Analysing market systems in emergencies – the EMMA toolkit

MIKE ALBU, LILI MOHIDDIN and KARRI GOELDNER BYRNE

Until recently, understanding markets and the challenges of market development were not prominent issues for agencies involved in emergencies and disaster response. This is now changing. Humanitarian organizations are recognizing that local markets can play a vital role in efficiently supplying critical goods or services to ensure people's survival, and protect their livelihoods, in the immediate aftermath of a disaster. Moreover, they are realizing that market systems matter to emergency-affected populations, who depend on them for income and inputs during times of crisis and beyond.

Keywords: market mapping, humanitarian response, value chain analysis, Haiti, Pakistan,

HUMANITARIAN GUIDELINES (e.g. Ramalingam and Pavanello, 2008), good practice standards (e.g. Sphere, 2004; SEEP Network 2009), programme evaluations (e.g. Savage and Umar, 2006; Harvey and Marongwe, 2006) and policy briefings (e.g. Harvey, 2007) increasingly emphasize the importance of including an analysis of markets in emergency situation assessments, response analyses and monitoring practices.

Most emergency programmes still fail to make the most of local market systems

Nevertheless, most emergency programmes still fail in practice to make the most of the actual or potential capacity that local market systems might have to contribute to emergency and early recovery responses. This is largely due to a lack of familiarity with the private sector, and uncertainty about how to understand or work with traders and other market actors in an emergency setting. When it comes to understanding markets, commonly cited challenges include lack of time, not knowing what data to gather and from where (macro versus

Table 1. Why markets matter in emergencies

For ensuring survival	*For protecting livelihoods*	
Markets may be able to supply food and essential items or services related to basic survival needs	Markets may be able to supply or replace urgent non-food items, agricultural inputs, fuel, tools and vital services	Markets may be able maintain demand for labour, employment or production that restores incomes

Mike Albu is with Practical Action, Lili Mohiddin is with Oxfam GB and Karri Goeldner Byrne is with IRC (International Rescue Committee).

doi: 10.3362/1755-1986.2010.003, ISSN: 1755-1978 (print) 1755-1986 (online)

micro levels), lack of confidence about how to interpret basic information collected, such as prices, and uncertainty about how to translate analysis into programme decisions (Albu and Murphy, 2007).

There has been, in effect, a big gap in both the humanitarian and economic recovery communities for tools that can be used in a pressured emergency environment to get the quality and types of data needed to make informed programming decisions. This paper describes the development of a new Emergency Market Mapping and Analysis (EMMA) toolkit (Albu, 2010) that aims to fill this gap.

Why consider markets in emergencies?

The growing interest and demand for emergency-relevant market analysis tools has its roots in at least three attitudinal changes in the humanitarian sector:

Increasing confidence in operational feasibility and effectiveness of cash-based interventions

Cash gives people affected by disaster some choice in meeting their preferred needs

Cash-based responses alongside or in place of conventional relief distributions of food and non-food items are attractive from a humanitarian perspective. In principle they give people affected by disaster some choice and control in meeting their preferred needs. Cash distributions are also often a fast and administratively efficient way to disperse humanitarian aid.

Cash transfers may be abused by traders with excessive market power

The use of cash accelerated noticeably after the Asian tsunami in December 2004. This enabled researchers to examine the trade-offs and lessons learned (Adams, 2007). It is clear that many cash interventions are implemented without a proper assessment of local market systems' capacity to respond to households increased purchasing power. Responsible agencies are therefore concerned, naturally, about the risk of causing inflationary pressures in critical markets; or that the benefits of cash transfers may be abused by traders with excessive market power (uncompetitive behaviour).

Growing awareness of the negative impacts of sudden flows of relief supplies on economic recovery prospects

Conversely, there is also growing awareness of, and sensitivity to, the risk that large-scale humanitarian relief distributions can exclude and harm the private sector (with negative consequences for many relatively vulnerable households). The idea of 'market-integrated relief' approaches is beginning to get some traction. Such approaches focus on reducing market distortion and supporting private sector recovery by working where possible with private sector actors to respond to emergencies, rather than creating 'parallel' relief supply channels, or

transitioning to commercial supply channels as early as is feasible following a crisis (see Market Development Working Group, 2007).

Heightened sensitivity around the need to leverage early humanitarian assistance to promote livelihood recovery

Beyond the issues of addressing immediate humanitarian needs, there is also more awareness of the responsibility to make better use of the substantial flows of humanitarian assistance that come immediately following a disaster, to promote livelihood recovery. There is clearly often an imbalance between the scale of this early funding and what is later available to promote livelihoods and economic recovery. Recent research recommends engagement in market development very soon after a crisis or in the midst of low-intensity crisis, as long as populations are stable in terms of mobility and security is reasonable (Market Development Working Group, 2007).

The importance of quickly establishing a foundation for post-crisis recovery and growth – through an intersection of relief and development interventions – has been recognized, especially in conflict situations, by Saperstein and Campbell (2008):

> No matter how devastated a post-conflict environment appears at first glance, it should be recognized that economic structures existed prior to the conflict and that some are most likely still functioning. It should be an immediate priority to identify any economic actors, structures and mechanisms that have survived the conflict in order to salvage and build on them. This 'asset-based' analysis will safeguard post-conflict interventions from inadvertently destroying remnants of economic viability and creating dependency, and facilitate more rapid impact.

No matter how devastated the immediate appearances, some economic structures are most likely still functioning

Market analysis tools for emergency situations

Until recently, market analysis was not seen as a high priority in emergency situations, especially in those with a sudden-onset, by most humanitarian NGOs. The range of tools available were therefore either too specialized (e.g Bellmon Analysis) or too protracted (e.g. conventional value-chain analyses) to be useful.

In 2007, two international NGOs with large humanitarian emergency programmes – Oxfam GB and International Rescue Committee UK – commissioned Practical Action Consulting to develop a toolkit that would enable their staff to undertake essential 'good-enough' market analysis. The proposed tools needed to be adaptable, rough-and-ready, speed-orientated processes designed to reflect the information constraints and urgency of decision-making required in the first few weeks of a sudden-onset emergency situation. They needed to

Tools were needed for emergency practitioners with no economic background to do a quick-and-dirty analysis of the most critical markets

enable emergency practitioners with no economic background to do a quick-and-dirty analysis of the markets most critical to the emergency-affected population. Most importantly, the toolkits' outputs needed to have a strong visual impact, making it easy for decision-makers to quickly understand the recommendations of the analysis.

