

# Emergency Market Mapping and Analysis (EMMA)

## Pilot Test 2, Myanmar

### Key Findings and Recommendations

July 15 - 31, 2008

Small Fishing Net Market System



Thatch (Dhani) Market System



*Report Date and Authors:*

*Anita Yeomans, Practical Action Consulting  
Michael Leung, Save the Children (volunteer)  
1 August 2008*

## **Acknowledgements**

Sincere thanks go to Save the Children in Myanmar (SCiM) for hosting and Oxfam for supporting this pilot amidst a backdrop of rapid evolution in their programming activities. The unexpected scaling-up of activities didn't affect the great atmosphere in the operations room. Doubtlessly, the Myanmar pilot would not have been possible without the much appreciated organisational support of Mike Leung, a volunteer for SCiM. Thanks too to Marc Theuss, SCiM Livelihoods Coordinator, for welcoming us into his team.

We are grateful to SCiM, Oxfam, SMC, RMO, Ju Foundation, and EcoDev, the organisations that supported this learning process by providing some dedicated and enthusiastic participants for the Myanmar Pilot. We appreciated their commitment to the pilot during a period when many organisations were still very much in the emergency phase and reluctant to release staff.

For making us feel so welcome, for being so patient during translation, and for their frequent promises to always do their best, we sincerely thank the Pilot Two participants of Myanmar, who tirelessly contributed towards making a stronger tool.

## 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 May 3, 2008, 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 are 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 (Laputta), fishing farming and processing. The very poor are also active in wood cutting (Laputta), 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 report<sup>1</sup>, the majority of the cyclone's victims were female: 61% of those dead were female, with the percentage being much higher in some villages.

Lastly, the monsoon hit during the hunger season. Although people are accustomed to employing a range of seasonal coping strategies, most of these strategies have been destroyed as food stocks were washed away and the credit usually borrowed from the medium/rich families was no longer available because 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 for meeting the affected population's emergency needs as well as protecting and restoring 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.

---

<sup>1</sup> Post-Nargis Joint Assessment Report - [www.aseansec.org/21765.pdf](http://www.aseansec.org/21765.pdf)

## **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 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. Nevertheless, 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. Prices of small nets reflect seasonal shifts in demand. Annex 1 provides 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 streams and ponds. The name of this net is 'gaw' and it is 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 market, stabilised because the main supply of small nets is from Thailand. The Thai nets are imported by Yangon or Patheingyi importer/wholesalers, who then sell onto township retailers from whom the village shops buy.

