Economic Value Chains

Recovery Value Chains

MARKET DEVELOPMENT FOR DISASTER RISK REDUCTION (M4DRR)

BANGLADESH

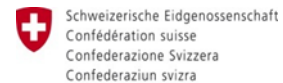# APPROACH TO MARKET DEVELOPMENT FOR DISASTER RISK REDUCTION

Action for Enterprise

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Contents

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EXECUTIVE SUMMARY

Bangladesh is one of the most disaster prone countries in the world regularly suffering from a number of natural hazards. Most disaster responses in the country have followed traditional patterns of relief aid designed without taking market systems into account, and consequently often lead to a culture of dependency amongst the beneficiaries and create market distortions as the markets are flooded with subsidies. Rather than providing distortionary relief "aid," a better approach would be to rehabilitate affected markets and help households reintegrate into these markets and enter into new markets. Relief agencies worldwide are making the transition to more market-oriented approaches in their relief and rehabilitation activities. Many development practitioners and donors have recognized that disaster response efforts need to have economic components in order to facilitate the transition from relief to development. Incorporating market-oriented approaches into disaster risk reduction (DRR) efforts should improve the effectiveness of relief and recovery operations.

Market-oriented approaches in DRR will increase benefits for the poor and the 'most vulnerable' through 1) increased sustainability of economic gains by changing and strengthening market systems, 2) reduced vulnerability from natural hazards, by improving coping mechanisms within market systems and 3) improved targeting of relief efforts in the event of disasters, by increasing the effectiveness of the Emergency Market Mapping and Analysis (EMMA) Toolkit and other relief approaches. Currently, market development, DRR, and humanitarian agencies are functioning in individual realms with little knowledge sharing and collaboration. The implementation of market-oriented approaches in DRR and humanitarian response programming promotes collaboration and complements the roles of the three groups: market development, DRR, and humanitarian agencies, ultimately leading to increased benefits for the 'most vulnerable.' This integrated approach helps market development agencies identify ways to sustainably enhance resilience of market systems, and disaster risk reduction and humanitarian agencies to understand market dynamics including vulnerabilities due to hazards enhancing their ability to structure timely and effective programs and responses. The study conducted by Action for Enterprise (AFE) focuses on how improving the efficacy of market-oriented approaches with regard to relief efforts, can be accomplished by introducing market-oriented approaches into DRR and relief efforts.

The purpose of this report is to present the "approach" taken by Action for Enterprise (AFE) when conducting the pilot study of introducing market-oriented approaches into disaster risk reduction (DRR) efforts. The approach is targeted at conducting a market systems analysis with explicit focus on vulnerabilities to hazards, and consists of selecting target areas, value chain/market selection, value chain/market analysis, identification of market based solutions, assessment of market based solutions, identification and selection of 'potential facilitation activities' for DRR, market systems, and relief programming. The objective of the "*Approach to Market Development for Disaster Risk Reduction*" report is to elucidate on the explicit methodology of applying market based approaches in designing DRR programs in order to achieve sustainable economic benefits, reduce vulnerability from natural disasters, and improve targeting of relief efforts during times of disasters.

The following is a brief summary of the steps taken to implement the "approach" for the pilot study. Firstly, the target area selection criteria were determined. Kazipur Upazila in Sirajganj District, a region prone to flooding, and Galachipa Upazila, situated in Patuakhali District, a region prone to cyclones and tidal surges, were the two regions selected as target areas for this study to pilot this approach. These regions

were selected after consultations with DRR and humanitarian relief experts because of their variances in hazards, regional location, as well as due to the presence of on-going DRR projects.

The next step was to implement AFE's multi-step approach to program design with distinctive activities for each step. This methodology was adapted to take into account an explicit focus on the vulnerability of these market systems to specific natural hazards. The program design consists of 1) value chain selection, 2) value chain analysis, with a focus on 'constraints due to vulnerability', 3) identification and assessment of *potential* 'market based solutions', and 4) identification of *potential* facilitation activities.