Before starting development of the EMMA toolkit, Albu and Murphy (2007) conducted a review to better understand market analysis needs, decision maker information requirements, identify existing market analysis tools, and get a better understanding of the capacity of field-level staff who would undertake such analysis. Conclusions underlined the need for a user-friendly non-specialist analytical tool, as many existing market analysis tools were too specialist or development orientated and therefore not suitable to emergency settings where specialists are hard to locate.

Albu and Murphy found a number of pre-existing market-analysis tools – and it is useful to understand how the scope of EMMA relates to or builds on these.

Some existing tools are specific to markets for food

Some existing tools are specific to markets for food. The well-established Bellmon Analysis, for example, examines whether imported food aid will result in a substantial disincentive to or interference with domestic production or marketing in a recipient country. Bellmon is required by US Federal law for projects involving the monetization of Title II food aid. Completing a conventional Bellmon Analysis requires experience with markets, logistics and strong research or analytical skills. A national-level analysis including field surveys and report writing, takes three to six weeks, depending on the size of country.

A recent evolution and possible successor to Bellmon is the MIFIRA Toolkit (described by Barrett et al, 2009). This also focuses on food markets, but with a broader analysis of food insecurity and responses including the scope for local procurement, or the use of cash. Guidelines for MIFIRA are expected to be published at http://aem.cornell.edu/faculty_sites/cbb2/mifira.htm during 2010. Compared to EMMA, MIFIRA is a longer process better suited for chronic situations or as part of an emergency preparedness planning process – especially in locations where emergencies happen with some frequency.

The household economy approach is a livelihoods-based framework

The household economy approach (HEA) developed by FEG Consulting and Save the Children (2008) is a livelihoods-based framework for analysing the way people obtain access to the things they need to survive and prosper. It helps determine people's food and non-food needs and identify appropriate means of assistance, whether short-term emergency assistance or longer term development programmes or policy changes. HEA is a framework rather than a toolkit (i.e. field methodology), but it includes a supplement (Chapter 8) on market assessment whose structure: baseline, hazard and outcome analysis,

and response, along with a step-by-step process was influential in the development of EMMA. HEA is relatively complex and demanding for rapid-onset emergency situations and may not answer key questions concerning market competitiveness, restrictions to movement of goods and the risks of inflation.

Value-chain analysis influenced the design of the EMMA toolkit

Value-chain analysis – in its various guises – was heavily influential in the design of the EMMA toolkit. It underpins the market mapping approach (Albu and Griffith, 2005) from which EMMA originally evolved. At the time of the review, Albu and Murphy (2007) found no examples of value-chain analysis applied in emergency contexts, but this has changed since that time. A good example is the study of the Haitian construction sector (Blum, 2008) that used a value-chain approach to advocate a shift in infrastructure programme design from a direct implementation strategy toward longer-term, market-integrated relief in Haiti's most conflict-prone cities. Nevertheless, compared to the EMMA toolkit process, this was a relatively well-resourced, expert staffed and lengthy endeavour. It is therefore perhaps an exemplar for a detailed analysis study that might follow an early EMMA process in an ideal post-disaster scenario.

Overview of the EMMA toolkit

The EMMA toolkit (Albu, 2010) is a set of tools and guidance notes, designed to encourage and assist front-line humanitarian staff in sudden-onset emergencies to better understand and make use of market systems. It was written initially in 2008, and then revised in response to a series of pilot tests in 2008 and 2009.

The toolkit in essence produces a quick, rough-and-ready analysis with practical recommendations. It is suitable for use in the early stages of emergencies. It does not rely on users having specialist economic or market analysis skills; and it is broad in scope, addressing survival needs, livelihood protection and the transition to economic recovery.

The rationale for EMMA is that better understanding of the critical market systems in any given situation should enable humanitarian agencies to consider a broader range of responses. Thus they can

Box 1. Scope of the EMMA toolkit

Sudden-onset emergencies: where fast-moving events mean agencies have little advance knowledge of markets and limited resources to investigate.

A broad range of needs: any market system that may be critical in addressing priority needs, including food, non-food items and supporting services.

Rapid assessment and decision-making: supporting humanitarian teams to take urgent response decisions faced in the first few weeks.

Responses might include cash-based interventions, local procurement and other innovative forms of support to market actors

effectively address humanitarian needs while not hindering economic recovery by pushing out the private sector. These responses might include cash-based interventions, local procurement and other innovative forms of support to market actors (e.g. traders) that enable programmes to make better use of existing market-system capabilities. This could lead to more efficient use of humanitarian resources, as well as also encouraging recovery and reducing dependency on outside assistance.

In essence, EMMA helps front-line staff to both (1) *understand* the important market aspects of an emergency situation that may not otherwise be considered adequately or early enough; and (2) *communicate* this knowledge and the rationale for their proposed actions, promptly and effectively into programme decision-making processes (donors and managers).

The EMMA process involves three basic strands of enquiry. As EMMA proceeds these strands should knit together to provide a coherent analysis that supports the weight of the final recommendations.

The gap analysis is about understanding the priority needs of the target population

The *gap analysis* strand is about understanding the emergency situation, priority needs and preferences of those most affected by the emergency: our target population. It also puts these households' needs (the gaps they face) in the context of their economic profile and livelihood strategies. The gap analysis results inform the markets-system analysis by defining what the market system has to achieve if it is to meet people's needs. These results also contribute to the response analysis e.g. by describing women's and men's preferred forms of assistance (Box 2).

The market analysis reveals the critical market system's constraints

The *market analysis* strand is about understanding each critical market system's constraints, and capabilities to play a role in the emergency response. It develops a map and profile of the pre-crisis baseline situation and explores how the emergency has impacted on this in the emergency-affected situation. The market-system analysis results inform the response analysis by assessing what the market-system is capable of delivering, and what the main constraints it faces are. Early market-analysis findings may also help the gap analysis process by highlighting issues that require field investigation, e.g. market access constraints that the target population are unaware of (Box 3).