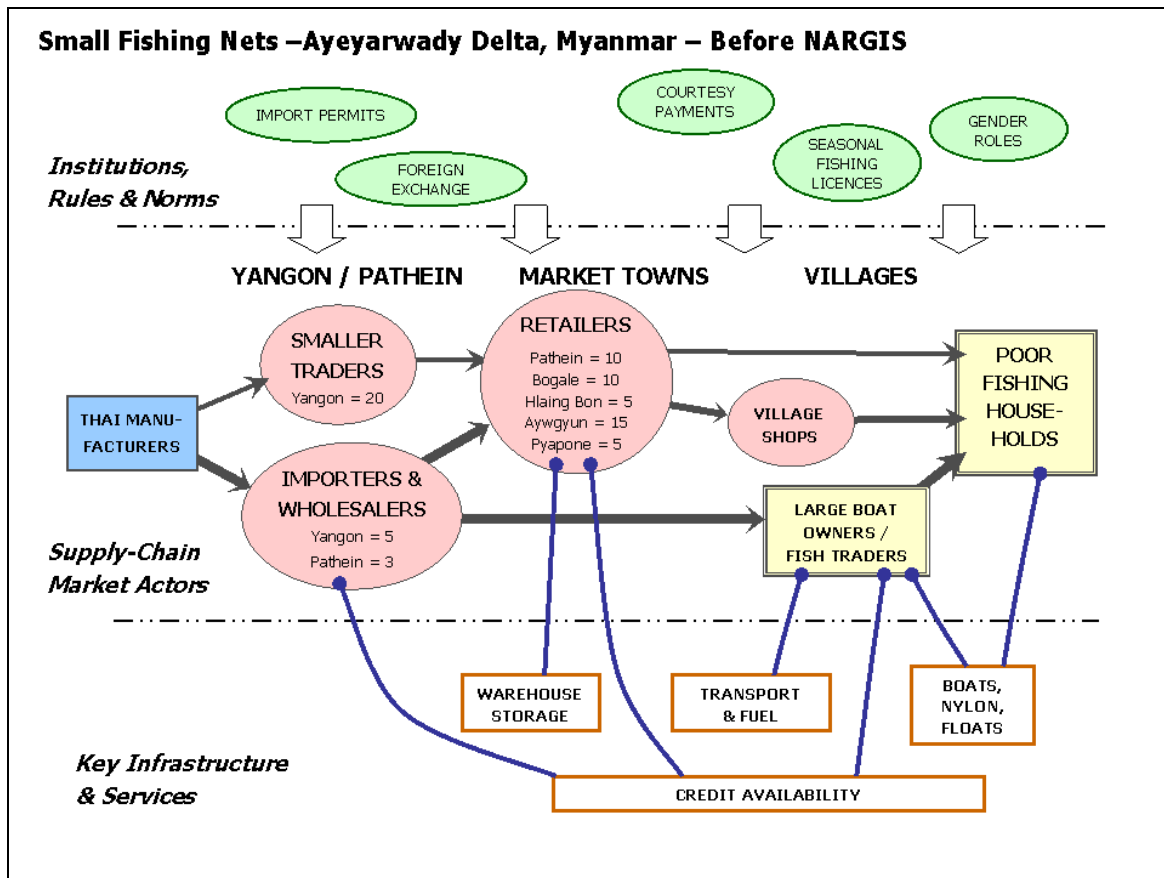
Yangon and Patheingyi wholesalers reported that one of the major factors affecting prices can be the unpredictability of import permits and, to a lesser degree, fluctuations in the exchange rate between baht and kyat.

Slight seasonal variations in the prices along the supply chain reflect 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 market with elastic demand. There is a strong relationship between changes in prices at village level and among Patheingyi 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, Patheingyi and township-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 the 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 wealthier boat owners who they repay over time with fish for the boat owners to sell, or on credit from village retailers who are repaid with proceeds from fish sales over time<sup>2</sup>.

Lastly, a fishing licence is required in the delta. Licences are auctioned annually by location and season. Wealthier fishermen usually acquire the licence and then either employ poorer fishermen to fish for them or divide the area into smaller segments for lease.



## 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.

In June, the month after Nargis, prices and quantities traded spiked upwards, reflecting cyclone-induced demand and the impairment of the supply chain. In the villages, demand fell sharply following Nargis, yet prices rose reflecting both the breakdown of the supply chain and

