

Emergency Market Mapping and Analysis (EMMA)

Pilot Test 2, Myanmar July 15 - 31, 2008

Key Findings and Recommendations

Small Fishing Net Market System Thatch (Dhani) Market System



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1 Introduction

This study was implemented by Save the Children in Myanmar (SCiM), who are currently running an emergency food security and livelihoods programme as part of the response to cyclone Nargis. The EMMA pilot test seeks to better understand critical market systems for the population directly and indirectly affected by the cyclone and to enable SCiM to programme more effectively. At the same time we hope to learn from the pilot experiences in order to improve the toolkit itself.

1.1 Context

Cyclone Nargis struck Myanmar on 2 and 3 May, leaving over 84,000 people dead and more than 50,000 missing. Over 450,000 houses were completely destroyed and 350,000 damaged. More than 600,000 hectares of agricultural land were flooded, killing up to 50% of draught animals. Many skilled fishers and processors died in the flooding and the storm - over 27,000 fisheries workers are missing or dead.

The majority of families living in the delta are poor, their main sources of income being fishing in the rivers and the sea, supplemented with casual labour, livestock, agricultural activities (mostly rice) and small trade in fish and rice products. Other livelihood sources include salt farming (Labutta), fishing farming and processing. The very poor are also active in wood cutting (Labutta), charcoal making (Ngapudaw), and the manufacture of dhani-thatch panels.

The houses of the poor in these same townships were largely made of thatch (roofs) with leaves for walls (90%)(UNDP 2006). Very few used wood or bamboo (5%) and almost none had brick (less than 1%).

According to the recent PONJA report¹, the majority of the cyclone's victims are female: 61% of those dead are female, with the number much higher in some villages.

Lastly, the monsoon hit in the hunger season, and although people are accustomed to employing a range of seasonal coping strategies, most have been destroyed as food stocks were washed away and the credit usually borrowed from the medium/rich families is no longer available as these families have also lost income and assets.

1.2 Critical Market Systems

Prior to the start of the pilot test, SCiM emergency field teams selected the market systems to be studied in this pilot. Market systems critical to meet the affected population's emergency needs, as well as, protect and restore livelihoods, were chosen for their relative and seasonal importance to the affected population.

The two market systems selected for analysis were those which supply:

- 1.) Small-scale Fishing Nets critical for livelihoods and food security
- 2.) Dhani (a palm-like thatching material) critical for shelter.

¹ Post-Nargis Joint Assessment Report - <u>www.aseansec.org/21765.pdf</u>

2 The Market System for Small Fishing Nets

Cyclone Nargis impacted in the delta areas where fishing is a major livelihood activity. Fishing activities in the delta vary enormously, from inland subsistence fishing in the rivers with small nets, to offshore fishing and aquaculture. Each employs specific fishing gear, tools and methods.

2.1 Introduction to the Small Fishing Net Market Systems

In the affected area of the delta, the largest number of vulnerable people is found depending on in-shore and inland fisheries and household-level aquaculture. As such families tend to own smaller nets and boats, this study focuses on better understanding the small fishing net market system. (Larger nets and boats are also important assets to wealthier families, who provide much needed employment for poorer families).

2.2 Seasonality of the Small Fishing Net Market System

The type of small net used depends on the kind of fish and the location. As fish availability can change with the season, different types of nets are used at specific times of year, but most small nets are used all year around. All but the smallest and cheapest of nets requires a boat and at least 2 persons to use it. As the seasons change, so too do the prices of small nets, reflecting seasonal shifts in demand. Annex 1 gives more detail on the seasonality of some of the smaller fishing nets, including where they are used, their approximate cost and the equipment and personnel needed to use them.

2.3 Gender and the Small Fishing Net Market System

Fishing is generally dominated by men for income purposes, with women involved in the processing and marketing. Only the smallest hand-held fishing nets are used by women for subsistence fishing in the inland steams and ponds. The name of this net is '*gaw*' and it's one of the few nets where a boat is not needed.

2.4 Small Fishing Net Market System Before Nargis

The small fishing net market system in Myanmar is usually a robust and stable market probably because the main supply of Myanmar's small nets is from Thailand. The Thai nets are imported by Yangon or Pathein importer/wholesalers, who then sell onto township retailers, from whom the village shops buy.