The *response analysis* strand is about exploring different options and opportunities for humanitarian agencies. It looks at each option's respective feasibility, likely outcomes, benefits and risks, before leading to recommendations for action. The response analysis results inform the final conclusions and recommendations of EMMA, by evaluating feasibility, risks, pros and cons of the response options or combinations of options identified during the EMMA process (Table 2).

Box 2. Example of gap-analysis result (summary)

25,000 households in the disaster area are normally food secure in locally-grown rice at this time of year. Due to 60 per cent flood destruction of current crop, they face a total collective shortfall (gap) of 1200 millions tonnes (MT)/month until the next harvest in nine months. Both women and men in the target population have a strong preference for cash-based assistance. For women this is mainly due to their concerns about likely type and quality of food aid; whereas men favour the flexibility of cash.

Box 3. Example of market-analysis result (summary)

Traders in disaster area will struggle to supply an extra 1200 MT rice/month from local stocks and are not accustomed to 'importing' more than 300 MT/month (baseline). The main obstacles to stepping up supplies are lack of finance (trading capital), and damage to local fleet of trucks. In addition, many rural feeder roads to remoter villages are blocked. However, ricer traders in the nearest large city have ample supplies (baseline 4,000 MT/month).

Table 2. Example of response-analysis results (summary)

Response option	*Timing*	*Benefits*	*Risks*	*Indicators*
Local procurement, with agency distribution	Start in 2–3 weeks	Rapid, operationally feasible response	May drive away local rice traders Increased long-term dependency	Prices Level of trade activity
Household vouchers, plus loans and transport assistance for local traders	Start in 4–5 weeks	Women prefer Less costly Boost for local economy	Complex to administer Risk of corruption Donor scepticism	Prices Voucher redemption
Cash-for-work, clearing rural feeder roads	Start in 1–2 weeks	Reduced transport costs, prices Boost for local economy	May divert labour from key agricultural activities May exclude extremely vulnerable individuals	Labour rates Exclusion

The EMMA process in practice

The EMMA process is flexible and adaptable, but built around a series of logical and broadly chronological steps – describing the general sequence of activities. It is also an iterative process. In practice, activities in different steps overlap, and steps may be returned to repeatedly, as the analysis of each market system is revised in the light of new information.

EDM readers will notice that as with subsector or value-chain analysis, EMMA requires the early selection of specific markets: in this case of those that are most critical from a humanitarian perspective (e.g. refer to Table 1). It encourages practitioners to explore the structure and performance of these markets from a systems perspective.

Box 4. Ten steps in EMMA

1. *Essential preparation*
   Do background research and in-country briefings; consult on the agency mandate, terms of reference and practicalities; identify target population and their priority needs.
2. *Market selection*
   Select the most critical market systems for EMMA to study, using various specific criteria; and then identify the key analytical questions that will guide the investigation of each system.
3. *Preliminary analysis*
   Draft initial provisional household profiles, seasonal calendars, baseline and emergency-affected maps of the market system; and then identify key informants and useful leads for fieldwork.
4. *Fieldwork preparation*
   Agree and set the fieldwork agenda; devise the questionnaires, interview plans and information-recording formats needed for EMMA interviews and other fieldwork.
5. *Fieldwork activities*
   Conduct fieldwork activities: interviews and other information gathering; this section includes guidance on interview methods and tips relating to different categories of informant.
6. *Mapping the market*
   Produce final versions of baseline and emergency market maps, seasonal calendars and household profiles that describe the situation, and will inform the three 'analytical' steps that follow.
7. *Gap analysis*
   Use household profiles, information on priority needs, shortfalls and access constraints in order to finally estimate the total gap that needs to be addressed.
8. *Market analysis*
   Complete the market-analysis strand: use market maps and data to analyse availability, conduct, performance and thus estimate the capacity of the market system to meet the gap.
9. *Response analysis*
   Finish the response analysis strand: make reasoned recommendations, based on the market-system logic, feasibility, timing and risks of different options, including cash, in-kind relief or other market support.
10. *Communicate results*
    Consult with colleagues, and communicate EMMA's results to wider audiences (donors, agencies); using concise briefings and eye-catching map-based presentations and reports.

Timetable for EMMA in practice

EMMA can take anywhere between two and four weeks to implement. Variables include the context and the scale of the emergency. It also depends on resources: the number of market systems to be studied and number of staff used. We envisage two extremes of EMMA in practice:

1. *The small single-handed process:* in which EMMA is conducted by an experienced lone practitioner, with assistance from one or two colleagues with good local knowledge of the crisis-affected area. This is quicker – as little as 10 days – but the amount of territory that can be covered is limited.

2. *The large team-based process:* in which EMMA is conducted by a team, led by an experienced leader who is responsible for training a small team of local interviewers/assessors. This takes longer – four weeks is realistic – but potentially can cover a lot more geographical territory, or different market systems.

Market maps – the main tool

EMMA makes use of several tools – some of which are already well established. For example, household income and expenditure profiles are charts illustrating the main sources of income and expenditure for those affected by crisis. They are used extensively in the HEA methodology. Similarly, seasonal calendars – that summarize important seasonal changes in markets and peoples lives – are well established in livelihoods analysis and rural development programmes.

Market maps are graphical representations of specific market systems before and after emergency onset

The main innovation of EMMA is the use of market maps that are used throughout the market-system analysis strand. These are graphical representations of specific market systems (before and after emergency onset) that are rapid to develop, visually engaging and intuitively easy to understand. The market-map tool in EMMA is derived from a participatory approach to pro-poor market development in non-emergency contexts, designed by the international NGO Practical Action (Albu and Griffith, 2005). It emphasizes simple and visually engaging methods of communicating and sharing knowledge about complex systems among non-specialists.

Market maps are a powerful way to:

- collate and represent information about market systems (before and after crisis);
- facilitate discussion, interpretation and analysis of data within the EMMA team;
- communicate findings about market systems to others.