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

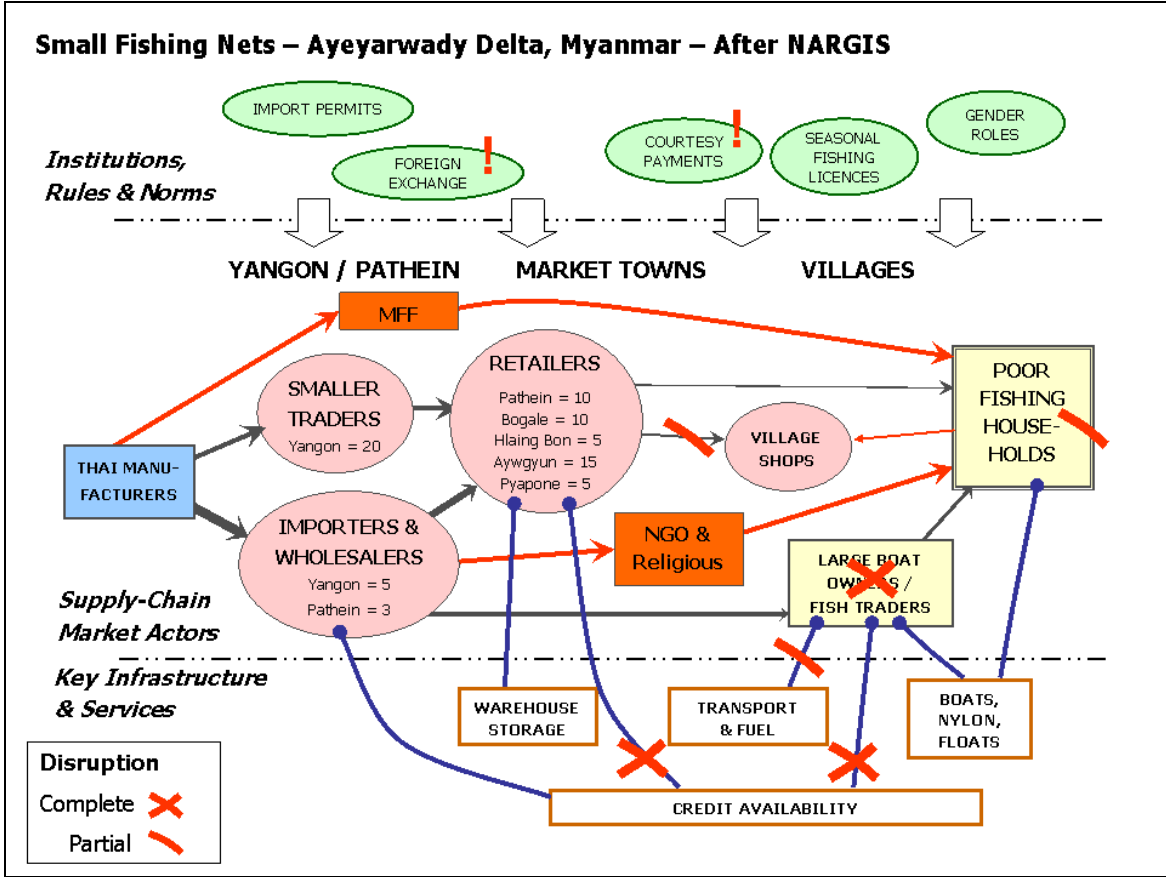
urgent needs of the traders. In July, prices have stabilised at levels slightly higher than the same time last year, but demand remains significantly lower (Annex 2).

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

The repercussions of bypassing 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 for a longer period to recoup these losses.
- Investment in key infrastructure such as private storage and transport facilities will be delayed.
- A higher chance of household 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 sufficiently engaged in the process of recovery. This is disempowering and less dignified.

The common reason 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.



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 occurred during the peak season for sales. Clearly demand has dropped with the loss of wealthier 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. Demand statistics vary by location depending on the areas where donors work.

Most fishing households said that they wanted to return to work as soon as possible and that fishing was their only skill. Therefore, there is an immediate need for nets. Some households

had already sold back donated nets to local retailers because 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, a condition that needs to be considered by any donor intervention.

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 post-Nargis due to the higher credit default rate.

In the villages visited, the average sales of village retailers in May, June and July of 2007, was circa 10 nets per week, so 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 correctly, 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, Mawlamyinegyun, Myaungmya, and Laputta, retailers/wholesalers say they can supply an unlimited number of nets, as they all procure directly from Yangon. However, credit for this procurement is likely to be limited.

### **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 stated that 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 for orders to ensure adequate supplies. Support with credit (or paying cash in advance) would guarantee timely delivery. 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 increased demand, with some support. Concerns about price rises, such as those raised by MFF are valid and should be taken into consideration by understanding blockages in the supply chain and how best to support the actors to relieve such bottlenecks (e.g. with credit support). Small price increases are to be expected when demand rises and data from Annex 2 indicates that price are likely to fall again once the demand normalises.

## **2.8 Recommendations & Follow-up**

In order to facilitate the early recovery of village-level fishing net traders, **donors should buy, where possible, small nets from the affected villages. They should 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 appropriate type of net. If cash interventions are not possible, fishing households should be able to submit a list of the exact equipment needed for each household to ensure appropriate procurement.
- 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 the nets have utility.