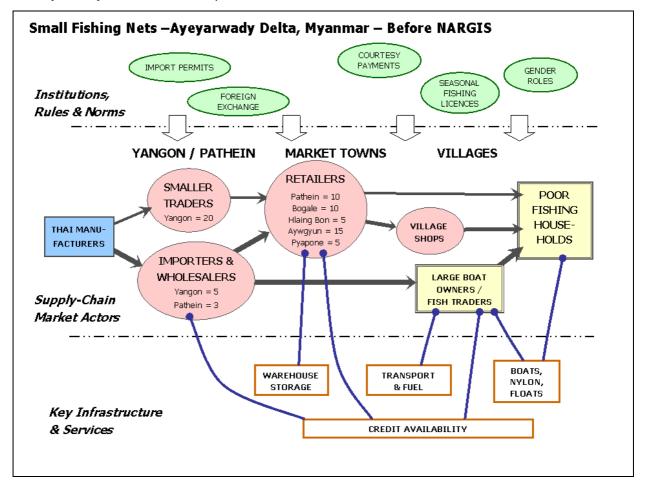
Yangon and Pathein wholesalers reported that one of the major factors affecting prices can be the unpredictability of import permits and to a lesser degree, fluctuations in the exchange rate between Baht and Kyat.

There are slight seasonal variations in the prices along the supply chain, reflecting the changing, seasonal demand. See Annex 2 for an example of price data of one type of small fishing net called *'kar-be-lu'*. The data indicates a price elastic market with strong relationship between changes in prices at village level and among Pathein and Yangon wholesalers. Therefore the market appears to have been well integrated pre-Nargis.

Competition between traders at the supplier end of the value chain (Yangon, Pathein and town-level), appears to be healthy, with buyers having plenty of choice between market actors. However, depending on the size of the village, households may or may not have much choice of small net traders at village-level. Moreover, families may be restricted to village retailers who are able to provide credit (see below).

Credit appears to be a critical service in this market system: all but one Yangon wholesaler said that credit is commonly used for the purchase of small fish nets. Poor fishing families are especially reliant on credit. They often access small nets on credit, either from 'rich' boat owners who they repay over time with fish which the boat owners market, or on credit from village retailers who they repay with sales from fish over time².

Lastly, a fishing licence is required in the delta. Licences are auctioned annually by location and season. Richer fishermen usually buy the licence then either employ poorer fishermen to fish for them or divide the area into segments for lease. Further information on how exactly this system works is required.



2.5 Small Fishing Net Market System After Nargis

The biggest impact to the small fish net market system was undoubtedly the tragic loss of tens of thousands of fishing household members. For net traders this means a drop in demand for this time of year of approximately 50 - 70%. Further, for such a credit-reliant system, such losses mean that many nets given on credit will never be repaid; **high default rates** impact actors all the way up the chain to Yangon. Households and traders alike say that it is now very difficult, if not impossible, to get small nets on credit from their corresponding suppliers.

² Village retailers also give credit to poor families for other important expenditures like funerals, weddings and medical.

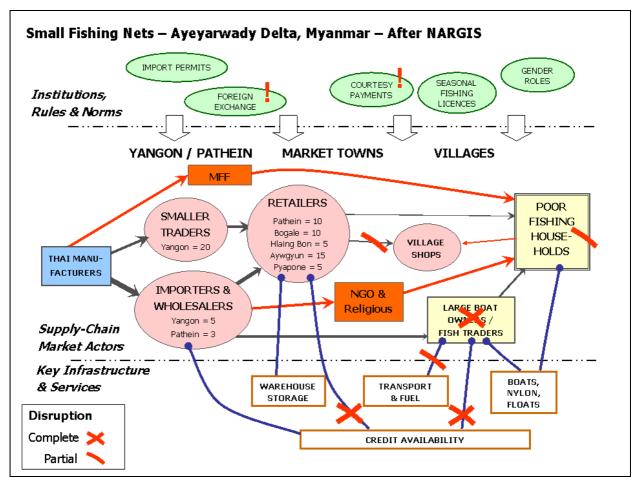
In June, the month after Nargis, prices and quantities traded shot up, reflecting cycloneinduced demand and impairment of the supply chain. In the villages, demand fell sharply following Nargis yet prices rose reflecting the breakdown of the supply chain and urgent needs of the traders. In July prices have stabilised to slightly higher than this time last year, however demand remains significantly lower than in July 2007 (Annex 2).