EMMA starts with rough, approximate sketches of the market system. Then gradually, with more information from interviews and informants, builds on and revises these maps until a final 'good enough' version is achieved.

The market actors include farmers, traders, processors, transporters, retailers and consumers

There are three sections to the market map – as illustrated by the example in Figure 1. The central section of the map shows the market chain (also known as the supply chain or value chain) of different market actors that buy and sell the product as it moves from primary producers/suppliers to the final consumers/buyers. These actors include, for example, smallholder farmers, larger-scale producers, traders, processors, transporters, wholesalers, retailers and of course consumers.

Below the market chain, the map shows various types of vital infrastructure, inputs and services that are provided by other service enterprises, organizations and governments. These actors and services are those that support the market system's overall functioning or performance, even though they do not directly buy or sell the item.

Above the market chain, the map shows other 'market environment' factors that strongly influence how producers, traders, consumers and other market actors operate in the emergency situation. These factors include formal policies, regulations and rules; informal social norms – such as gender roles, official and business practices; trends and current affairs – including patterns of social and political conflict, economic and environmental trends.

Comparing the baseline with the emergency-affected situation helps users to see where constraints have arisen

Market maps are used in EMMA – in particular – to show the changes (impact) created in the market system by the emergency situation. Direct comparison of the baseline situation with the emergency-affected situation helps users to 'see' clearly where constraints or bottlenecks have arisen. This is illustrated by the map of Haitian beans market in Figure 1, which highlights critical issues, and areas of partial or complete disruption to market actors, linkages or services in the market system. For example:

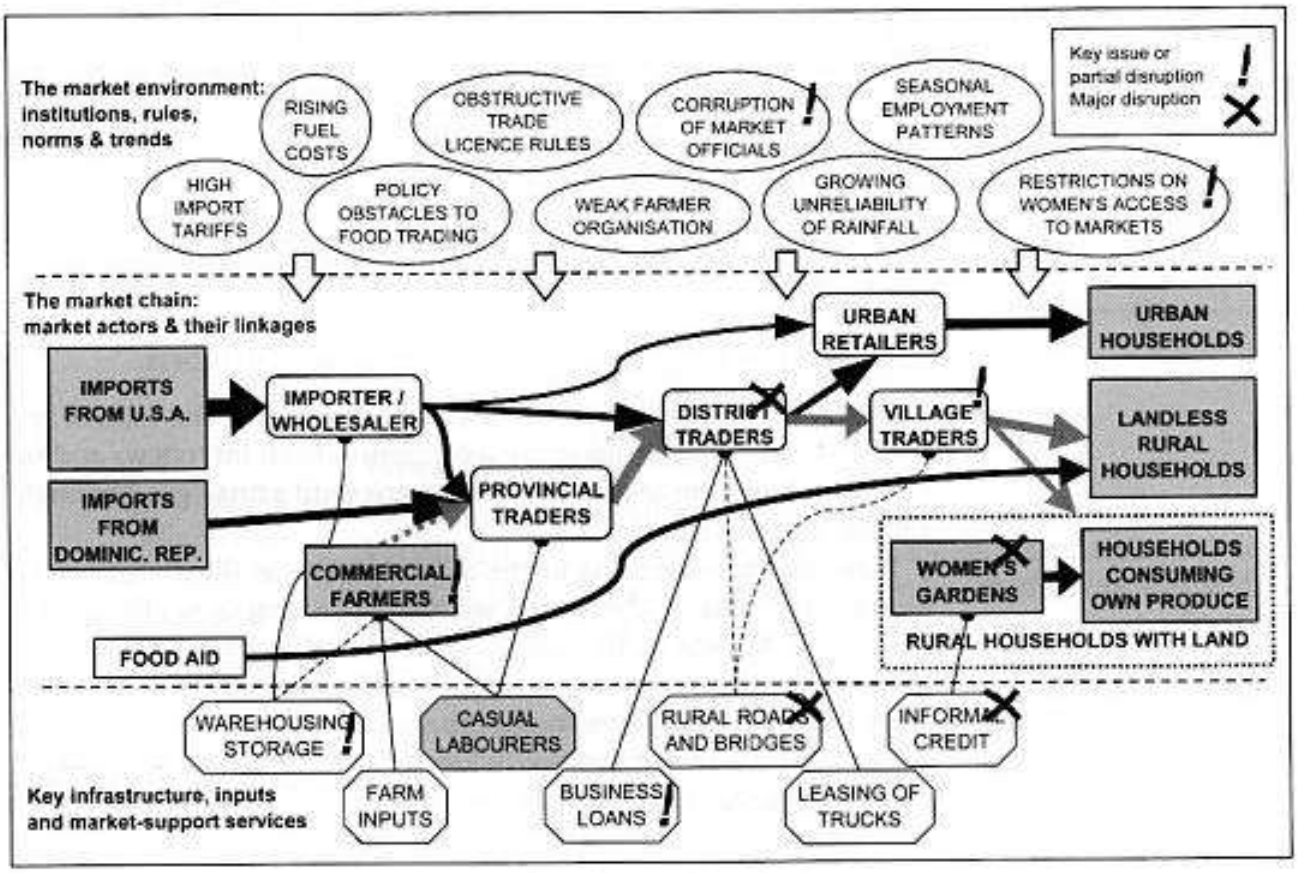

Figure 1. Emergency-affected market map – 'beans' example from Haiti

- Obstruction of rural roads and bridges by landslides, has severely impacted on district-level traders.
- Women gardeners have lost their crops, making these households dependent on purchased food at a time when they would normally be selling small food surpluses to village traders.
- Food aid is reaching some landless rural households, by-passing the normal supply chain.

Market maps can also be used to capture and analyse quantitative market data

Market maps can also be used to capture and analyse quantitative market data. Information about the number of market actors, and the total estimated volumes of trade can be overlaid onto the basic market map as in Figure 2. This type of data mapping can help reveal bottlenecks in supply chains, tell users about the market system's capability to meet priority needs, indicate where local procurement is possible or even highlight opportunities for other non-conventional emergency responses.