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**. Many fishermen were lost in the cyclone, leaving behind female headed households who need to be consulted on how best to adjust to their loss.
- **Analysis of Myanmar fish market systems** is 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. Regarding, important services and infrastructure, there are reports of the destruction of small ice factories that are critical to ensuring fish quality<sup>3</sup>.
- **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.

---

<sup>3</sup> 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 dhani palm. They are used for 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 saltwater 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. Major amounts of thatch grows east from Hlaing Bon in Laputta township.

#### 3.1 Introduction to the Thatch Market System

Dhani thatch panels are the predominant material used for houses of the poor in the cyclone-affected 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 look to better understand this system before intervening.



#### 3.2 Seasonality of the Thatch Market System

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

Harvesting of thatch 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.

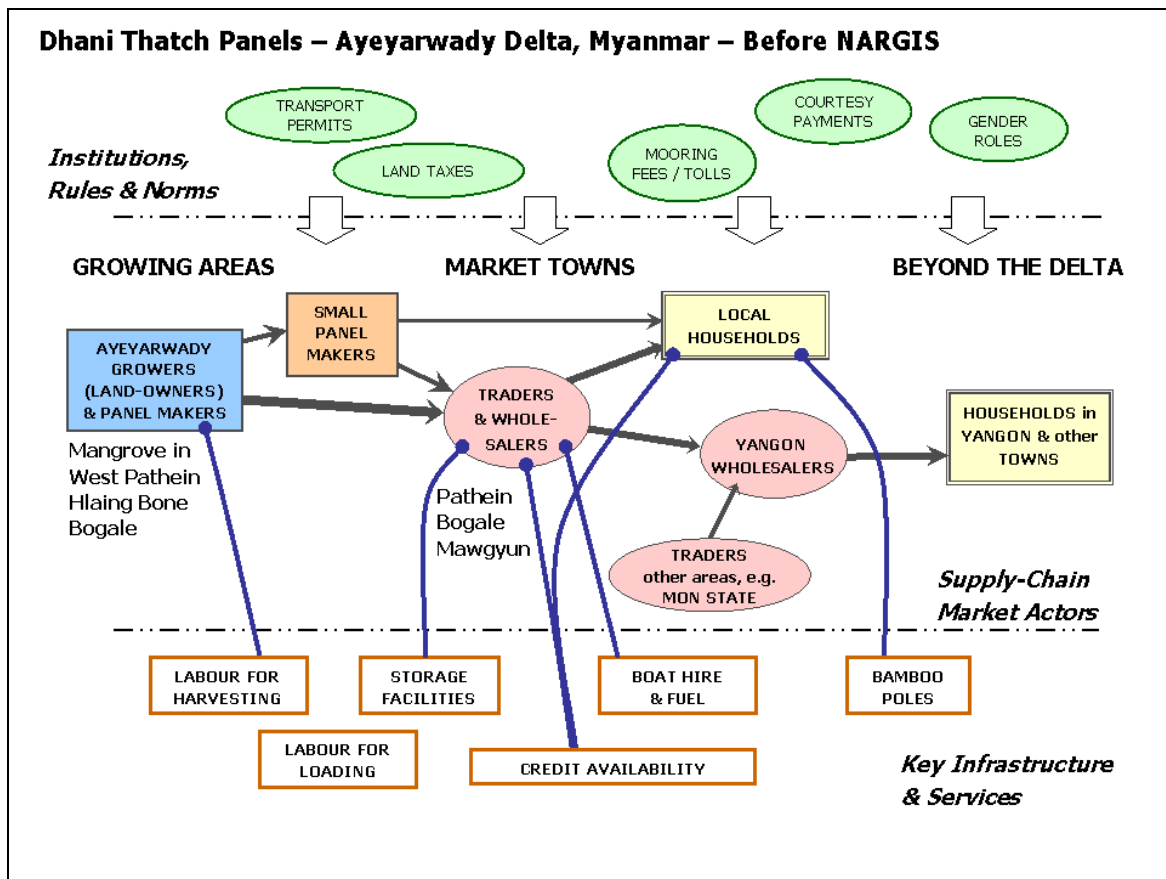
Thatch and rice paddy have correlated harvest patterns. April/May is usually the peak period when thatch is harvested and transformed into panels. This activity occurs before planting season for monsoon paddy. Similarly, harvesting of thatch in Sep/Oct ends when paddy harvesting requires agricultural 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 thatch palm growing on their lands may either harvest it with hired labour or receive payment from a wholesale panel-maker for directly harvesting it.