Further changes to the market system, post-Nargis, are indicated in red on the market map below. Significant actors are the Myanmar Fisheries Federation (MMF), NGOs, and private donors. Some of these are by-passing the existing supply chain traders by purchasing in Yangon and Thailand, then transporting nets directly to households in the villages.

The repercussions of by-passing existing actors in the supply chain include:

- Wholesalers and retailers will be slower to recover from high credit default rates and will need to maintain higher prices to recoup these losses for a longer period of time.
- Investment in the rehabilitation and replacement of key infrastructure such as private storage and transport facilities will be delayed.
- A higher chance of dissatisfaction with the nets provided. Several households reported selling fishing nets back to local traders because they were not appropriate to their needs
- As passive recipients of donations, fishing households will not be so engaged in the process of recovery. This is both disempowering and less dignified.

The reasons given for purchases directly from Thailand or Yangon is the fear of price hikes along the supply chain, however, no trader interviewed indicated any difficulty in accessing large quantities of nets, provided sufficient notice is given (this ranged between 1 day and 1 week for 200-2,000 nets). Slight price rises are to be expected with increased demand, yet the early recovery of traders in the affected areas crucially depends on sales and support from NGOs and other donors to do so.



Competition at the village-level may be an issue as shops may have been destroyed, yet the less affected towns and Yangon/remain competitive. In terms of market integration, the traders interviewed all indicated few constraints to supply flows, except the credit issue and low demand, and this is reflected in the similarity of price changes along the chain this month.

In terms of gender relations, the loss of fishermen has consequences for household income. **Female headed households expressed the need to shift livelihood focus** to other non-fishing related activities.

In summary, this market system appears to have partially recovered from the initial shock probably because the main supplier of small fishing nets has not been affected, Thailand. However, demand is down from last year, prices slightly higher and all traders are in debt

2.6 Demand

Demand for small nets is usually highest in May and June; so Nargis hit at the peak season for sales. Clearly demand has dropped with the loss of 'rich boat owners', village retailers and fishing families. As 70-80% of remaining households rely on fishing for income and food, the anticipated demand for small nets in the delta is likely to be high. Exact demand figures depend on where in the delta donors work.

Most fishing households said that they wanted to get back to work as soon as possible and that fishing was their only skill, therefore require nets as soon as possible. Some households

had already sold back donated nets to local retailers as they were not suitable, therefore any intervention should ensure that individual needs are considered.

Fishermen stipulated that nets **are near 'useless' without fishing boats and other net accessories** such as buoys and nylon to bind nets, so any donor intervention should bear in this in mind.

As donor programmes begin, demand for nets will likely rise. For instance the MFF has already bought 24,500 small nets from Thailand.

2.7 Small Fishing Net Market System Capacity to Respond to Demand

Village-level capacity

All remaining village retailers confirm the ability to supply approximately 180-200 small nets per week by making multiple trips to their nearest township dealer. Further, village retailers say that it is possible to scale-up to provide double this amount **providing they can get credit** from Pathein wholesalers or other towns, however this is no longer guaranteed as it was before the cyclone due to the high credit default rate.

However, in the villages visited, the average sales of village retailers in May, June and July of 2007, was circa 10 nets per week, so it remains to be seen if at this level there really is the capacity to supply as many as 180-200 nets per week as they say. If information given along the supply chain is correct, then there doesn't seem to be a shortage of nets, rather the means to access them (cash).

Town-level capacity

In towns like Pyapon, Kyaiklat, Mawlamyine gyn, Myoungmya and Laputta, retailers/wholesalers say they can supply unlimited number of nets, as they all purchase directly from Yangon. However, again, credit for this 'unlimited order' is likely to be problematic.

Pathein / Yangon capacity

Pathein and Yangon wholesalers can buy directly from Thailand and also claim to be able to supply unlimited amounts of nets within '2 days of order'. Further, traders say 'donors' have already emptied the market once after Nargis and they were able to restock within a week or two. All traders requested as much advance notice as possible to ensure adequate supplies and that support with credit (or paying cash in advance) would guarantee a timely transaction.

See Annex 3 for an indication of how traders believe they can respond to potential, large scale increased demand for small nets from donors, from village-level traders to Yangon wholesalers.

