season												
Labour migration	Bangladesh										Bangladesh	
Hungry season	Hunger										High hunger	

Table 2 Consolidated seasonal calendar for a target groups in Buthidaung												
Target group	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Income levels					High income							
Loan repayments						pay back						
Feast Days		Eid										Eid
School terms	primary school									primary school		
Fodder			Grass						Grass			
Livestock moves	High Selling					Low selling			Selling			
Casual employment		High								High		
Shelter activities						Building						

Table 3 Consolidation seasonal calendar for market system												
Market-system (e.g potatoes )	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Volume of trade					High					Low		
Prices at market	High				Low					High		
Input purchases		High										
Road conditions	Muddy									Muddy		
Risk of crop pests				High		High						

These tables suggest that aside rice which is the most important crop, villagers also engage in a winter crop of potatoes and chillies as part of their agricultural cycle. Casual labour employment and the migration of labour occur within two peaks between June to October, a period of the year when hunger and food insecurity also prevail. Income levels are highest following the potato harvest when there is substantial trade in crops and other goods. Fertilizer usage is also seasonally determined as is the engagement in livestock trade. Market prices are highest in June to October and lower in the January to March period rising again in April. Input purchases are highest in the October-December period presumably for the purchase of fertilizer so as to grow winter crops. Access within the township is severely constrained in the monsoon season which lasts from June until September during which northern Rakhine receives very heavy rains. Other times of the year, the township suffers from drought and a lack of rain fed water.

According to household income and expenditure profiles that were collected during the EMMA assessment and which provide a 'before' and 'after' crisis comparison, the food security and livelihood situation in Buthidaung has significantly deteriorated over the last year for the population living in the 29 villages (pop. 20,646) within CDN's Buthidaung program. Out of these villages 5 are Kamee, 4 Rakhine Buddhist and 18 Muslim. The EMMA indicated that 75% of the population residing in these villages report being landless, a higher percentage than in data collected in the baseline 2011. Furthermore, the income and expenditure levels of all three employment categories have significantly decreased over the last year.

Whilst the main income source for the population are the sales of vegetables and casual labour for agricultural purposes, income levels for these livelihood activities has dropped. The EMMA household income and expenditure profile suggests that for all three employment categories, incomes have gone down between 20 to 50 % on a monthly basis comparing 2012 with 2013. The most significant drop in income has been for those that are working in casual labour. The demand for labour has plummeted. In the 2011 baseline assessment, CDN found average monthly incomes for casual labour to be 27,205 MMK per month; in the EMMA assessment, this was in the region of 14,000 MMK per month. On the expenditure side, all population categories have reduced expenditure on food and have had higher expenses in terms of health care.

According to the World Food Programme (WFP) Food Security Update for April 2013, the child nutritional status has significantly deteriorated to levels far exceeding emergency thresholds. Screenings indicate that as many as one-quarter of all children under 5 could be acutely malnourished in Buthidaung Township. In July 2013, the Food Security Update moreover reports that for populations that were not displaced during the crisis, as is the case of most of the population of Buthidaung, insecurity continues to impact livelihoods and severely restricts movement as well as limits access to basic services. Furthermore, the monsoon rains have also been particularly strong causing much damage to seafood production in Buthidaung and WFP and Action Contre la Faim (ACF) have started to provide relief rations amongst children under 5 years and to pregnant and lactating women.

#### **Chapter Four: Critical Market Systems**

As highlighted earlier, the selection of the two critical markets followed a two step process. Significant in the decisions to select potatoes and chemical fertilizers was the importance these two markets have, in terms of supplying essential food, providing a basic cash income and the importance they have as agricultural input.

##### Potatoes

The 2011 baseline survey pointed out that whilst paddy is the most important crop in the monsoon season, potato is the most important product in the winter season followed by rice, chillies and turmeric. As a winter crop, 32.6 % of those interviewed grow potatoes and 34.4% of those sell their potato crop, which is the crop most often sold in Buthidaung. While rice is overall the most important crop, rice is primarily for household consumption as land holdings are very small. Potatoes in times of food scarcity are a key tradable and income generating commodity as well as providing food security for six months of the year.

The winter potato crop is not only an essential staple in the diet of the population of Buthidaung Township but is also an important income earner as Buthidaung exports large quantities of its crop to Maungdaw, Sittwe and eastern Rakhine State following harvest in February through to May. Buthidaung potatoes are well known in Rakhine State and are produced in three sizes, small, medium and large and consumed locally throughout the year and exported in harvest and peak seasons. In the opinion of the consumers of Sittwe, potatoes cultivated in Buthidaung hold a good name and are well liked by the general populace. Potatoes are considered food security as many farmers store potatoes (like paddy) for both 'consumption-and-seedling' purposes. Demand is often high for potato

seedlings at planting season as especially poorer local growers may have eaten their remaining crop as food is scarce.

Trade in potatoes between Buthidaung to Sittwe before and after the June 2012 crisis seems to contradict the notion that one has of a contracting economy in a post conflict environment. One would expect the trade and volume of potatoes traded to have stagnated or dropped off given the slump in income and expenditures, food insecurity and restrictions on movement and trade within and between townships. Information collected in the potato market system however indicate that in spite of the conflict environment, potato prices in the harvest season were lower than in 2012 and the volume of potatoes traded to Sittwe and elsewhere in 2013 during this time (Feb-May) had gone up. Either the potato crop in Buthidaung in 2013 was larger and therefore potatoes cost less and were more readily traded based on demands elsewhere or possibly the potato crop faced price control measures which have kept farm gate prices low and volumes produced may or may not have increased. Very significant is that while reports of the food security and nutrition status of populations in Buthidaung remain very precarious,<sup>5</sup> a significant amount of the potatoes from Buthidaung were exported to Sittwe and have to some extent been traded to Muslim traders/retailers that have destinations in the IDP camps/villages. While the food security situation in the camps remains relatively stable as assistance is largely sufficient to cover needs, there are reports of IDPs selling part of the food assistance they receive to diversify their food intake and punctually cover unmet needs.<sup>6</sup>

In its July 2013 Food Security Update, WFP suggests reviewing food assistance to some of the IDP camps, especially those close to running markets, where cash transfers rather than food in kind might better serve the preferences of Sittwe located IDPs. However, this EMMA suggests that these measures, particularly with regards to the potato market system need to be properly investigated as these measures could have serious implications for those populations within the three employment groups in Buthidaung involved in the cultivation of potatoes. Currently imposed economic measures, such as exclusive transport rights for Rakhine Buddhists, increased transit costs for all agricultural produce, increased handling charges as well as mandatory quotas and pricing measures driving down incomes earned by those farmers selling potatoes may seriously undermine the ability of the populations involved in the production and cultivation of a winter potato crop in Buthidaung to secure an essential food stockpile and generate a basic disposable income in the future.