It was determined that the study conducted in Kazipur and Galachipa would consist of the selection and mapping of economic and recovery market systems with an explicit focus on the vulnerability of these systems to specific hazards. Economic markets consist of economically productive value chains within which market actors, including the poor, are active as producers, consumers, and employees. Recovery market systems consist of recovery value chains, those which have economic benefits, but are crucial for relief and reconstruction efforts such as rebuilding housing, addressing food scarcity, and accessing safe drinking water.

The selection of economic and recovery value chains were based on a cursory analysis of predetermined criteria for various market systems in the Kazipur and Galachipa areas. The steps for selection of each type of value chain consisted of 1) developing an initial list of 25+ value chains, 2) creating a short listing matrix evaluating the number of MSME's involved and the vulnerability to reoccurring seasonal hazards, and 3) creating a ranking grid which incorporated additional criteria and weighted scores. The final selected economic value chains, are *chili* (for both regions), *cattle* (for Kazipur)*, and *pond fisheries* (for Galachipa). The final selected recovery value chains were initially *chira* (for both regions) and *corrugated galvanized iron (CGI) sheets* (for both regions). These value chains were initially selected based on the higher ranking they scored against the selection criteria used in the ranking grid; however, during subsequent field visits the value chains for *tube wells* (for both regions) were determined to be of critical importance and so were included in the analysis, while *CGI sheets* were found to be less important in Kazipur and the value chain was therefore dropped from further analysis.

The next steps of the program design consisting of value chain/market analysis, identification of market based solutions, assessment of market based solutions, and deriving a list of potential facilitation activities ensued. The mapping process of these value chains generated knowledge that is useful for improving the targeting and efficiency of future disaster relief efforts to rehabilitate the market system in Kazipur and Galachipa. Furthermore, the process produced a series of recommendations and potential facilitation activities for DRR programming aimed at reducing the vulnerability of the market systems from natural hazards. Detailed information regarding Kazipur and Galachipa and how market-oriented approaches can be utilized in DRR efforts are found in the subsequent reports "*Market Development for Disaster Risk Reduction: Kazipur Value Chain Analyses*", and "*Market Development for Disaster Risk Reduction: Galachipa Value Chain Analyses*."

1. BACKGROUND

The poor tend to be more vulnerable to a wide array of natural hazards than the population as a whole. Recognizing this fact, many development programs focus on disaster risk reduction (DRR) for the poor by reducing their vulnerability to environmental and other hazards. According to the United Nations, DRR is

> *"the conceptual framework of elements considered with the possibilities to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development".[1]*

Despite the important role market systems play in the lives of the poor and a growing focus on markets in disaster relief, there has been little attention to date on markets in most DRR programs. However, market-oriented development approaches, such as "making markets work for the poor", have significant potential to: a) ensure that DRR programs have sustainable economic benefits for the poor; b) reduce the vulnerability of the poor from natural hazards; and c) generate knowledge that can help effectively target relief in the event of disasters.

1.1 Bangladesh Context

Bangladesh is one of the most disaster prone countries in the world, regularly suffering from a number of natural hazards including: floods, cyclones, tidal surges, droughts, erratic rainfall, tornadoes, and earthquakes. Most disaster responses in the country have followed traditional patterns of relief aid (i.e. the provision of direct asset transfers [food and non-food items] as well as food-for-work and cash-for-work programs). Most of these traditional programs are designed without taking market systems into account and consequently often lead to a culture of dependency amongst the beneficiaries and create market distortions as the markets are flooded with subsidies. In the long term these types of programs often get stuck giving out "relief" and never really move onto "development."