In summary, the small fish net market system appears to have the capacity to respond to increase demand with some support. Concerns about price rises, such as those raised by MFF are valid and should be taken into consideration by ensuring a thorough understanding of blockages in the supply chain and how best to support the actors to relieve such bottlenecks, i.e. with credit support. Small price increases are to be expected when demand rises and data from Annex 2 indicates that such price rises are likely to drop again once demand drops once again.

2.8 Recommendations & Follow-up

In order to facilitate the early recovery of village-level fishing net traders, where possible, **donors should buy small nets from the affected villages and not attempt to bypass market chain actors** by purchasing in bulk from wholesalers in Yangon. However, as the main bottleneck to accessing significant quantities of nets is obtaining credit from larger actors, donors may need to provide either credit to the village retailer, or act as guarantors to wholesalers on behalf of village retailers.

Relevant to such an intervention, the following issues should be considered:

- Households expressed a preference for cash to be able to select and buy the right net. Failing that, fishing households should be able to submit a list of the exact equipment needed for each household to ensure donors buy appropriately.
- Fishing households reported that most nets are useless without boats, therefore donors should consider how to synergise their programmes with other donors to ensure that fishermen are able to actually use the nets.

Further follow-up includes:

- Further analysis of how fishing licenses may affect poorer households. One family said 'the net is useless without access to a licensed fishing area, a boat and the buoy and nylon to bind nets'.
- Further analysis of the **shift in livelihoods gender roles** as many fishermen were sadly lost in the cyclone leaving behind female headed households who need to be consulted on how best to adjust to this change.
- Analysis of Myanmar fish market systems is absolutely critical to understanding how poor households usually interact with this system and where potential bottlenecks may lie as a result of cyclone Nargis. For instance, in terms of critical market actors, households may experience problems following the deaths of many rich boat owners who may have leased fishing rights to them, provided nets on credit and likely provided other reciprocal support in return for fish (which rich boat owners often marketed for poorer households). Regarding, important services and infrastructure, there are reports of the destruction of small ice factories, which are critical to ensure fish quality³.
- Analysis of the large fishing boat and net market systems as these were major providers of employment. For instance, the average sea fishing boat employs 8-15 workers.
- Understanding of how the cyclone has affected fish stocks.

³ The cyclone-affected areas are among the most diverse fishery regions in the world. In many places, a whole range of fishing and aquaculture practices is found in one location, while in most other places these are geographically distinct.

3 The Market System for Thatch (Dhani)

Dhani panels are made of leaves from the Nipa palm. They are used as roofing material in most of the houses and buildings in rural areas and also for houses on the outskirts of urban areas. Houses are built with panels that are woven from thatch leaves. Thatch grows naturally in mangroves and along banks of paddy fields in tidal salt water intrusion areas. Most of the thatch grown and processed in Myanmar comes from the delta areas affected by Cyclone Nargis, mostly in the southern part of the delta, close to the sea (East and West Laputta, starting from Hlaing Bon).

3.1 Introduction to the Thatch Market System

Dhani thatch panels are the predominant material used for houses of the poor in the cycloneaffected areas of Myanmar. Demand for panels is expected to be very high because nearly all houses in the delta were destroyed or damaged during Cyclone Nargis, and need to be rebuilt with thatch. There are no plausible alternate materials for durable shelter. Donors, including SCiM, are interested to better understand this system before intervening.



3.2 Seasonality of the Thatch Market System

Nipa only takes between 3 and 4 months to re-grow to sufficient length after it has been cut and grows fastest during the monsoon season. However, optimal maturity takes a full year to achieve. Therefore, the Nipa palm that's cut only once per year is generally higher quality than that cut twice per year.

Harvesting of nipa palms takes place annually (February - May) in some areas and twice per year in other areas (a second harvest during September – November). See Annex 4 for the thatch seasonal calendar.