Knowledge about how a market system performed before the crisis – its capacity, structure, performance and conduct – is also a useful indication of what can be expected to be achieved through market support in the post-emergency situation. Information about trade volumes, degrees of market integration, levels of competition at different points in the value chain are valuable indicators of the market response to different types of humanitarian intervention.

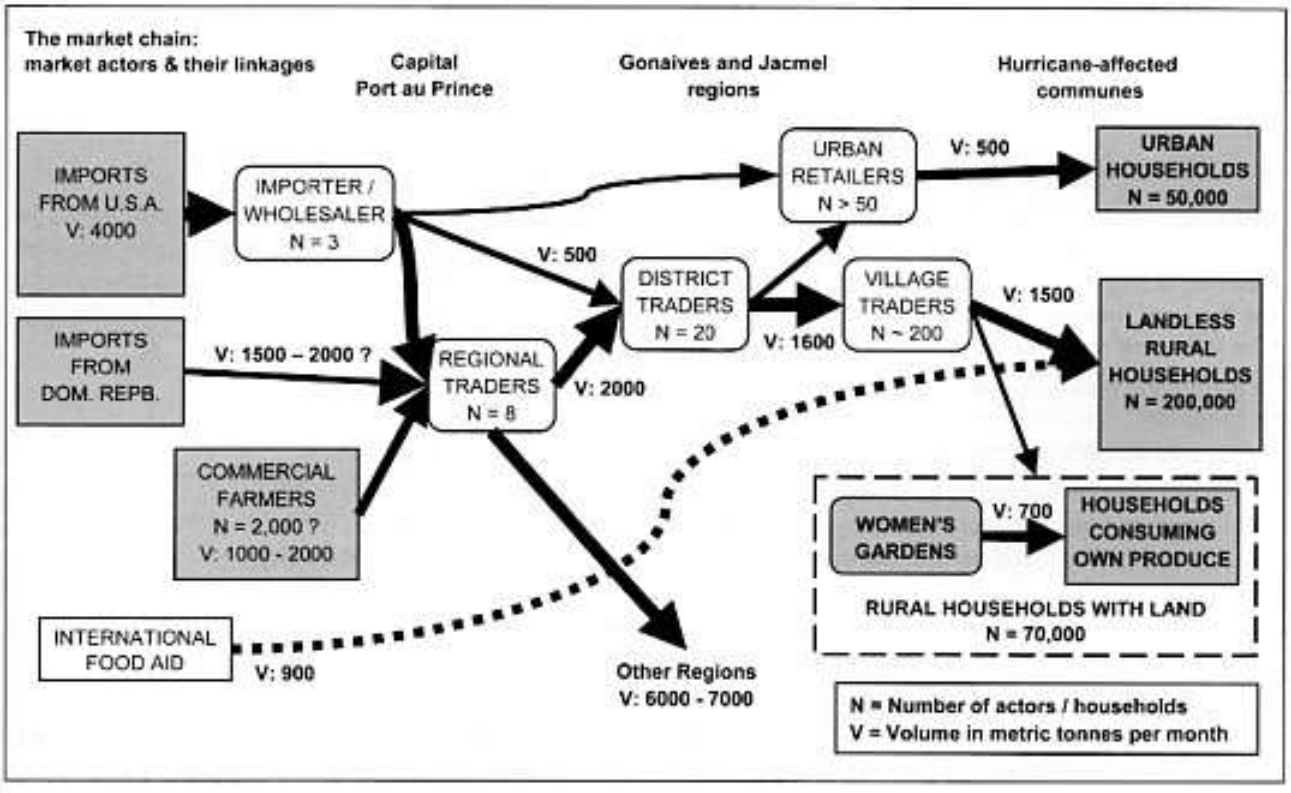

Figure 2. Market-system map overlaid with trade volumes

Response analysis in EMMA

Users must be able to translate market analysis into programme decisions

A vital requirement and characteristic of the toolkit is that it should enable users to translate market analysis into programme decisions. This is the objective of response analysis. The user's task is essentially to assess how far the critical market system can be relied upon to play its role (as supply or buyer) in meeting humanitarian objectives. The toolkit therefore organizes humanitarian responses or actions in four categories:

A. Responses that rely on local market systems performing well;
B. Responses that aim to strengthen or support local market systems, so that actions in category A are more effective, less risky or simply unnecessary;
C. Responses that do not rely on local market systems performing well (although they may require regional or national markets to do so);
D. Actions leading to further investigation, analysis and monitoring.

The decision process for selecting between these four options has a core logic, which can be can be summarized in three relatively simple analytical questions:

1. *Baseline situation*: How well did this market system work before the emergency? To what extent did it meet normal needs? How inclusive and accessible was it? How efficient, reliable and fair was it? (market-power)

Box 5. Different response options – example of firewood needs in an IDP camp

Households in a rapidly expanding camp for internally displaced persons (IDPs) are suffering acute shortage of fuel for cooking. Humanitarian concerns include local environmental degradation, risks to children and women scavenging firewood, and the potential for conflict with host community. Depending on its assessment of the local firewood market system's capacity to respond to the IDPs' needs, an EMMA study might identify the following response options:

If the market system is expected to perform well (A)
- Include a cash allocation for firewood in regular transfers to women householders
- Create a voucher system enabling IDPs to purchase firewood at subsidized prices

If the market system needs to be strengthened or supported (B)
- Negotiate official access to forestry reserves for authorized firewood traders
- Guarantee loans and vehicle leases to enable more traders to enter the market quickly

If market system is not going to be capable of performing well (C)
- Distribute fuel-efficient stoves to reduce households' firewood needs
- Procure and distribute firewood rations to households in camp

If further investigation and analysis are needed (D)
- Continue to monitor prices of firewood inside the camp and in neighbouring towns to confirm that EMMA's assessment of market-system capacity is accurate
- Investigate the local market system for alternative cooking fuels (e.g. gas canisters)

2. *Impact of the crisis*: How has this market system been affected by the crisis, and how have market actors or others responded to the emergency? What is the situation now – e.g. structure, performance, prices, access, availability, conduct? What are the coping strategies? What are the existing humanitarian responses?
3. *Market-system forecast*: How well is this market system likely to react or respond to various proposed humanitarian actions, or other future impacts of the crisis? What will happen to demand, prices, access, availability in the market system if the affected population are given cash-type assistance? Or, are assisted with in-kind relief distributions? Or, as a result of other anticipated future impacts of the crisis?