An example of the potential negative consequences of these types of programs was observed during a market development program design exercise carried out in May 2011 by Action for Enterprise (AFE) in Sarankhola Upazila under Khulna Division. AFE encountered some harsh criticism from market actors about some of the "relief" programs being implemented in Sarankhola. More than three and a half years after Cyclone Sidr, both local and international NGOs continue to distribute agricultural inputs, housing materials, and other assets for free to "beneficiaries" without any regard to the impact on local and regional markets. For instance, many of the agricultural inputs distributed for free included seeds for crops with little or no commercial or subsistence value in Sarankhola, such as maize, thereby limiting households' opportunities to engage in more productive activities and reducing demand for more economically productive commercially sold seed (from both the government and private sectors). These types of activities have also distorted markets for goods and labor outside the local area, as evidenced by one vegetable wholesaler interviewed in Barguna. Two of his employees returned to Sarankhola to collect relief aid distributed by development organizations because they could earn more in selling these "assets" than by working for the vegetable wholesaler.

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[1] *Living with Risk: A Global Review of Disaster Reduction Initiatives*, United Nations International Strategy for Disaster Reduction Secretariat (UNISDR), 2004 available at: http://www.unisdr.org/files/657_lwr1.pdf

Rather than providing distortionary relief "aid," a better approach to disaster relief would be to rehabilitate affected markets and help households reintegrate into these markets and enter into new markets. Realizing this, relief agencies worldwide are making the transition to more market-oriented approaches in their relief and rehabilitation activities.

1.2 Markets in Disaster Response

/Following catastrophic events market systems are often severely disrupted, and therefore need to be rehabilitated. However, many efforts become "stuck in the relief phase[2]" delaying and often hampering economic development efforts through distorting markets and creating a dependency on relief aid among the supposed beneficiaries. In recent years many development practitioners and donors have recognized that disaster response efforts need to have economic/livelihood components in order to facilitate the transition from relief to development. Incorporating market development approaches, such as "making markets work for the poor," into disaster response efforts should improve the effectiveness of relief and recovery operations by avoiding the distortion of markets during the initial response. A number of efforts[3] have been made to smooth the transition from relief to development through incorporating market-oriented strategies into a number of disaster response efforts, including the recent 2010 Haiti earthquake response.

Initial reports have shown that market-oriented tools developed for disaster response, such as the Emergency Market Mapping Analysis (EMMA) toolkit, have proven to be effective in helping conduct rapid analyses of market systems in the aftermath of a crisis.[4] These analyses have allowed decision makers from donors, NGOs, governments, and other humanitarian actors to take into account market systems when designing and implementing their relief and rehabilitation programs. Despite these early successes, these reports also identify areas in which there is still significant

EXPAND
HH income and consumption

SMOOTH
HH income and consumption

BUILD
and protect key assets

RECOVER
assets & stabilize HH consumption
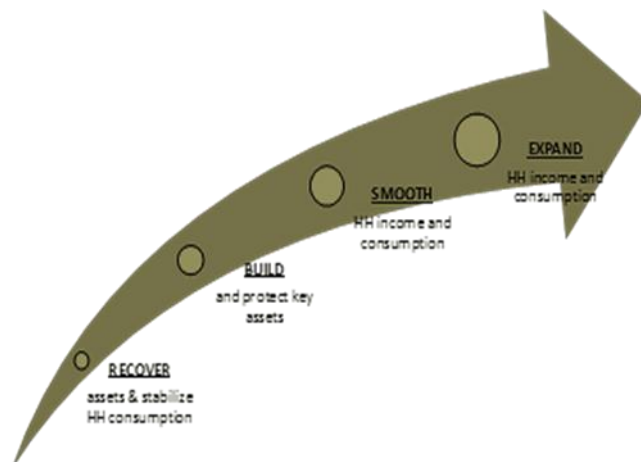
Figure 1: Diagram of Transition from Relief to Resilience

potential to improve the efficacy of market-oriented approaches into humanitarian relief efforts. One of the primary ways to accomplish this goal is to introduce market-oriented approaches into DRR efforts, especially in areas prone to frequent and/or recurring crises. In the words of one development practitioner, DRR programs have "never focused on markets," despite the potential benefits of these approaches.