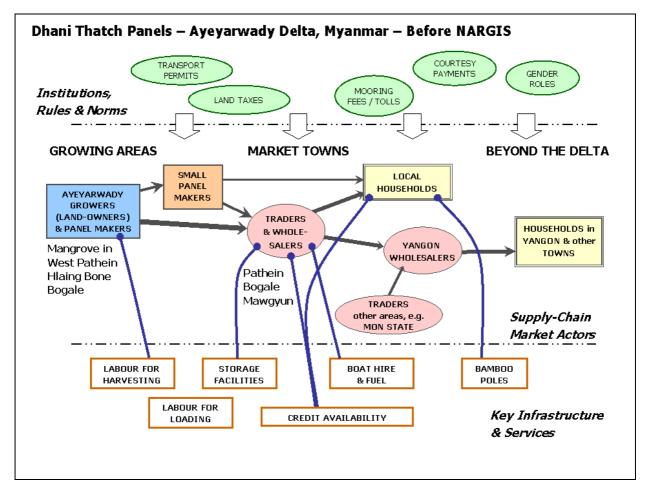
Thatch and rice paddy have correlated harvest patterns. April/May is usually the peak period when thatch is harvested and transformed into panels. This activity occurs before planting season for monsoon paddy. Similarly, harvesting of thatch in Sep/Oct ends when paddy harvesting requires agricultural labour from both men and women.

3.3 Gender and the Thatch Market System

Labour for the harvest and transport of raw palm is provided primarily by men. Panel-making is done mostly by women. Cyclone Nargis has had much impact on the labour market for thatch panel-making as most of the casualties of the disaster were women.

3.4 Dhani - Thatch Market System Before Nargis

Individual households may buy panels from retailers as well as directly from wholesalers. Some wholesalers also grow and transform palm into panels. Landowners with Nipa palm growing on their lands may either harvest it with hired labour or receive payment from a wholesale panel-maker for directly harvesting it.



<u>Hlaing Pan area</u>

Hlaing Pan is a major growing area for Nipa palm. Much of the thatch demanded in Yangon is procured from Hlaing Pan as well as Bogale. There were 6 businesses in Hlaing Pan that sold thatch panels. These businesses were involved in the entire thatch production process—growing, harvesting, panel-making, and wholesale. Three of these businesses were in one village; the other three were located in another village in the Hlaing Pan area.

Pyinkayaing island

Pathein town has a large hub of thatch wholesalers. The 20 identified wholesalers are not involved in harvesting of thatch. They are supplied by small traders who purchase thatch from growers and panel makers in southern Ngapudaw. Local demand in Pyinkayaing purchase thatch directly from local growers and panel makers, predominantly from the northwest side of Pyinkayaing.

In general, the price of thatch in Pathein is higher, yet better quality. Factors dictating this difference include soil type, panel length, and style of panel design.

In Pathein, between 3 and 5 wholesale shops are clustered closely to each other. Therefore, there is some price coordination within these clusters. There is, however, greater competition among these wholesalers in the procurement of thatch panels. Pathein wholesalers need to place advance orders to panel-makers (e.g. 10 days or 1-month notice). These orders often lead to competitive bids for growers and panel-makers.

There was some credit system in Thingagone on Pyinkayaing but credit was usually not extended to individual households for thatch purchases. In Pathein, however, wholesalers did extend credit to salt farms who purchased thatch to build shelter for storage and accommodations for labourers.

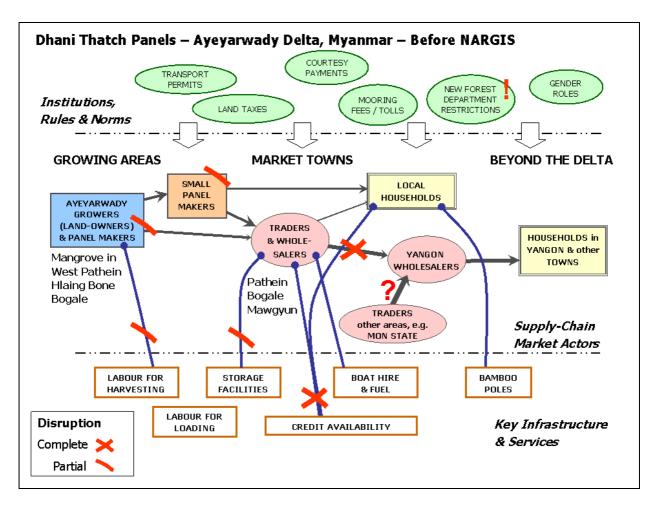
3.5 Thatch Market System After Nargis

As a result of the cyclone, the price of thatch has increased sharply due to high demand, damage and loss of stock. See Annex 5 for data on price and quantities before and after the cyclone.