Increased demand for potatoes by populations in IDP camps, through the provision of cash for food handouts, without protecting Buthidaung farmers with fair farm gate potato prices and reasonable production supply quotas may have already undermined the 2013-2014

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<sup>5</sup> The WFP April 2013 FSU reports for northern Rakhine State, that there has been a significant deterioration in child nutritional status, to levels far exceeding emergency thresholds. Screenings indicated that as many as one-quarter of all children under 5 could be acutely malnourished in both Maungdaw and Buthidaung townships.

<sup>6</sup> It has been reported by NGOs working in the IDP camps in Sittwe that IDP's are known to sell almost a third of their food assistance in kind, in part to compliment their food intake with other tradable commodities as potatoes and other vegetables that are sold in the village markets within the IDP camps.

potato crop or any winter crops in the future. Populations in Buthidaung may have been forced to sell more of their potato and potato seedling stock in the 2012-2013 potato season than is optimum for own consumption and for planting in the upcoming winter crop season.

### Fertilizers

Intimately linked to the potato crop in Buthidaung are chemical and organic fertilizers. The 2011 baseline survey concludes that more than 90% of rice farmers use some kind of fertilizer to grow their paddy rice crop. Farmers that cultivate rice and potatoes, and use a combination of chemical and organic fertilizer, have the highest rice and potato yields and those that use no fertilizer have the lowest yields. Without exception, given the quality of the soil and local agricultural conditions, the biggest constraint in crop production in Buthidaung is that households have limited access to fertilizer because it is too expensive or because they cannot find the credit to purchase fertilizer. The lack of money to buy necessary agricultural inputs underlines the current crisis within subsistence agricultural in northern Rakhine.

Whilst in 2011 and prior to the June 2012 crisis, populations in Buthidaung were mostly able to secure loans to buy food (68.3%) followed by purchases of agricultural inputs (40.6%) with business investments as the third most important reason to request for a loan, all socio-economic groups in 2013 faced more difficulties in securing loans and credits. According to a survey (n=360) in Buthidaung by CDN that ran alongside the EMMA in September 2013, while households were still able to secure some credit and loans, primarily from a money lender (37.2%) followed by from friends and neighbours (26.8%), through pre sales of produce to traders (12.7%) and from government (9.7%), credit and loan sizes were significantly less than in 2012 and collateral required much larger. In comparing what people spent loans on in 2012 and 2013 the table below suggest a similar pattern -- the majority of loans are spent on securing food (64%), then on fertilizers (40%), on health expenses (26%) and on hired labour (21%).

Table 4 Loan Spending	Percentage		amount	
On what did you spend your loans	2012	2013	2012	2013
Food	68.3%	63.9%	0.7	0.6
Rice seeds	24.4%	20.8%	0.3	0.3
Vegetable seeds	27.2%	16.9%	0.4	0.3
Education of the children	17.5%	14.2%	0.5	0.4
Fertilizer	40.6%	39.2%	0.5	0.5
Health emergencies	29.2%	25.6%	0.5	0.5
Weddings	2.2%	0.8%	3.6	1.2
Funerals	0.3%	0.6%	0.5	0.8
Business investment	8.9%	8.1%	2.4	1.5
Hired labour/cattle for traction	21.4%	21.4%	0.6	0.7
Repay loan	10.0%	5.8%	1.0	1.3
To hire land	9.2%	5.0%	0.6	0.5
Others	4.4%	0.0%	1.5	0.0

From the same survey, 87.2% mentioned that the most significant problems they face in 2013 are a lack of food. 47.9% mentioned no work opportunities, 46.0% high acute debt and 42.9% lack of access to credit. This pattern was comparable for both genders as well as for those that were Muslim or Rakhine Buddhist. In the EMMA assessment all socio economic groups pointed out that since the June 2012 conflict, people have faced extreme difficulties in securing formal loans of any kind. The provision of credit for commodities system has been abolished and those seeking to borrow monies can no longer get credit even at very high interest rates of 30%. Many with existing loans mentioned that their debt levels had increased and that they were currently unable to pay off their existing loans and feared that their assets and lands would be taken from them as collateral for bad loan payments. Whilst the poorest of the poor, those working as casual labour, are no longer able to borrow to buy food, those with access to land are less able to borrow money for agricultural inputs such as labour, oxen and ploughs, seeds and chemical fertilizers imported from the mainland or from Bangladesh.

Based on information collected by the EMMA, there are five types of chemical fertilizer available in Buthidaung; Urea old China, Urea new Myanmar, Urea Bangla, T-Super 16 and T-Super 46. Chemical fertilizers are bought from Bangladesh via Maungdaw, from Yangon via Sittwe by sea cargo and by land from Mandalay. Although the total volume of fertilizer bags bought and sold in Buthidaung has dropped off after the June 2012 crisis, trade in fertilizers is still ongoing. Sold in 50 kg bags with prices from 15,000 to 25,000 MMK, the areas of Rakhine State that imported the highest amount of fertilizer in 2013 include the townships of Myauk-Oo and Kyauk-Taw with the 3 townships of Maungdaw, Rathedaung and Buthidaung of northern Rakhine State importing much less. Whilst much of the Urea fertilizer is sold at the start, the middle and latter parts of the monsoon rains, as it is broadly used for the paddy harvest, the T-Super brands are mostly sold at the onset of the winter season for the potato harvest. Normally, traders dealing in fertilizers for the winter crops start placing orders during the second half of the monsoon season and have stocks in warehousing at the start of the winter crop demand. The fertilizers that are most traded include the China Urea and Myanmar Urea varieties. Currently all purchases of fertilizer can be made over the phone and are paid for on a 'cash down' basis only. Whilst many farmers claim that they cannot work without fertilizer, several Rakhine Buddhist traders have since the crisis in June 2012, stopped supplying Muslims traders, retailers or consumers with fertilizers or those organizations that are assisting them with fertilizers.<sup>7</sup>

Aside the sectarianism in the fertilizer market system and lack of access to credit and loans, other important problems that populations face in terms of access to critical markets systems in Buthidaung is the current food security situation, the high levels of indebtedness, the low levels of employment and the restrictions on movement as well as stringent government policies and regulations and corrupt practices of some local officials which interfere with the functioning of the markets.

## **Chapter Five: Market System Maps**

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<sup>7</sup> Based on interviews with Sittwe Traders in September 2013.