2. APPLYING MARKET-ORIENTED APPROACHES TO DRR

Applying market-oriented approaches to DRR programs will generate a number of improvements over traditional approaches. These improvements will in turn generate additional benefits for the poor

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[2] *Minimum Economic Recovery Standards*, The Seep Network (2010) available at:
http://seepnetwork.org/PDFfiles/MinimumEconRecoveryStandards2_web.pdf
[3] E.g. *Minimum Economic Recovery Standards*; *Emergency Market Mapping Assessment (EMMA) toolkit*; etc.
[4] Emergency Market Mapping and Analysis Toolkit, Mike Albu

including: a) increased sustainability of economic gains; b) reduced vulnerability from natural hazards; and c) improved targeting of relief efforts in the event of disasters. Each of these is addressed in more detail in the subsequent sections.

2.1 Increasing Sustainability

There has been some recognition of the need to incorporate economic development approaches (in addition to community development, governance, rights-based, and other approaches) into DRR activities[5]. However, these discussions have primarily focused on traditional supply-led "livelihoods" activities rather than explicitly focusing on market-oriented approaches. While these types of traditional approaches may help to improve household-level access to assets, there is little focus on the markets or supporting markets in which the poor will have to operate in order to sustainably manage and benefit from these assets. Instead, the poor become dependent upon the project and project staff to market and care for these assets. As a result the benefits of these traditional approaches often end once the project funding ends.

In contrast, market-oriented development programs focus on changing and strengthening the market systems in which the poor operate. These market systems operate independently of project funding, and as a result changes to the market systems facilitated by the project will still generate sustainable benefits for the poor that participate within these systems as consumers, producers, and/or employees.

2.2 Reducing Vulnerability

Just like individuals, households, and communities, market systems are vulnerable to natural hazards. In fact disruption of market systems are often the primary source of costs to communities and households due to losses of incomes associated with damaged and/or destroyed assets. Through explicitly focusing on reducing the vulnerability of market systems, market-oriented approaches have the potential to reduce the vulnerability of the poor that operate within these market systems.

2.3 Improving Relief and Early Recovery

Applying market-oriented approaches in DRR efforts will have the added benefit of helping target humanitarian relief in the aftermath of disasters by providing a clear context of relevant markets prior to the onset of the disaster. Early analyses of the humanitarian response to the 2010 Haiti earthquake[6] identified a number of areas in which market-oriented approaches in DRR could have helped guide the relief efforts including:

- Identification of "critical and reoccurring actors affected by seasonal disasters;"
- Creation of seasonal calendars to allow "longer-term assessments" and planning;
- Identification of "new opportunities for cash-for-work" programs;
- Defining the threshold where the response moves "from the relief to the recovery phase;"
- Understanding labor markets to avoid distortionary effects from relief and recovery programming; and
- Identifying "weak [market] links for strengthening."

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[5] *PRACTICE BRIEF Integrating approaches: Sustainable livelihoods, disaster risk reduction and climate change adaptation,* Practical Action (2009) available at: http://practicalaction.org/reducing-vulnerability/docs/ia1/integrating-approaches-esrc-briefing-paper.pdf

[6] E.g. *Emergency Market Mapping Analysis An exploration of EMMA's diagnostic process and its impact on Humanitarian response-logic*, Alesh Brown (2010) available at: http://haiti.humanitarianresponse.info/LinkClick.aspx?fileticket=Jw6g-xiIBm0%3D&tabid=69&mid=433; and *Note from Haiti: Improving Relief Efforts through Market Mapping*, US Agency for International Development (2010) available at: http://www.microlinks.org/ev_en.php?ID=43044_201&ID2=DO_TOPIC; etc.

Analyses of market systems with an explicit focus on the vulnerability of these systems to specific natural hazards can be used as "baselines" to guide relief and early recovery operations during and post disasters. It is widely recognized that good practice standards, guidelines, and evaluations all emphasize the importance of including markets in emergency situation and response analysis. However, in practice, emergency practitioners have often overlooked the potential and actual role of markets in emergency and early recovery responses. This is mainly due to uncertainty of how to understand or work with the private sector[7].