How well is this market system likely to react or respond to various proposed humanitarian actions?

Figure 3 illustrates this core logic by showing how these three questions relate to the category of response decision. Note: the form these questions take depends on whether, from the target beneficiaries' point of view, the market system is for 'consumption' or 'income'. Figure 3 is for a consumption-type market.

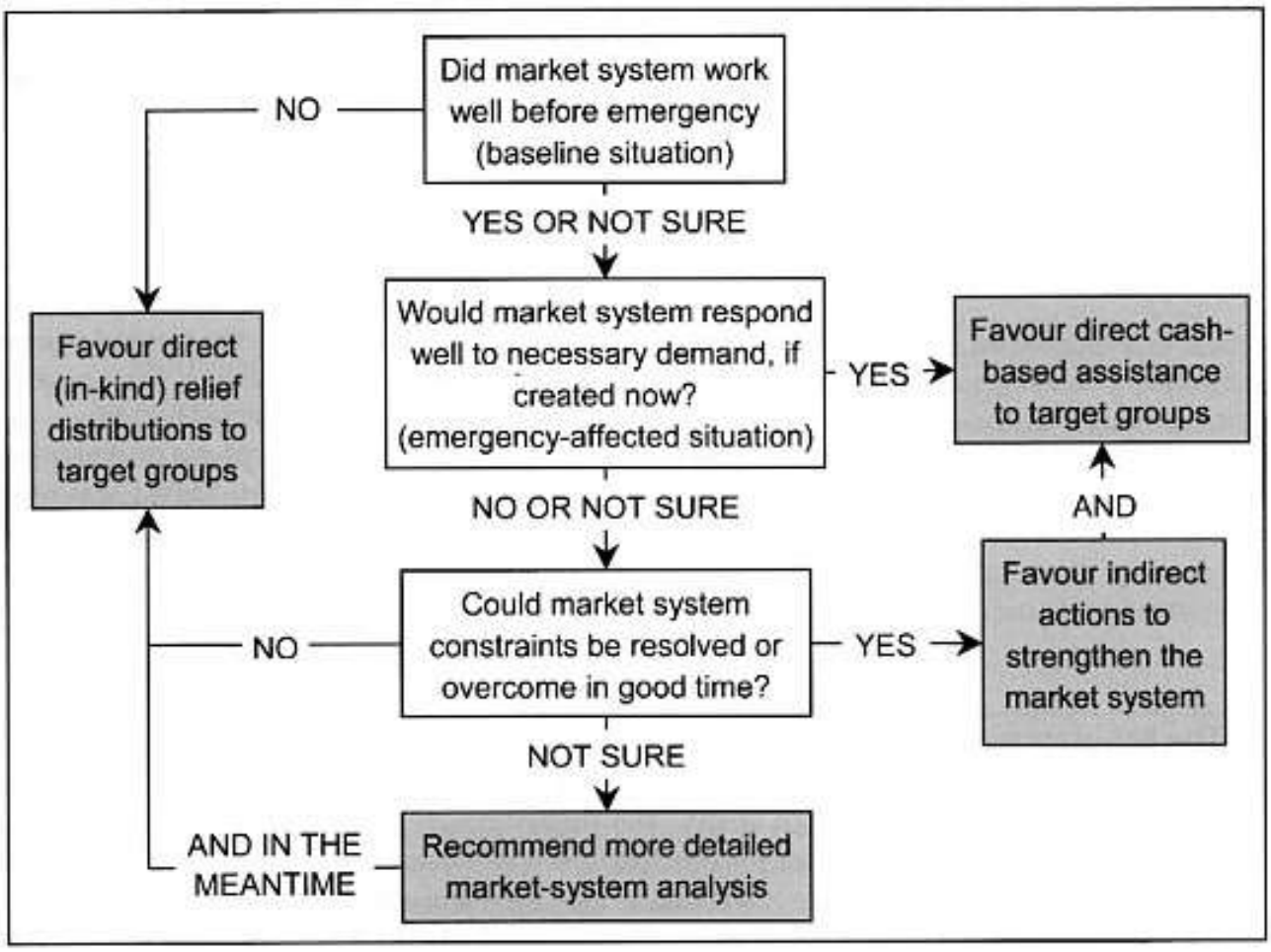

Figure 3. Response analysis logic

Development and testing of the toolkit

The toolkit was tested in Kenya, Myanmar, Haiti and Pakistan

After an initial version of the EMMA toolkit was drafted in March 2008, four pilots of the toolkit were held: in Kenya (after election violence) in April 2008, in Myanmar (after cyclone Nargis) in July 2008, in Haiti (after hurricanes) in September/October 2008 and in Pakistan (after IDP movements) in February 2009. The scheduling of pilots was extremely challenging. However, the EMMA development team managed to hold pilots in four very different contexts, with a variety of team compositions that included: multiagency teams, single NGO teams, primarily local staff teams, international team leader with local staff, primarily international staff, larger teams, and smaller teams. In this way the toolkit could be tested on a technical level as well as determining the implementation challenges faced by various team compositions.

Each pilot produced a pilot report (e.g. Goluba, 2009), which documented how the tool performed during the pilot and provided recommendations for changes to the toolkit, as well as reports on the key findings and recommendations for each market system evaluated. The pilot report was then used to make changes to the structure and content of the toolkit. The testing and retesting of various toolkit structures proved to be an arduous but fruitful process – after some pilots the toolkit was completely rewritten.

EMMA in practice – Haiti case study

The third EMMA pilot study took place in Haiti in September/October 2008 by the Red Cross (IFRC, Haitian, Canadian), ACDI/VOCA and Oxfam (GB, Intermon, Quebec) responding to the tropical storms (Fay, Gustav, Hanna and Ike) that struck that summer. Each organization was involved in emergency response activities to address basic needs or protect livelihoods and were in the phase of designing future programme activities based on assessments. EMMA was used to understand the market systems as part of a process of ascertaining appropriate response modalities. Two market systems – timber for construction and beans – were analysed.