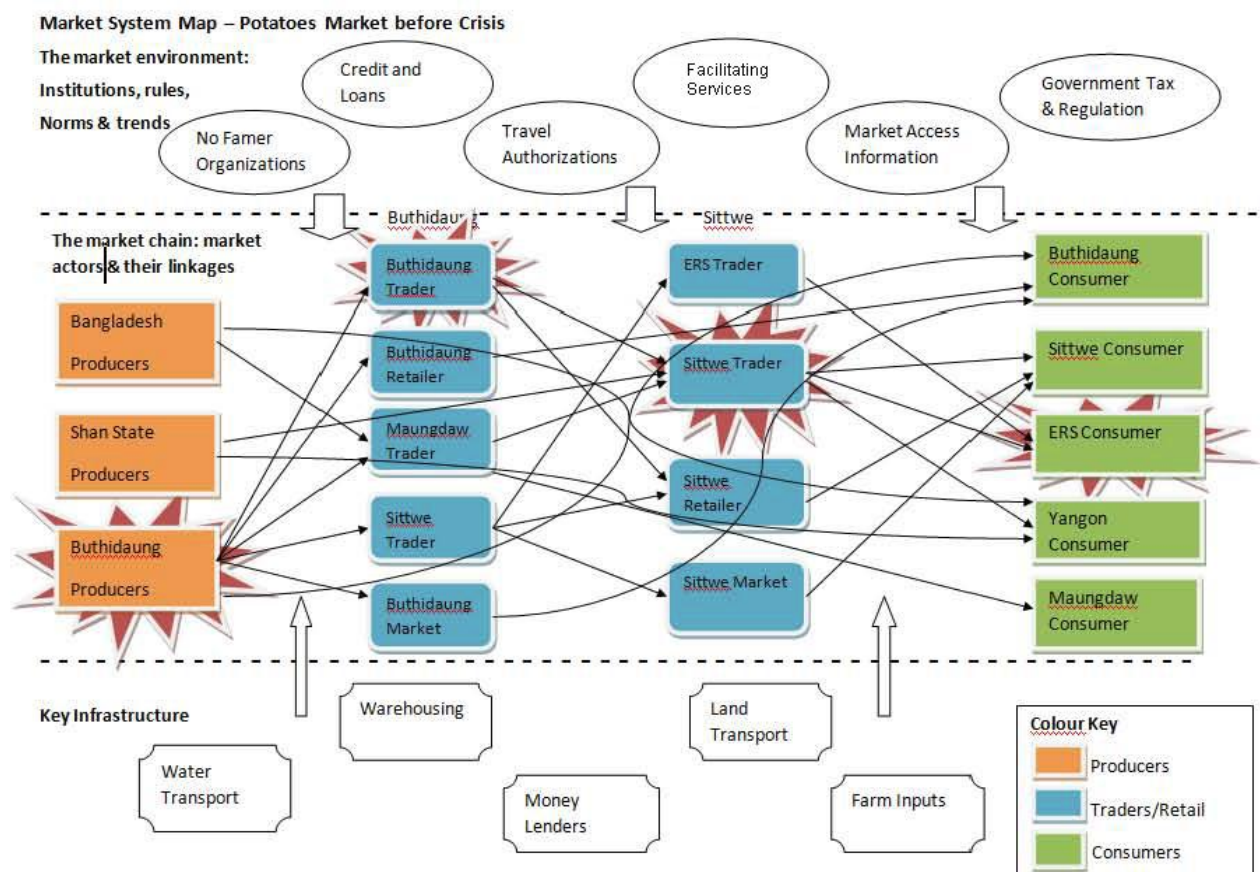
EMMA uses market maps as the graphical representations of the market systems before and after an emergency. The market maps show the linkages between different market actors – producers, retailers, traders/wholesalers and consumers - and the impact of the crisis on the market system’s structure, functions, capacity and performance.

The potato and chemical fertilizer market maps below capture how these commodities are produced, exchanged and accessed by the target populations. Figure 1 shows the main market actors and their linkages in the market system before the conflict and Figure 2 reflects the changes/disruptions and realignment created by the emergency situation in the potato market system. Figure 3 and Figure 4 show main actors, structures and factors in chemical fertilizer market prior and after the emergency respectively.

### Potatoes

Figure 1 displays the complex network of actors and linkages involved in the potato market system in Buthidaung and Sittwe before the crisis in June 2012. Illustrated by the “blasts”, key actors involved in the market system are Buthidaung cultivators, Buthidaung traders that buy farm gate produce, Sittwe traders that trade with Buthidaung traders and eastern Rakhine consumers who represent the main demand of Buthidaung potatoes. Potatoes consumed in Rakhine are produced in three main areas -- Shan State, Bangladesh and Buthidaung. Locally grown Buthidaung potatoes are grown as a winter crop, seedlings are

Figure 1 Potato Market System before Conflict



planted in November and harvested in February March. Buthidaung and Sittwe traders/wholesalers are the main dealers, purchasing and then transporting about 90% of the crop to Sittwe where the largest portions of the crop is sold to traders and retailers who sell the crop to consumers in eastern Rakhine. As the many arrows suggest, the potato market in Buthidaung and in the region prior to June 2012 have multiple actors with numerous linkages and networks.

Although the potato market system before the 2012 crisis was “routine”, the market environment was nevertheless restrictive, particularly in Northern Rakhine. As presented in Figure 1, the market environment in Buthidaung has for many years been restrained; there were no farmer cooperatives or associations, and local populations involved in agriculture faced limited access to credit and loans, had poor market information, faced “facilitating services” and interfering government regulations and taxes. Travel restrictions although much less significant than today were imposed in the past on particularly the Muslim population. The local market infrastructure was also underdeveloped and had a negative impact on the potato market. Transport means, warehousing and farm inputs were at best variable and often inadequate and like money lending often controlled by zealous local officialdom.

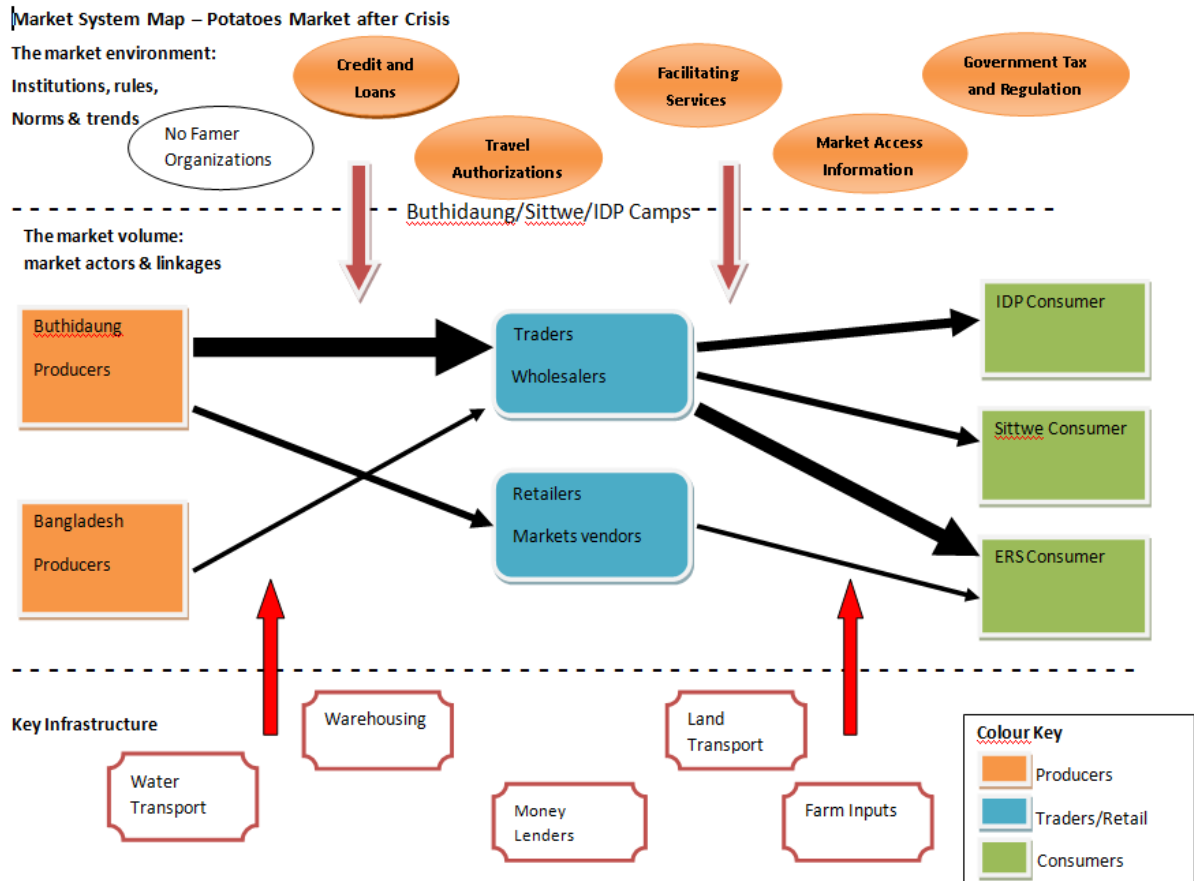
As Figure 2 below illustrates, the main source of potatoes in Rakhine State following the crisis comes from Buthidaung, with this crop being traded to retailers and market vendors and onwards to consumers in Sittwe, eastern Rakhine and most recently to IDP populations in the Sittwe camps. This trade is driven by Muslim traders in Buthidaung and in the host villages where IDP camps are located and represents a new departure and is a direct consequence of the June-October 2012 crisis in Rakhine State. Representing about 36% of all potatoes traded by Muslim traders in Buthidaung, the many IDP camps and their consumers represent a significant market share.