Prices have spiked in both Hlaing Pan and Middle Island/Pathein areas—both supply the Yangon market, which also saw an increase in demand for thatch after Nargis. Before Nargis, prices in both Hlaing Bon and Pathein were around Ks.3500 per 100 panels. Since Nargis, prices have risen to Ks.5000 per 100 panels in Hlaing Bon, and Ks.5500 per 100 panels in Pathein. These price patterns have been driven by Yangon's significant demand for thatch during the low season for supply. Hlaing Pan and Bogale were the main markets for Yangon before the cyclone. Since Nargis, Yangon has relied on both Pathein and East Labutta areas for supply.

The business of dhani roof making and marketing is one of the non-farm income earners in the southern part of delta area. It is estimated that it will take at least one year to rectify the market to pre-disaster levels (FAO).

Most of the Nipa palms were also damaged by the cyclone and remaining nipa leaves are now cut and used by the village peoples in cyclone affected areas for roofing of shelters.



Hlaing Bon area

Hlaing Bon is a major centre for dhani panel production. Seventy percent of thatch in this area was destroyed by Cyclone Nargis.

Because there is currently no thatch available in Hlaing Bon, Hlaing Bon villages have been taking thatch from riverside traders in Mawgyun. Mawgyun had 10 traders of thatch in operation before Nargis. Post-Nargis, only 7 of these traders have thatch to sell and their source has been from poorer quality areas of Maungmya.

As a result of the destruction of the major thatch zones of Hlaing Bon, Bogale, and Laputta, a new trade route moved to the thatch-producing Hlaing Bon area. Import costs from outside the area means greater transportation costs added to the price of thatch. Rising diesel, boat hire costs, and the limited number of remaining transport boats have also contributed to the rise of thatch prices.

This trade route for thatch into Hlaing Pan is likely to be temporary as the Nipa palm is particularly resilient; so re-growth is currently estimated to not take longer than a year. Nevertheless, the Department of Forestry has recently issued a new policy requiring a permit for thatch harvesting, which essentially means that little or no harvesting is expected for the next few months. How strictly this policy will be implemented remains unclear.

Pyinkayaing island

Thatch areas on Pyinkayaing were only partially affected by Nargis. Therefore, supply chains to the Pathein market have not been significantly disrupted. Before Nargis, Thingangone on Pyinkayaing had 3 retailers and 2 wholesalers. After Nargis, 3 retailers and 1 wholesaler remain who continue to source thatch from the north-western side of Pyinkayaing. Here, boat transportation remains a significant constraint to economic activity as in Thingangone, the boats owned by most thatch retailers have all but been destroyed. However, their suppliers from the northwest of Pyinkayaing may have boats to deliver thatch orders.

Wholesalers in Hlaing Bon have indicated that they will not cut palm until pre-monsoon April/May to allow re-growth. In Hlaing Pan and Bogale areas, however, there have been reports that thatch is being stolen and sold to small traders/panel makers. Consequently, there is a risk to the anticipated thatch supply available for harvest in both Sep/Oct and April/May.

Some wholesalers in Pathein previously extended credit to salt farmers located in the southern parts of Labutta and Ngapudaw. Of 70 salt farm owners, only 30 remain following the cyclone. None of the salt farms are operational, though businesses may be rehabilitated in the future.

For now, salt farm owners are reliant on fishing as their main source of income. Consequently, high default rates in payment have negatively impacted on Pathein and village-level traders who had previously extended credit; now they neither have the capital to buy thatch nor significant stocks to sell. Other Pathein wholesalers have only a few thousands panels in stock. At the village-level, some retailers have hundreds of panels.

3.6 Demand

An average house requires 200 thatch panels for roofing and 500 thatch panels in total. The durability of the thatch panels usually depends on the number of panels used. For example, roofing with 200 panels may last two years, while roofing of an average house with 300 panels may last three years because of greater support from more overlap.

Nargis occurred right after the peak April/May season for thatch demand and houses have been freshly repaired. Consequently, Nargis destroyed this newly repaired thatch housing in both Pyinkayaing and Hlaing Bon.

Although there will be a need to rebuild houses with thatch, near-term demand for thatch may be mitigated due to several factors:

- Roughly 80% of houses have tarpaulin sheets for temporary shelter, have stolen thatch or used other materials.
- Shelter is not usually repaired during the rainy season (ending around October).
- Thatch demand has been significantly constrained by the lack of funds available to individual households.