Thatch market systems related to two regions, East Laputta township and Pyinkayaing island in Ngapudaw township were examined.

#### East Laputta

Hlaing Bon in East Laputta is a major growing area for thatch. Much of the thatch demanded in Yangon is procured from Hlaing Bon and Bogale. There were 6 businesses in Hlaing Bon 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 Bon area.

#### Pyinkayaing island

Pathein town has a large group of thatch wholesalers. The 20 identified wholesalers are not involved in the harvesting of thatch. Instead, small traders purchase thatch from growers and panel makers in southern Ngapudaw and sell them to Pathein. 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.

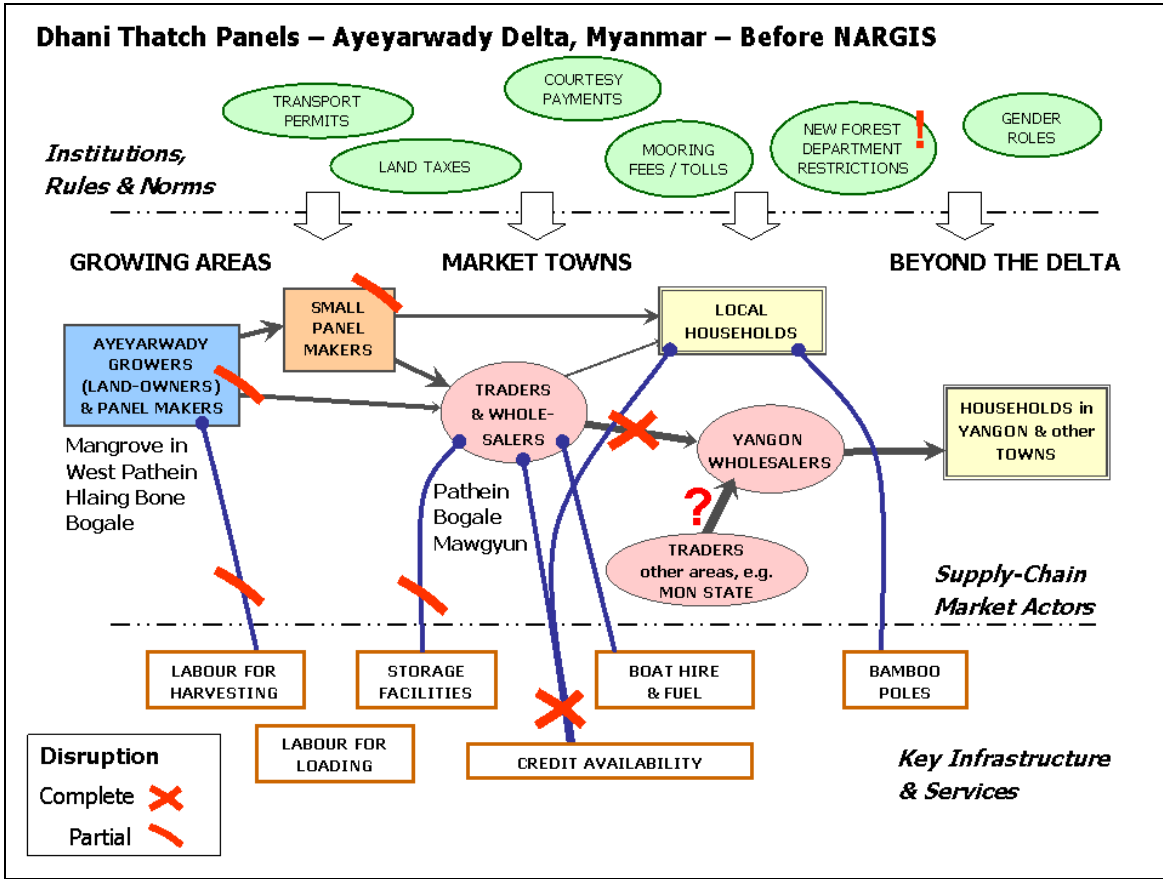
### **3.5 Thatch Market System After Nargis**