This trade and the trade to eastern Rakhine State and to Sittwe town by Muslim traders/retailers represents about one third of the total yearly potato crop production in Buthidaung. The remaining crop is traded through and by Sittwe traders that have access to local farmers and markets in Buthidaung directly. Total volume of potatoes produced between January – June 2013 is in the area of 6,710,980 viss or 1,073,775 tons.

Notwithstanding the significant volume of potatoes traded, Figure 2 indicates, that the local market environment for potatoes in Buthidaung in 2013 is highly controlled and is regressive in terms of the income and expenditures implications this has for the three socio-economic groups in the EMMA target population. Not only have income levels gone down significantly, expenditures on all essential items have been reduced, groups have less access to credit and loans, employment opportunities have become more scarce as debts have increased and disposable incomes have dried up and the overall security situation and imposition of travel restrictions for Muslim limits people’s ability to move and seek livelihood opportunities. In addition, local authorities have increased levies and taxes, such as a new tax on firewood collection and the level of “facilitating services” has also increased at all check points and transport hubs.

All forms of key infrastructure such as transport means, warehousing and farm inputs are less accessible and available to the target population since the crisis and have limited the

Figure 2 Potato Market after the Crisis

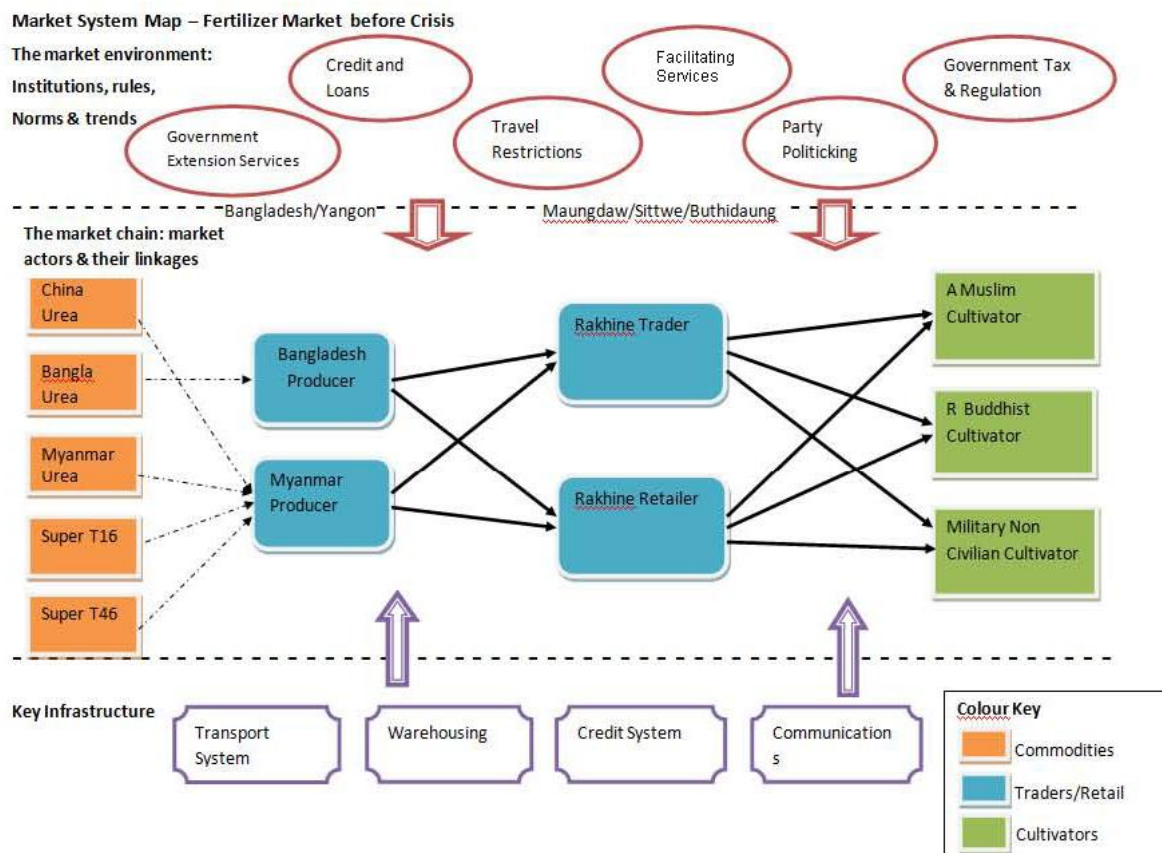


population's ability to cultivate and produce a potato crop. It is disconcerting that given this negative scenario that even though the volume of potatoes exported has gone up after the crisis, the three socio-economic groups in Buthidaung seem less capable now, then before of sustaining themselves.

### Fertilizers

Figure 3 illustrates the fertilizer market before the crisis and shows that there are 5 key fertilizer commodities that are produced and distributed by two key producers, one in Bangladesh and another in Myanmar. The Myanmar producer is also the importer and distributor of Chinese made fertilizer. These producers sell their fertilizers to traders/wholesalers and retailers in Sittwe and northern Rakhine where these traders/wholesalers are the key providers of fertilizer supplies to Muslim, Rakhine Buddhist and paramilitary cultivators that are growing monsoon and winter crops in Buthidaung. Of interest is that, although the market system, as mentioned above in the potato market system, was "routine" before the 2012 crisis, the market environment and the market infrastructure were restrictive particularly in northern Rakhine. This meant that interference in the fertilizer market system was both common and overseen by local authorities.