In summary, individual households do not have the financial means to purchase thatch to repair their houses. Even if they had the funds, households have expressed a preference for expenditure on livelihood activities, preferring to 'make do' with the temporary shelter they have for the meantime. As there is not likely to be high demand for thatch in the next few

months, it is suggested that this market system is monitored carefully over the coming months in order to ascertain more precise information on quantities required in the dry season.

3.7 Thatch Market System Capacity to Respond to Demand

In the near-term, major thatch producing areas have been devastated. Therefore, greater demand in thatch is likely to escalate prices further. Nevertheless, the thatch tree is resilient and re-growth is expected to occur within three to six months. In the traditional thatch centre of Hlaing Bon, for instance, the supply is expected to return by the next harvest season. Though capacity is also subject to labour and transportation constraints. Specifically, the diminished availability of boats and higher boat costs will likely affect trade into the intermediate term.

In Pyinkayaing, traders can procure thatch from the same sources if demand increases. But in the Hlaing Bon area, the thatch market is further constrained by supply shortages. Therefore, both demand and supply side problems are restricting the rehabilitation of the thatch market in Hlaing Bon. Despite the low demand in both markets, prices have increased significantly on this time last year. This has been driven primarily by the big market demand from Yangon which is procuring thatch from both Pathein and the East Delta areas, as well as the aforementioned supply constraints.

3.8 Recommendations and Follow-up

Most individual households prefer livelihoods-oriented interventions from donors instead of thatch. The high distribution of tarpaulin sheets provides a temporary substitute for shelter affords households the ability to rank other needs higher priority, particularly livelihoods. Livelihoods interventions would support the ultimate demand of individual households to repair housing with thatch. This is likely to occur next April/May when devastated areas of thatch are anticipated to have returned and harvesting occurs. Permanent thatch shelter interventions may be more appropriate around that time. In the meantime, supply remains the key constraint for thatch and prices across the delta are being pressured by excess demand from Yangon.

Further research is recommended for:

- The supply of thatch from areas not discussed here, i.e. Mon State and Myuangmya.
- Study of the market systems for other shelter items such as tarpaulin and CGI sheeting.
- Gender concerns on availability of women for panel making
- Further analysis of the impact on the livelihoods of actors involved in the thatch market system, i.e. in the growing areas
- Monitoring on how rising prices of thatch affect poorer households in unaffected areas. Specifically, if they have adequate means to access to shelter materials in the dry season when they would normally repair roofing. As these families are not in the 'the spotlight' they could be particularly vulnerable to any price increases, which push households just above the poverty line down into groups of concern.

ANNEX 1 Seasonal Calendar – FISHING NETS Market System

Name of Net	Cost \$*	Main Use	Gender of User		Boat?	Where used	June	July	Aug	Sept	Ot	Nov Cold	Dec Cold	Feb Cold	<i>April</i> Hot	<i>May</i> Hot
Gaw	6	Food	M&F	1	No	Streams										
Kar be lu	20 (x3)	\$	М	2	Yes	Streams, River					\$ Î					
Kun	40	\$	М	2+	Yes	Streams, Rivers										\$
Pazon	40	\$	М	2	Yes	Rivers & Sea					\$					
Pike Bun	80	\$	М	2+	Yes	Streams, Rivers								\$]^		
Sein	130	\$	М	2+	Yes	Rivers & Sea										\$
Kya	150	\$	М	3+	Yes	Rivers & Sea								\$ Î		

SEASONAL CALENDAR & OTHER INFO FOR SMALL FISHING NET MARKET SYSTEM, MYANMAR

*Thingagone village

Fishing season

 \hat{s} = time when net prices increase

Fisher families need to buy several nets

ANNEX 2: Small Fishing Net ('Kar be lu' net) Market System Changing Prices & Quantities Traded