During the early phase of a rapid onset disaster, humanitarian priorities are primarily concerned with ensuring survival and protecting livelihoods rather than the assessment of market systems. Generally, relief agencies have little advance knowledge of markets and limited resources to prioritize such analyses. However, as the need for market systems analysis is increasingly acknowledged, relief agencies are attempting to incorporate market systems analysis in their efforts through approaches such as those outlined in the EMMA Toolkit. This is because there is a growing realization that unless responses are designed with a solid understanding of key market-systems, they may inadvertently damage livelihoods, local businesses, and jobs.

However, numerous attempts to incorporate market systems into relief efforts are often unsuccessful. For instance, following a flood in Bangladesh in late 2012, one relief organization reportedly hired a consultant to conduct a regional market analysis on the chili value chain. However, by the time the comprehensive study was completed and potential intervention activities were selected, too much time had passed and the information gathered was no longer relevant to the region affected by the disaster. As in this case, during times of disaster there is often a short window of time when value is added to beneficiaries of relief efforts. Therefore market "baselines" to guide rapid humanitarian response is essential.

By embedding market-oriented approaches into DRR, a baseline is created, depicting a profile of the 'normal' pre-crisis market system, with the inclusion of a seasonality calendar. Additionally, by highlighting the hazards and the constraints due to vulnerabilities of the hazards, relief agencies are better able to understand the impacts to market systems, its constraints, and the capabilities a relief agency can play in humanitarian response. Furthermore, by utilizing the market system analysis as a baseline, the relief agency will be better suited to explore different potential facilitation activities for humanitarian assistance and to estimate the likely benefits and outcomes of such actions. Ultimately, the use of these "baselines" will assist humanitarian agencies in understanding market dynamics during an emergency situation allowing them to effectively develop effective response and early recovery activities. This will reduce the risk that relief efforts distort markets and create a culture of dependency among recipients.

2.4 Market Systems Analysis

Action for Enterprise (AFE) has developed a framework for program design that reflects state of the art practice in value chain analysis and market development approaches. The AFE methodology combines the strengths of value chain analysis with methods for identifying sustainable market-based solutions that promote MSME and industry competitiveness. AFE carries out interviews and research to gain a greater understanding of market trends and industry dynamics including value chain participants, their roles, and interrelationships. The objective is to determine key issues hindering MSME growth and competitiveness; and then to identify, assess, develop, and promote commercially viable solutions to these issues.

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[7] Emergency Market Mapping and Analysis Toolkit, Mike Albu

AFE's methodology is based on a multi-step approach to program design with distinct activities for each step. For each step (*see Figure 2*) AFE incorporates the latest tools, concepts, and best practices from the field. AFE carries out in-depth interviews and research to gain a greater understanding of final market trends and industry dynamics including value chain participants, their roles, and interrelationships. The objective is to determine the main issues hindering MSME growth and competitiveness and then to identify, assess, and promote commercially viable solutions to these issues. AFE uses an array of tools including participatory focus group discussions with key industry actors to identify the most appropriate program interventions.

Step 6: Performance Measurement Systems

Step 1: Value Chain Selection

Step 5: Identification of Facilitation Activities

Step 2: Value Chain Analysis

Step 4: Assessment of Market-based Solutions

Step 3: Identification of Market-based Soloutions

Figure 2: AFE's Value Chain Program Design Steps

This methodology has been adapted for the pilot study, to take into account an explicit focus on the vulnerability of these systems to specific regional hazards when mapping market systems/value chains. The mapping process was utilized to generate useful knowledge for improving the targeting and efficiency of any future disaster relief efforts to rehabilitate the market systems. The process also produced a series of 'potential facilitation activities' derived from the market based solutions, as examples of what can be incorporated into market development, DRR and relief programming with a focus on reducing the vulnerability of the market systems and 'most vulnerable' from natural hazards.