Figure 3 Fertilizer Market before Crisis

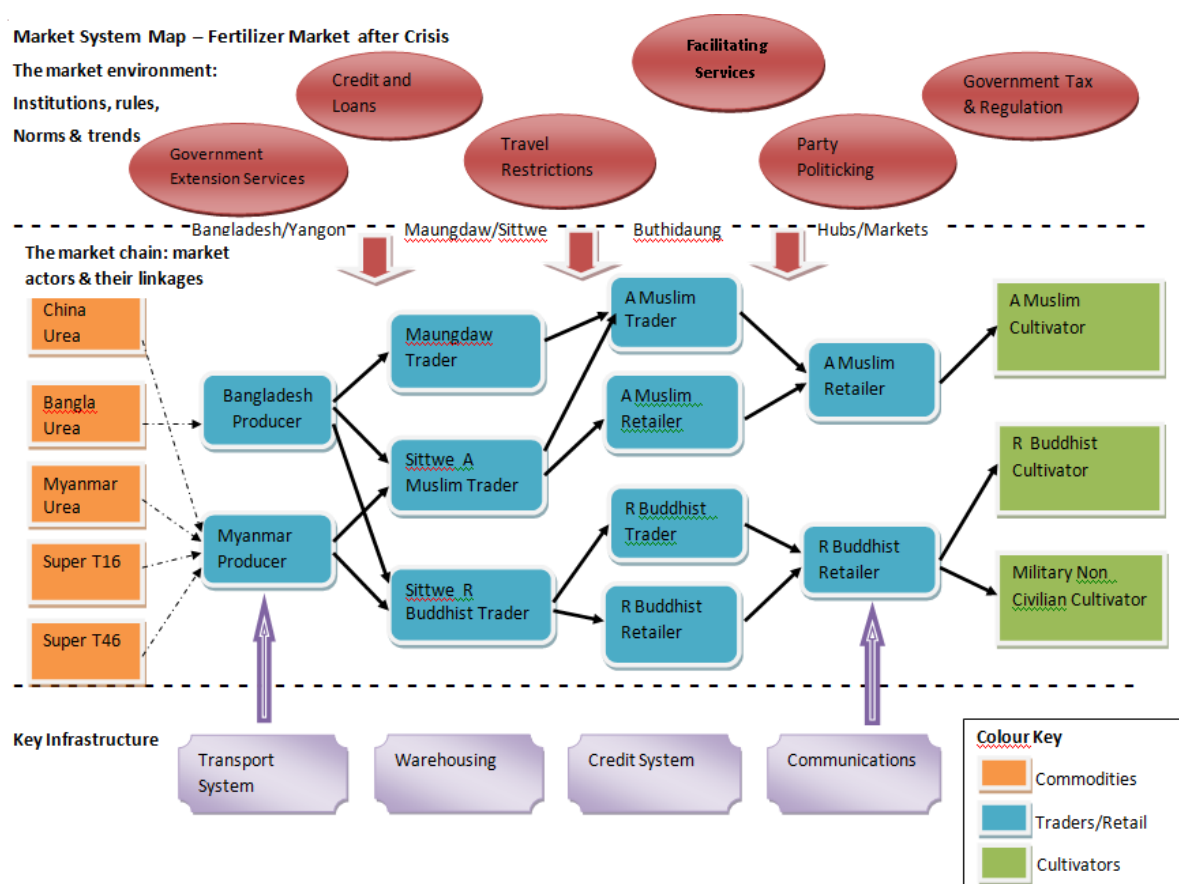


As illustrated in Figure 4, the fertilizer market after the crisis suggests that market actors and their linkages became sectarian, attaching importance to perceived differences between traders and retailers of different religions. Significantly, Muslim cultivators in Buthidaung are currently only able to purchase fertilizers from Muslim traders and retailers and this is likewise the case for Rakhine Buddhist cultivators who can only purchase fertilizers from Rakhine Buddhist traders and retailers. Paramilitary cultivators are also only purchasing fertilizer from Rakhine Buddhist traders and retailers.

This sectarianism is however not noticeable outside of Rahine state -- seemingly producers and distributors in Myanmar are not participating in this form of trade segregation.

The fertilizer market system in Buthidaung after the crisis has dropped as is expected in a contracting economy in a post conflict environment. The volume of fertilizer bags sold in 2013 is down from the year before and has been affected by the same market constraints that have affected the potato market system. This includes transport restrictions, extensive local government intrusion, more “facilitating services”, limited credit and loans and political opportunism which have polarized market actors.

Figure 4 Fertilizer Market after Crisis



Similarly, the same inadequacies and constraints that have affected the potato market have also affected key infrastructure for the fertilizer market -- the transport system is more restrictive, there are no real warehouses available, communication means are limited and suppliers reluctant to provide credit.

## Chapter Six: Key Findings of Gap analysis and Market analysis

The key findings of this EMMA are that the food security and emergency livelihood situation of populations in Buthidaung township are constrained or face bottlenecks as a consequence of the following key issues:

- Increased restrictions on movement for Muslim populations and a continuing climate of fear between Rakhine Buddhist and Muslim villagers seriously disrupts the ability of local populations to secure food, cultivate crops, render services and assure themselves of a subsistence income.
- The current state of emergency and militarized administrative environment has depressed local employment opportunities, reduced credit and loans schemes for purchasing farm inputs, led to lower income and expenditure levels, reduced demand for all essential goods and increased levels of indebtedness for target populations.
- Reduced food stocks and insufficient food security provisions, particularly for vulnerable groups, has led a significant number of households to reduce

expenditures on food and has led households to consume and/or to sell potato crop seedling supplies for the coming winter and monsoon crop.

- Agricultural policies and local government regulations whereby farmers are offered very low prices for market crops like potato at harvest time whilst obliging farmers to sell quantities of stock beyond their abilities have distorted the local economy and increased food insecurity.
- The current demand for Buthidaung potatoes by IDP populations in Sittwe camps although very noteworthy as this demonstrates important levels of cooperation and is essential for IDP populations seeking to diversify their food intake, also implies an increased pressure on local farmers to sell their potato crop beyond sustainability levels.
- The segregation of market actors in the trading of fertilizers in northern Rakhine and in Buthidaung, in particular, has a negative effect on the local market for farm inputs and undermines opportunities for finding common ground and collaborative livelihood opportunities in an environment already deeply divided by inter-communal strife.
- The levels of “facilitating services” have significantly increased since June-October 2012, checkpoints and other transit legitimization points require increased levels of money. The trade of all commodities by and through Muslim traders faces a 20% facilitation fee imposed by local authorities and/ or military further depressing commodity prices and incomes earned from tradable commodities.