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 East Laputta and Middle Island/Pathein areas—both supply the Yangon market and its significant increase in demand for thatch after Nargis. Before Nargis, prices in both and Pathein were around 3500 kyat per 100 panels. Since Nargis, prices have risen to 5000 kyat per 100 panels in Hlaing Bon, and 5500 kyat 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 Bon and Bogale were the main markets for Yangon before the cyclone. Since Nargis, Yangon has relied on both Pathein and East Laputta areas for supply.

Thatch roof making and marketing is one of the non-farm income-generating activities in the southern part of delta area. FAO estimated that it will take at least one year for the market to return to pre-disaster levels.

Most of the thatch palms were also damaged by the cyclone, and remaining nipa leaves are now cut and used by villagers in cyclone-affected areas for roofing of shelters.



**East Laputta area**

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

Because there is currently no thatch available in Hlaing Bon, villages there have been taking thatch from riverside traders in Mawlaminegyun. Mawlaminegyun 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 the 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 area. Import costs from outside the area means greater transportation costs added to the price of thatch. Rising diesel prices, 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 Bon is likely to be temporary as the thatch palm is particularly resilient, and 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, so little or no harvesting is expected for the next few months. The longer-term implication of this policy 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. Boat transportation remains a significant constraint to economic activity and the boats owned by most thatch retailers have been destroyed. However, these 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 the Hlaing Bon 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 Laputta and Ngapudaw. Of 70 salt farm owners operating before Nargis, only 30 remained following the cyclone. None of the salt farms are operational, though businesses may be rehabilitated in the future. The high levels of default on credit have negatively impacted Pathein and village-level traders who had previously extended the credit, but 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 is constrained by 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 endure with temporary shelter. As there is not likely to be high demand for thatch in the next few months, this market system needs to be monitored carefully over the coming months to more precisely forecast demand in the upcoming 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. 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. Nevertheless, 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 . Despite the low demand in both markets, prices have increased significantly compared to one year ago. This has been significantly driven by the big market demand from Yangon which is procuring thatch from both Patheingyi and the East Delta areas.

### **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 Myaungmya).
- Study of the market systems for other shelter items such as tarpaulin and CGI sheeting.
- Gender concerns on the availability of women for panel making
- Further analysis of the impact on the livelihoods of actors involved in the thatch market system
- Monitor and assess the impact of rising thatch prices on poorer households in the unaffected areas

ANNEX 1 Seasonal Calendar – FISHING NETS Market System

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

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

\*Thingagone village

Fisher families need to buy several nets

Fishing season

\$↑ = time when net prices increase



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

No. Actors	Actor-Location	Quantities 2007	Quantities Traded 2008			Prices 2007	Prices 2008		
		Avg Month (May – Jul)	May	Jun	Jul	Avg Month (May – Jul)	May	Jun	Jul
3	Retailer-Phin Gan Gone	10	3	1	3	7,900	8,200	8,500	8,200
5	Retailer-Thet Kel Thaug	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 Bon	10			2	7,900			7,900
5	Retailer-Mawlaminegyun	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

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

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
Mawlamine-gyun	Village & Town retailer	300 400	Both buy from Mawlaminegyun & 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.
Pyinkayaing	Village retailer <i>Thet Kul Thoung, Dedugone, Thingankone</i>	50	Take on credit from Pathein, can provide 2,000+ nets within 4 days but not sure about credit for so man nets
	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, sources indicate that large amounts (20,000) would take a month to source.



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

No of Actors	Location	2007			2008		
		May	June	July	May	June	July
	<b>VILLAGES</b>						
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 Thaug 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
	<b>TOWNS</b>						
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	Pyaw Pone	6,500	6,500	6,500	15,000	7,500	7,500
	<b>AVERAGE</b>	<b>5,275</b>	<b>5,188</b>	<b>4,950</b>	<b>12,583</b>	<b>6,383</b>	<b>6,500</b>