The timber market system

The programmes needed to know the market capacity for supplying timber for construction

The Red Cross identified shelter as a priority need in their implementation areas of St Marc, Desdunes and Grande Saline and therefore decided to analyse the timber market as the majority of households use timber for construction. EMMA was used to identify the most appropriate intervention modality. Some specific programme questions that needed answering included: (1) What is the market capacity to

supply timber (for reconstruction) to the affected population? (2) Can cash be used or direct purchase?

EMMA analysis enabled the teams to answer these questions but also consider the timing and organization of a potential response. Findings included:

- Imported timber market system had to be analysed in detail as target households previously relied on locally grown timber, thus contributing to unacceptably high levels of environmental degradation.
- The timber supply chain is normally stable and was functioning well in both the non-affected and affected areas.
- As traders were importing more than double the whole target population timber needs in one week, the market system had the capacity to respond to the predicted population household timber demand at every level of the chain.
- Timber suppliers would only require one month notification.

The market system had the capacity to respond to the predicted household timber demand

Recommendations included:

- Using basic seasonal calendar analysis in the target area, the reconstruction period was planned not to coincide with peak labour/agricultural activities.
- As weak competition was identified in one implementation area (St Marc), additional care and attention to agreements and contracts was warranted.
- The intervention should try, where possible, to source timber from the nearest available supplier to inject cash into the local economy and affected area.
- Although most cash preconditions were favourable and traders would have been compliant, households expressed a preference for an in-kind response. This was due to concerns regarding trader corruption and their financial and logistical inability to transport the timber to their household. These constraints could be overcome and cash/vouchers used, with further investigation and discussion with communities, traders and transport agencies and through establishing a monitoring and accountability system.

The reconstruction period was planned not to coincide with peak agricultural activities

Households expressed a preference for an in-kind response

The beans (haricot) market system

This market system was analysed by ACDI/VOCA and Oxfam teams because it was considered an essential component of the Haitian diet and a good indicator of the overall functioning of the national food market. EMMA analysis was undertaken in two areas – Artibonite (Gonaives) and the south-east (Jacmel, La Vallee and Bainet).

At the time of analysis, imported food aid was being delivered to most affected households and many NGOs were curious as to how

the hurricanes had affected bean farmers and traders. EMMA was used to better understand the implementation context and investigate potential response decisions. The following questions were of particular interest:

- How has the crisis affected farmers' access to beans markets (to sell produce)?
- What is the availability of beans supplies (for purchase/consumption)?
- How has the crisis affected beans market chain actors and how are they coping?
- When should food aid be stopped, and how?

Findings included:

- With the hurricane season being more destructive than usual, bean crop losses were high (50–90 per cent), which heavily affected the local economy and diet. Agricultural land was damaged and varying levels of rehabilitation required.
- The local markets and economy seemed robust enough to respond to an increased bean demand with advance notification. Local and preferred varieties may have to be replaced by cheaper less popular imported varieties.

Bean traders were able to access further supplies and said they only needed consumer demand to initiate this

- Traders were able to access further supplies and many said they only needed consumer demand to initiate this. Although rural market sellers were fewer than seasonally expected, they mentioned higher than normal surpluses. This could have been due to food aid and lower local purchasing power.
- The conditions of secondary and tertiary roads were improving gradually, facilitating transportation of commodities to and from markets.
- Destruction of trader stocks and storage facilities and the breakdown of the informal credit systems would affect the early recovery of market system actors in the affected areas. Therefore it was likely that prices would take time to decrease to pre-crisis levels as traders tried to compensate for their losses.

The decrease in bean demand due to lack of cash or food aid reduced trader incentive to rehabilitate

- The decrease in bean demand due to lack of cash or food aid reduced trader incentive to rehabilitate and recover their activities. This was especially worrying in Gonaives due to aid and the enormous amounts of mud clogging up the streets.
- Poor households (including producers) rely heavily on cash to purchase more than half of the food consumed. Higher prices mean that many are forced to consume less and risk nutritional deterioration. Although food aid filled the gap for some households, targeting was difficult and many were not included.

Recommendations included:

- Increase the purchasing power of target beneficiaries via injecting cash into the local economy via cash transfer programmes.
- Provide support to some traders that may need access to credit in order to restock (particularly in Gonaives) or to rebuild storage facilities (wholesalers in Gonaives).
- Provide bean seeds and agricultural inputs to farmers to ensure planting of the subsequent crop.
- Stop food aid by the time the next harvest begins.
- Stagger implementation periods based recovery capacities. In La Vallee and Bainet, targeted distributions may only be necessary until the next harvest if farmers are assisted to recover through targeted agricultural inputs.
- As households frequent markets three to five times/week, buying in small quantities (due to lack of cash, storage facilities and refrigeration), organizations should consider these aspects and security risks for those receiving large amounts of assistance.
- During harvest months, agencies should complement the local availability of food by implementing interventions that harness local production.

Food aid should be stopped by the time the next harvest begins

EMMA in practice – Pakistan case study

The fourth EMMA pilot took place in February 2008 in north-west Pakistan. The International Rescue Committee (IRC) used EMMA to assess the effect of an IDP crisis on local markets in Peshawar, to inform programming with market-oriented data. The studies examined market systems for firewood and vegetables (Goluba, 2009). Based on the findings, the IRC developed a livelihood project that sought to reduce household expenditure on firewood, which was later funded by US OFDA. According to the IRC team in Islamabad, the analysis added value to the analysis and design of the livelihood project in several ways:

- The simple tools enabled non-technical staff to collect relevant market information easily. Before being introduced to EMMA, teams had very little experience with collecting this type of economic/livelihood information from the field. The data presented a baseline for programming, making the project more data-driven.
- Use of the analysis broadened IRC's approach to recovery work. Market maps helped the team to better visualize multiple and different points of entry. This overcame their conventional tendency to consider only assistance to the end-users or beneficiaries. The team felt that EMMA helped them develop more inventive

The market maps helped the team overcome their tendency to consider only the end-users

and nuanced responses based on market realities; rather than the simple dichotomy of in-kind or cash distributions.