The impact of these issues on the three socio-economic groupings in Buthidaung has been different. Those most adversely affected have been the households that are exclusively involved in casual labour. Next are those that are self employed and lastly those that have access to land. Box 2 below presents the estimated shortfalls in income that these target groups face on a monthly basis comparing 2012 to 2013, with those households most dependent on others for their livelihood also the ones that have suffered the most.

While households with access to some land have been able to continue to grow vegetables and possibly cultivate rice and those self employed able to continue to earn some kind of livelihood as they perform a variety of functions, the June 2012 crisis and the then imposed state of emergency and increased restrictions on Muslim populations significantly reduced opportunities for those involved exclusively in casual labour. Casual labour was no longer required for transporting cargo for Rakhine Buddhist commercial enterprises, those with land reduced their reliance on casual labour and casual labour was no longer able to move around in search of work. From interviews undertaken in the EMMA, the livelihood situation for those in casual labour is alarming -- many earn less than 10,000 MMK per month for an entire household, are having to reduce their food intake and spend increased amounts of their little money on health care costs. Numerous households mentioned they now rely on WFP food support.

<b>Box 2 Summary of Gap Analysis</b>						
<i>Target Group</i>	<i>HH in need</i>	<i>Household Shortfall in 2013</i>	<i>Other aid</i>	<i>Total Gap</i>	<i>Likely gap duration</i>	<i>Prefs for help</i>
1. Households with access to land	1632	20% fall in income	-	-	Oct-Feb	Mostly in-kind and cash
2. Households involved in casual labour (exclusively)	1253	50% fall in income	-	-	Oct-Feb-	Mostly in-kind and cash
3. Households that are self employed (partially or exclusively)	2550	30-40 % fall in income	-	-	Oct-Feb	Mostly in-kind and cash
Total population	3532					

For households which are self employed, the contracting and more restrictive economy due to decreased demand for all saleable goods and increased local administrative directives restricting the movement of those involved in fishing, gathering firewood, artisanal activities and market vending has meant reduced income from market trade which revolves primarily around local produce. Spot checks and travel restrictions are in force for Muslims, newly restricted areas have been set up and enforced as fire free zones, a curfew is in place and the collection of forest produce is being taxed.

For households with access to land and in key potato producing areas such as in the villages in Htin Shar Pyin Village Tract and Let Wai Det Village Tract, the contracting and more restrictive economy has meant reduced income from their vegetable (potato) trade. Additionally they face more difficulties in accessing credit to purchase farm inputs such as fertilizer, less ability to hire farm labour, increased indebtedness due to an inability to pay off past loans and a distorting pricing policy whereby farmers are forced to accept very low prices for potatoes at harvest time and forced to sell quantities of stock beyond their abilities to retain a surplus for future cultivation and food security.

Data on the volume and pricing of potatoes is very hard to come by, but what has been gathered by the EMMA through discussions with local traders suggests that not only do prices vary substantially throughout the year but that a very substantial volume of potatoes is exported each year to Sittwe and elsewhere. Data collected from the several traders for the period February to May suggests that in the lead up to the conflict in June 2012, the potato prices and volumes traded from Buthidaung to Sittwe were as follows:

- Feb prices MMK 260/viss and total amount traded 52,000 viss
- Mar prices MMK 340/viss total amount traded 55,000 viss
- Apr prices MMK 410/viss total amount traded 60,000 viss
- May prices MMK 440/viss total amount traded 44,000 viss

In the same period one year later, the potato prices in Buthidaung are traded at a lower price while the volume has increased substantially.

- Feb prices MMK 280/viss total amount traded 50,000 viss
- Mar prices MMKs 200/viss total amount traded 49,000 viss
- Apr prices MMK 220/viss total amount traded 78,000 viss



- May prices MMK 400/viss total amount traded 51,000 viss

WFP market price data for Buthidaung for 2012 and 2013 confirms the seasonal trend in prices (see Annex 2). In general, potato prices drop very significantly in Feb-March from MMK 300 per viss to MMK 100 per viss whilst cultivators are in the middle of their harvest period. Prices of potato then rise slowly till the next harvest season. It does seem that control measures are exerted on the potato market system. This phenomenon is not unique to Buthidaung and northern Rakhine, as it is recognized throughout much of Myanmar that as farmland belongs to the state and farmers are given cultivation rights only, farmers at times are obliged to grow and deliver designated amounts of produce to the government regardless of the profitability of the crops. And although potatoes are generally marketed free of direct government production and pricing constraints, it does seem that in 2013 there exists an obligatory production and procurement directive on households with access to farm land.

As a consequence of these many measures, households that have access to land as well as the other socio-economic groupings in Buthidaung have suffered considerably since the June 2012 crisis and over the last year and face a very uncertain and complicated future. The two market systems upon which many of these target populations rely have also been adversely affected by the crisis, yet continue to function and provide potential for market engagement both within a humanitarian and development context. Whilst readily acknowledging the limitations in terms of information, time and analytical capacities that this EMMA has faced, the authors of this study feel that the above study has shed light on a number of interesting findings that can guide future programming or future response systems.

## **Chapter Seven: Recommendations and Conclusions**

This EMMA has sought to establish a baseline and enable the identification of key constraints on two market systems brought on by the conflict in June and October 2012. Additionally, the EMMA has looked at three target populations in Buthidaung and the consequences the crisis has had on these populations. In this concluding chapter, the focus will be on what market based program opportunities exist and how these can address basic needs as well as encourage economic recovery and livelihood development. Recently developed guidelines on engaging in markets in humanitarian responses<sup>8</sup> suggest that there are three main strands in developing recommendations for market engagement and these revolve around:

- implementing short-term '*market-integrated relief*' to reach beneficiaries following emergencies – such as through cash and voucher interventions;
- on a smaller scale, delivering '*indirect support through markets*', short-term targeted support to market actors that restore the market system after a crisis;
- and in the longer term, engage in '*market strengthening and development*' to build resilience and strengthen livelihoods.

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<sup>8</sup> Executive Brief Engaging with Markets in Humanitarian Responses, WFP and Oxfam July 2013.



The following table summarizes, in order of immediate importance, the various options that are available.