Figure 3 Map of Kazipur Upazila, Sirajganj District

3. PILOT STUDY

In order to demonstrate the effectiveness of utilizing the "approach" towards improving the efficacy of market-oriented approach into DRR efforts, a pilot study was conducted by Action for Enterprise (AFE) in Bangladesh in two selected target areas prone to divergent natural disasters with an emphasis on identifying critical market systems for the population who are directly and indirectly affected by disasters. The study explores and analyzes market development approaches which can be significantly useful when designing and implementing DRR programming in order to increase sustainability, reduce vulnerability, and improve targeting of relief efforts during times of disaster. The subsequent sections will address the methodology and each step taken by Action for Enterprise (AFE), when implementing the pilot study "*Market Developments for Disaster Risk Reduction*" in the respective target areas.

3.1 Selection of Target Areas

Prior to mapping market systems, AFE consulted with various stakeholders including the United Nations Development Program (UNDP), Save the Children, Practical Action, and Oxfam GB to identify specific target areas in which to pilot this approach. Two areas in Bangladesh, Kazipur Upazila in Sirajganj District (flood-prone) and Galachipa Upazila in Patuakhali District (prone to cyclones and tidal surges), were selected based on a number of criteria including: the risk of natural hazard, one flood prone and one cyclone prone area was selected, as well as the presence of ongoing DRR projects.

Kazipur Upazila is located on the river belt towards the northern part of Bangladesh. It borders the Brahmaputra (Jamuna) river to its north and is comprised of a large number of *chars* (islands) in addition to the mainland areas (*Figure 3*). Situated in Patuakhali district in the southern end of Bangladesh, Galachipa Upazila borders the Bay of Bengal to its south. In addition to the mainland areas, Galachipa is also made up of numerous *chars* (*Figure 4*). Existing DRR structures in these target areas, such as on-going DRR projects and local Disaster Management Committees (established by the Ministry of Food and Disaster Management) were consulted throughout the process to ensure that findings are relevant for and accepted by the DRR community.

3.2 Value Chain/Market Selection

After selecting the targeted areas, AFE then selected specific markets and value chains within those target areas for mapping. Two different types of markets/value chains were selected, "economic value chains" and "recovery value chains." Economic value chains are economically productive value chains within which the poor are active as producers, consumers, and employees. Examples of economic value chains include:

- Staple crops (rice);
- Cash crops (vegetables, lentils, etc.);
- Other agricultural products (fish, poultry, livestock, etc.);
- Non-agricultural value chains (raw materials, woven products, etc.); and
- Agricultural labor.

Recovery value chains have economic benefits and are also some of the most important value chains in relief, reconstruction and rehabilitation efforts (rebuilding housing, addressing food scarcity, and accessing safe drinking water, etc.) as well as in many DRR efforts (plinth raising, shelter construction, etc.). As a result, recovery value chains have been included as a separate category for consideration. Examples of reconstruction value chains include:

- Materials (concrete, corrugated iron, bamboo, wood, etc.); and
- Water (especially for tube wells, bottled water, purifying tablets, etc.);
- Food items (commonly distributed such as dry food, e.g. *chira, gur,* and *muri)*;
- Other non-food items (commonly distributed items such as soap, washing powder, etc.);

Figure 4: Map of Galachipa Upazila, Patuakhali District

Selection of the economic and recovery value chains were based on a cursory analysis of vulnerable value chains in each of the target areas. The value chain selection process entailed the following six steps:

1. Determining which selection criteria to use;
2. Identifying an initial set of value chains;
3. Reviewing secondary sources of information;
4. Collecting primary information (e.g. interviews);
5. Completing short-listing of candidates using a matrix tool; and
6. Compiling results for final selection using a ranking grid tool

3.2.1 Determining Selection Criteria

The selection of value chains criteria varied depending on the type of value chain. For **economic value chains** the following considerations were taken into account:

- Number of MSME's
- Vulnerability to hazards
- Unmet demand
- Presence of potential 'lead firms'
- Potential to increase incomes
- Potential to smooth incomes
- Supporting enabling environment
- No harmful environment impacts
- Importance in DRR/relief efforts

The selection criteria for the **recovery value chains** took the following considerations into account:

- Number of households affected
- Vulnerability of market systems to hazards
- Unmet demand
- Presence of potential 'lead firms'
- Potential to increase incomes
- Potential to source locally
- Importance in DRR/relief efforts

3.2.2 Identifying Initial Set of Value Chain Candidates

Drawing on AFE's previous experience of working in value chains across a number of projects in Bangladesh, an initial list of potential economic and recovery value chain candidates were developed. The initial lists of both economic and recovery value chains can be found in **Appendix 1**.