- Going through the steps of the analysis forced staff to think about beneficiaries within the context of the critical markets selected. By not exclusively looking at needs, the team understood much more about the critical markets, their constraints and the opportunities for action.
- The process helped IRC staff define market-related indicators, which were then included in the LogFrame (programme strategy) and monitored using the EMMA tools. When used with the income and expenditure profiles, EMMA enabled local IRC staff to identify indicators that characterized the relationship between markets and households
- The 'income' market exercise presented more challenges to the team as compared to 'supply', demanding a shift from focusing on the material needs of IDPs to how best to support them to generate income. The development team finally selected interventions that would both address a need and also lead to savings and therefore income generation. The interrelationship between markets, supply and income guided the intervention selection process.

The interventions selected would address a material need and also lead to income generation

Building on this experience, IRC Pakistan conducted additional EMMA analyses for the livestock and daily labour markets in IDP camps, to help inform future programming.

Challenges

Advocates of market analysis in emergency situations still face a number of challenges:

- *Winning the argument* – Providing an analysis of critical market systems in emergencies is only the first step. How can we ensure that the findings and recommendations have some influence over operational decision-making? EMMA encourages the use of highly visual 'market maps' to represent and convey the results of analysis to busy decision-makers, managers and donors.
- *Coping with complexity* – For some organizations, realigning limited resources to include market-systems analysis in emergency assessments will be challenging. How can this additional facet of programme design be included in the analysis of very diverse and often complex situations?
- *Building capacity* – As the analysis of complex systems cannot be reduced to checklists and step-by-step processes, the team developing EMMA is following a strategy of cultivating leaders – people with the capacity to develop and share the 'art' of

The highly visual 'market maps' convey the results to busy decision-makers

doing EMMA throughout the humanitarian community. Plans are being developed for training courses and online resources, to be available in 2010–2011.

- *Coordination among agencies* – EMMA will be most valuable if agencies work together in the field to coordinate and share market-systems analysis. Without this, there is a risk that good programmes will be undermined by poorly designed ones. NGOs must take on the responsibility of designing market-sensitive programmes that support recovery.

References

Adams, L. (2007) 'Learning from cash responses to the tsunami, Final Report', HPG Background Paper, Overseas Development Institute, London, www.odi.org.uk/hpg/papers/BGP_Tsunamilessons.pdf [last accessed 21 January 2010]

Albu, M. (2010) *The Emergency Market Mapping and Analysis Toolkit*, Practical Action Publishing, www.emma-toolkit.info

Albu, M. and Griffith, A. (2005) *Mapping the Market: A Framework for Rural Enterprise Development Policy and Practice*, Practical Action, Rugby, http://practicalaction.org/?id=mapping_the_market [last accessed 21 January 2010]

Albu, M. and Murphy, E. (2007) *Market Analysis Tools in Rapid-Onset Emergencies*, Phase 1 desk review report for Oxfam and IRC, July 2007 Practical Action Consulting, Rugby.

Barrett, C., Bell, R., Lentz, E. and Maxwell, D. (2009), 'Market information and food insecurity response analysis', *Food Security* 1: 151–168, www.springerlink.com/content/20t80w3656428335 [last accessed 21 January 2010]

Blum R. (2008) *Value Chain Tools for Market-integrated Relief: Haiti's Construction Sector*, USAID AMAP microReport #93, CHF International, Washington DC, www.microlinks.org/ev_en.php?ID=23118_201&ID2=DO_TOPIC [last accessed 21 January 2010]

Creti, P. and Jaspars, S. (2006), *Cash-transfer programming in emergencies*, Oxfam GB Publishing, http://publications.oxfam.org.uk/oxfam/add_info_024.asp [last accessed 21 January 2010]

FEG Consulting and Save the Children (2008) *The Practitioners' Guide to the Household Economy Approach*, Regional Hunger and Vulnerability Program, Johannesburg, www.feg-consulting.com/resource/practitioners-guide-to-hea [last accessed 21 January 2010]

Goluba, D. (2009) *Testing Emergency Market Mapping & Analysis in Pakistan, Following Internal Displacement of Populations in North West Frontier Province*, report of pilot study for IRC, Mercy Corps,

Harvey, P. (2007), *Cash-based Responses in Emergencies*, HPG briefing paper 25, Overseas Development Institute, London, www.odi.org.uk/resources/download/256.pdf [last accessed 21 January 2010]

Harvey, P. and Marongwe, N. (2006) *Independent Evaluation of Oxfam GB Zambia's Emergency Cash-transfer Programme*, Humanitarian Policy Group, ODI, London, www.odi.org.uk/resources/download/606.pdf

Market Development Working Group (2007) *Market Development in Crisis-affected Environments: Emerging Lessons for Achieving Pro-poor Economic Reconstruction*, The SEEP Network, Washington DC, http://communities.seepnetwork.org/edexchange/node/276 [last accessed 21 January 2010]

Ramalingam, B. and Pavanello, S. (2008) *Cyclone Nargis: Lessons for Operational Agencies*, ALNAP, London, www.alnap.org [last accessed 21 January 2010]

Saperstein, A. and Campbell, R. (2008) *Accelerating the Transition from Conflict to Sustainable Growth*, USAID AMAP microReport #111, ACDI/VOCA, Washington DC, www.microlinks.org/ev_en.php?ID=25267_201&ID2=DO_TOPIC [last accessed 21 January 2010]

Savage, K. and Umar, E. (2006) *Independent Evaluation of Oxfam GB Malawi's Cash-transfer programme*, Humanitarian Policy Group, ODI, London, www.odi.org.uk/resources/download/603.pdf [last accessed 21 January 2010]

SEEP Network (2009) *Minimum Standards for Economic Recovery after Crisis*, The SEEP Network, Washington DC, http://communities.seepnetwork.org/econrecovery/node/821 [last accessed 21 January 2010]

Sphere (2004) *Humanitarian Charter and Minimum Standards in Disaster Response*, The Sphere Project, www.sphereproject.org [last accessed 21 January 2010]