Response Activities or Combinations	Feasibility and Timing	Key Risks and Assumptions	Likely Effect on Market System and Target population	Indicators
<p><b><i>'market-integrated relief'</i></b> Distribution of vouchers for high energy food rations to vulnerable populations (young children, pregnant and lactating mothers and the elderly) for those households involved in casual labour and self employed in target villagers</p>	Highly feasible; should consider seasonality of vegetables and challenges in supplying commodities in rainy season	<ul style="list-style-type: none"> <li>- requires production of high energy food, such as locally developed biscuits</li> <li>- logistical difficulties in delivering in-kind items</li> <li>- seasonal difficulties in delivering the items</li> <li>- acceptability of biscuit to local populace</li> <li>- requires vulnerable households in settings where food is available in markets and capacity for implementing programs exists</li> </ul>	<ul style="list-style-type: none"> <li>- addresses immediate needs of vulnerable population</li> <li>- contributes to food security and diversifies food intakes</li> <li>- gives benefit to local market actors if local resources are used</li> <li>- Eligibility for receiving a voucher can be linked to conditional-cash transfer or food-for-work programs</li> <li>- Collecting vouchers and reimbursing shop keepers requires reasonably</li> <li>- functioning markets and administrative systems</li> </ul>	<ul style="list-style-type: none"> <li>- number of local retailers</li> <li>- local prices on vegetables and other staples</li> <li>- expenditure structure and food intakes of vulnerable households</li> </ul>
<p><b><i>'market-integrated relief'</i></b> Cash for work to those populations that are involved in casual labour</p> <p>Cash grants for households to access vegetables and vegetable seeds</p>	Highly feasible; design and preparation of cash transfer system can take 4-6 weeks	<ul style="list-style-type: none"> <li>- can be implemented rapidly</li> <li>- risk of misusing the cash</li> <li>- inflation risk</li> <li>- staff bribing and corruption issues might arise</li> <li>- some beneficiaries may not have sufficient access to markets to make proper use</li> </ul>	<ul style="list-style-type: none"> <li>- addresses immediate and basic needs</li> <li>- gives more control over the beneficiaries' lives, allows them to make more flexible decisions in meeting their needs</li> <li>- increases purchasing power of</li> </ul>	<ul style="list-style-type: none"> <li>- Local prices of critical items (farm inputs &amp; vegetables)</li> </ul>

Cash grants for households with access to land for purchase of production inputs (tools, seeds and fertilizer)		<ul style="list-style-type: none"> <li>- of cash</li> <li>- difficult to monitor cash use</li> </ul>	<ul style="list-style-type: none"> <li>- beneficiaries</li> <li>- softens losses of incomes</li> <li>- creates job opportunities for casual labourers</li> </ul>	
<b><i>‘market strengthening and development’</i></b> Model community saving and loan schemes or community micro-credit Initiatives for both Rakhine Buddhist and Muslim villages.	Feasible; can be developed at Village Tract level, requires expertise and understanding of local conditions	<ul style="list-style-type: none"> <li>- Requires substantial organizational know-how,</li> <li>- requires reasonably functioning markets and administrative systems,</li> <li>- Requires administrative support from local authorities</li> </ul>	<ul style="list-style-type: none"> <li>- Will enhance market dynamics as more credit will be available</li> <li>- May cause informal money lending to lose business</li> <li>- promotes inter-communal cooperation</li> </ul>	
<b><i>‘indirect support through markets’</i></b> Support households that are self employed with small business grants both in Rakhine Buddhist and Muslim villages. Grants could be in kind in the form of various small tools and equipment	Feasible where local authorities are in agreement	<ul style="list-style-type: none"> <li>- requires relevant infrastructure, access to markets</li> <li>- risk of misuse of business grants</li> <li>- can inflate prices on vegetables/other goods</li> <li>- beneficiaries must have access to production assets</li> </ul>	<ul style="list-style-type: none"> <li>- indirectly supports villagers by increasing supply of vegetables and goods in the area</li> <li>- provides livelihood support to affected traders</li> <li>- fosters local procurement</li> <li>- promotes inter-communal cooperation</li> </ul>	<ul style="list-style-type: none"> <li>- sales volumes</li> <li>- local prices</li> <li>- number of traders assisted</li> <li>- number of customers</li> </ul>
<b><i>‘market strengthening and development’</i></b> Support community livelihood centres where households with access to	Feasible where local authorities are in agreement	<ul style="list-style-type: none"> <li>- farmers must be able to access input markets where tools and inputs are sold and have access to customers</li> <li>- it will have immediate impact</li> </ul>	<ul style="list-style-type: none"> <li>- supports farmers whose production was hampered by lack of tools and loss of inputs</li> <li>- boosts local production of vegetables</li> </ul>	<ul style="list-style-type: none"> <li>- production volumes</li> <li>- input prices</li> <li>- product prices</li> <li>- number of farmers</li> </ul>

some land can be assisted with in kind production inputs (tools, seeds, fertilizers) to foster supply flow		only if it's done in line with the vegetable crop cycle	<ul style="list-style-type: none"> <li>- increases supply and availability of vegetables</li> <li>- creates job opportunities for casual labourers</li> <li>- promotes inter-communal cooperation</li> </ul>	assisted
<b><i>'market strengthening and development'</i></b> Establish potato warehousing facilities in village tracts where potatoes are grown.	Feasible where local authorities are in agreement	<ul style="list-style-type: none"> <li>- requires investment into infrastructure</li> <li>- Requires substantial organizational know-how,</li> <li>- requires reasonably functioning markets and administrative systems ,</li> <li>- Requires administrative support from local authorities</li> </ul>	<ul style="list-style-type: none"> <li>- helps restoring lost businesses and revenues</li> <li>- boosts local economy</li> <li>- provides new and alternative storage facilities</li> <li>- promotes inter-communal cooperation</li> </ul>	<ul style="list-style-type: none"> <li>- the amount of the grants</li> <li>- number of beneficiaries assisted</li> <li>- income levels of beneficiaries</li> <li>- production volumes/ number of clients</li> </ul>
<b><i>'indirect support through markets'</i></b> Advocate with authorities for alleviating restrictions on movement and participation in economic activities for Muslims	Low feasibility - timing is unknown, no concrete timeframes can be anticipated	<ul style="list-style-type: none"> <li>- process can be very complex and long</li> <li>- mandate of the agency might not be advocacy with the authorities</li> <li>- can increase tensions between two groups</li> <li>- may not respond to immediate food security needs or emergency livelihood</li> </ul>	<ul style="list-style-type: none"> <li>- addresses key problem disrupting normal functioning of the market system</li> <li>- has direct positive effect on target population</li> <li>- boosts local economy, helps restoring market linkages and providing income for affected people</li> </ul>	<ul style="list-style-type: none"> <li>- Abandoning curfew and martial order</li> <li>- adopting laws about rights of total population</li> </ul>