		Quantities 2007			Prices 2007	Prices 2008			
No. Actors	Actor-Location	Avg Month (May – Jul)	May Jun		Jul	Avg Month (May – Jul)	Мау	Jun	Jul
3	Retailer-Phin Gan Gone	10	3	1	3	7,900	8,200	8,500	8,200
5	Retailer-Thet Kel Thaung	10	2	2	4	7,900	8,200	8,500	8,200
10	Retailer-Pathein	20	5	40	7	7,850	8,100	8,400	8,100
1	Retailer-Yangon	35	15	45	20	7,850	8,100	8,400	8,100
3	Retailer-Hlaing Bone	10			2	7,900			7,900
5	Retailer-Maw Gyun	8			4	7,900			8,000
3	Retailer-Bogale	10		11	15	8,000		8,000	8,000
1	Retailer-Pyapone	10		8	8	8,000		8,000	8,200
1	Wholesaler-Dedugone	10	2	2	3	7,900	8,200	8,500	8,200
3	Wholesaler-Pathein	30	10	50	10	7,800	8,000	8,300	8,000
5	Wholesaler-Yangon	40	25	50	22	7,800	8,000	8,300	8,000

Village Trader		Available Now per Week	Trader's Estimated Response to Increased Demand					
East Laputta	Hlaingbone Town Retailer	350	Can provide 2,000+ nets by going to Yangon 3 times/week over 2 weeks. Needs 7 days to complete and 7 days notice.					
West Laputta	Village retailer Town retailers	250 600	Both can provide 2,000+ nets. Village retailer can get from 2 trips to Laputta town within 3 days. Town retailer needs 2 days notice to buy from Yangon.					
Pyapon	Village retailer Town retailer	250 600	VR buys from Payapon on credit, 3 trips, needs 1 day notice. TR can buy 2,000+nets from Yangon within 2 days, with 3 trips.					
Kyaiklat Village & Town retailers.		-	Both say they can provide 2,000+ nets within 1 day, buying directly from Yangon					
Maw Gyun Village & Town retailer		300 400	Both buy from Mawgyun & Yangon and can provide 2,000+ nets within 2 days.					
Myaung Mya	Village Retailer Town retailer		Village Retailers buy from Myaungmya. Needs 1 day notice. Town Retailers buy directly from Yangon, needs 2 days.					
Distancias	Village retailer Thet Kul Thoung, Dedugone, Thingankone	50	Take on credit from Pathein, can provide 2,000+ nets within 4 days but not sure about credit for so man nets					
Pyinkayaing	Town retailer (Pathein)	300	Credit from Yangon, can deliver 5000+ nets in 2 days.					
	Wholesaler (Pathein)	1500	Credit from Pathein, can deliver 5000+ nets in 2 days.					
Yangon	Wholesaler	?	Says can provide unlimited amounts from Thailand within 2 days, however, source					

indicate that large amounts (20,000) would take a month to source.

?

ANNEX 3 - Small Fishing Net Traders Capacity to Respond to Increased Demand

Yangon

ANNEX 4 Seasonal Calendar – DHANI / THATCH PANELS Market System

SEASONAL CALENDAR & OTHER INFO FOR DHANI THATCH MARKET SYSTEM, MYANMAR

Activities	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan	Feb	Mar.	April	May
Weather	S.	S.	S.	\sim	S.	Cold	Cold	Cold	Cold	Hot	Hot	Hot
Dhani / Nipa Harvests	Main	Growth F	Period	Secol Har	-				Primary Harvest Period			
Panel-Making												
Price	Low De	emand &	Prices	es High Demand & High Prices						S		
Panel Maturity / Quality	Low	Low	Low	Low	Low	Low	Low	Low	Med	High	High	High
Trade Volume - Bogale				Low	Low	Low			High	High	High	High
Trade Volume - Pathein				High	High	High			High	High	High	High

No of Actors	Location		2007		2008				
	VILLAGES	Мау	June	July	Мау	June	July		
2	Didukone Village	5,200	4,000	3,200			8,000		
10	Mawlamyaing Kyun	5,000	5,000	5,000	18,000	6,500	6,500		
1	Thet ke Thaung Village	4,500	4,500	4,200	4,500	4,300	4,500		
5	Thingankone Village	5,500	5,500	5,200			5,500		
6	Hlaing Pone	3,500	3,500	3,500	10,000	5,000	5,000		
	TOWNS								
4	Bogale	5,000	5,000	5,000	15,000	7,000	7,000		
20	Pathein	7,000	7,500	7,000	13,000	8,000	8,000		
10	Pya Pone	6,500	6,500	6,500	15,000	7,500	7,500		
	AVERAGE	5,275	5,188	4,950	12,583	6,383	6,500		

ANNEX 5 Prices – DHANI / THATCH PANELS - before and after NARGIS