<p><b><i>'indirect support through markets'</i></b></p> <p>Advocate with authorities that fair prices are negotiated for potato crop and that quotas on volume are respectful of farmer needs</p>	<p>Low feasibility - timing is unknown, no concrete timeframes can be anticipated</p>	<ul style="list-style-type: none"> <li>- process can be very complex and long</li> <li>- mandate of the agency might not be advocacy with the authorities</li> <li>- can increase tensions between groups</li> <li>- may not respond to food security needs or emergency livelihood</li> </ul>	<ul style="list-style-type: none"> <li>- addresses key problem disrupting normal functioning of the market system</li> <li>- has direct positive effect on target population</li> <li>- boosts local economy, helps restoring market linkages and providing income for affected people</li> </ul>	<ul style="list-style-type: none"> <li>- Abandoning curfew and martial order</li> <li>- adopting laws about rights of total population</li> </ul>
<p><b><i>'market strengthening and development'</i></b></p> <p>More detailed assessment of market systems</p>	<p>High Feasibility; for detailed livelihood studies 8-10 weeks should be considered</p>	<ul style="list-style-type: none"> <li>- insufficient financial, logistical and human resources for new study</li> <li>- delayed assessment may result in late and inadequate humanitarian response</li> </ul>	<ul style="list-style-type: none"> <li>- explores new and alternative sources of livelihood where restoring of previous livelihoods is not feasible in the near future</li> <li>- assesses new opportunities within the geographic area and</li> <li>- support local markets according to study results</li> </ul>	<ul style="list-style-type: none"> <li>- key findings</li> <li>- recommendations</li> </ul>
<p><b><i>'market strengthening and development'</i></b></p> <p>Develop community education and development centres</p>	<p>Feasible where local authorities are in agreement</p>	<ul style="list-style-type: none"> <li>- Requires substantial organizational know-how,</li> <li>- requires reasonably functioning markets and administrative systems ,</li> <li>- Requires administrative support from local authorities</li> </ul>	<ul style="list-style-type: none"> <li>- addresses key problem</li> <li>- gives more control to the beneficiaries' lives, allow them to make more flexible decisions in meeting needs</li> <li>- promotes inter-communal collaboration</li> </ul>	<ul style="list-style-type: none"> <li>-</li> </ul>

## Annex One: Village selection table and map of study sites

### Hub 1 San Hnyin Wai

4 Villages

Pyin Shay Ashy

Pyin Shay Anauk

San Hnyin Wai

Kwan Dine

### Hub 2 Let Wea Det

4 Villages

Htin Shar Pyin

Done Chaung

Kyauk Hla Pyin

Inn Pauk

### Hub 3 Sein Hnyin Pyar

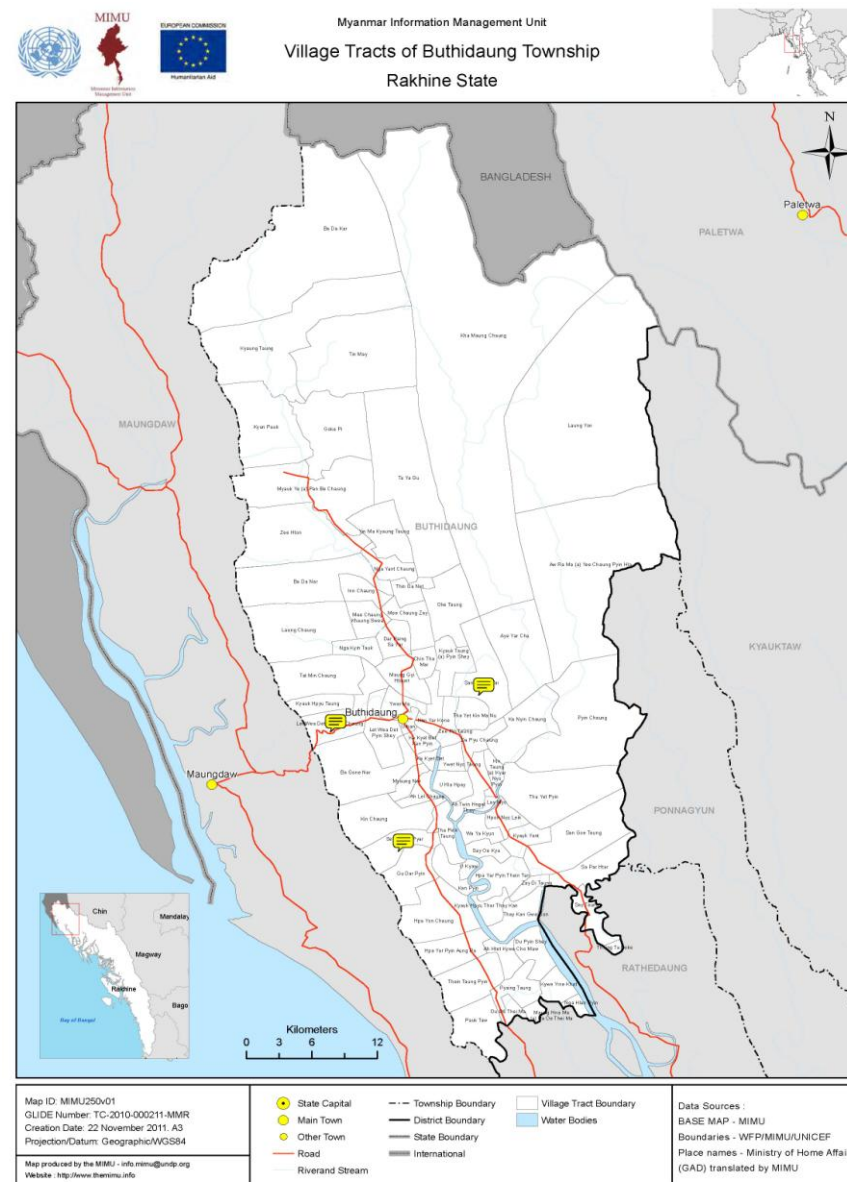
4 Villages:

Tha Pyay Taw

Zay Anauk

Pyin Shey Ahlel

Zay Ashey



## Annex Two: WFP market price data for Buthidaung Township

items	units	Currency	Jan'11	Feb'11	Mar'11	April'11	May'11	Jun'11	July'11	Aug'11	Sep'11	Oct'11	Nov'11	Dec'11
Potato	Kg	Kyats		300	350	400	350	360	370	400	400	400	400	400
Daily wages per day: (Male)	Kyats	Kyats		2000	2000	2000	1500	2000	2000	2000	2000	2000	2000	2000
Daily wages per day: (Female)	Kyats	Kyats		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	800
Employment (per week) (M)	Days	Days		4	4	3	3	3	4	5	4	4	5	3
employment (per week) (F)	Days	Days		3	3	3	3	2	2	2	3	2	3	1

items	units	Currency	Dec'11	Jan'12	Feb'12	Mar'12	April'12	May'12	Jun'12	July'12	Aug'12	Sep'12	Oct'12	Nov'12
Potato	Kg	Kyats	400	600	300	100	200	200	250					
Daily wages per day: (Male)	Kyats	Kyats	2000	2000	2000	2000	2000	2000	2000					
Daily wages per day: (Female)	Kyats	Kyats	800	800	800	800	800	700	700					
Employment (per week) (M)	Days	Days	3	3	3	3	4	4	3					
employment (per week) (F)	Days	Days	1	2	2	2	2	3	2					

items	units	Currency	Dec'12	Jan'13	Feb'13	Mar'13	April'13	May'13	Jun'13	July'13	Aug'13	Sep'13	Oct'13	Nov'13
Potato	Kg	Kyats	400	600	300	100	200	200	250					
Daily wages per day: (Male)	Kyats	Kyats	2000	2000	2000	2000	2000	2000	2000					
Daily wages per day: (Female)	Kyats	Kyats	800	800	800	800	800	700	700					
Employment (per week) (M)	Days	Days	3	3	3	3	4	4	3					
employment (per week) (F)	Days	Days	1	2	2	2	2	3	2					

1 Viss= 1.67 Kg (local measurement)