3.2.3 Collecting Primary Information

From an initial list of 25 or more economic and recovery value chains, AFE compiled a short-list of higher priority value chains. Once fieldwork commenced in both Kazipur and Galachipa, the initial days on the ground were dedicated to interviewing key informants to gather first-hand information that could inform the value chain short listing process. Key informants interviewed as part of the field research included local government representatives, large and small market actors, NGOs, and inhabitants of each respective area who could provide perspectives on market systems during disasters. Simultaneously, the study team gathered information on the hazards and repercussions of the hazards specific to each region.

As a result of these efforts AFE shortlisted the following '**economic'** value chains:

Shortlist of 'Economic' Value Chains	
Kazipur Upazila, Sirajganj district	**Galachipa Upazila, Patuakhali district**
1. Jute	1. Watermelon
2. Maize	2. Chili
3. Chili	3. Potato
4. Livestock (cattle)	4. Pond fisheries
5. Groundnut	5. Open catch fisheries
6. Pulses	6. Pulses
7. Brinjal	7. Rice (aman)
8. Rice (aman)	

The following **'recovery'** value chains were also shortlisted:

Shortlist of 'Recovery' Value Chains	
Kazipur Upazila, Sirajganj district	**Galachipa Upazila, Patuakhali district**
1. CGI sheets	1. CGI sheets
2. Dry food: *chira, muri*	2. Dry food: *chira, muri, gur*
	3. Fish Fingerlings

3.2.4 Short Listing Utilizing Matrix Tool

The list of shortlisted economic and recovery value chains were then examined in greater detail by the AFE study team through collecting primary information from key informants including market actors (producers,

traders, processors, transporters) working within the selected value chains. These interviews were conducted to obtain further information about the primary two criteria to be used for further short-listing:

- Number of MSMEs involved
- Vulnerability to reoccurring seasonal hazards

The next step involved ranking each value chain against the two criteria as low, medium or high on the matrix through a participatory process that brought together all findings from the exercise so far. Those value chains that scored either a high ranking on both criteria or a high medium/medium high rank were selected for further assessment. The results of the short listing matrix can be seen in **Appendix 2.**

3.2.5 Final Selection from Ranking Grid Tool

As part of the next stage of the value chain selection process, a ranking grid was developed to rate the value chains that were identified through the matrix as high priority. The selection criteria for the ranking grid was predetermined (with a separate list of specific criteria for the economic value chains as well as for the recovery value chains) and was cited earlier in this section under the heading 'Determining Selection Criteria.'

Each of the criteria for both types of value chains were given a weight from one to three based on its relative importance as determined by the AFE team given the stated goals of the value chain selection exercise. The next stage required rating (from one to five - one being poor, five being excellent) the performance of each value chain against each criterion. These ratings were then multiplied by the predetermined weight to produce the weighted score. The result of the ranking grid can be seen in **Appendix 3**. As seen in the chart below, the preliminary value chains were selected from the ranking grid assessment tools:

PRELIMINARY SELECTED VALUE CHAINS FROM RANKGING GRID		
	Kazipur	**Galachipa**
Economic Value Chains	• **Chili** • **Cattle**	• **Chili** • **Pond Fisheries**
Recovery Value Chains	• **Dry Food:** *Chira* • **Dry Food:** *Muri* • **CGI Sheets**	• **Dry Food:** *Chira* • **Dry Food:** *Muri* • **Fish Fingerlings**

However, as the study team began to conduct market analyses of these selected value chains, adjustments were made based on primary information gathered about the relevance of other pressing issues such as the lack of clean drinking water post disaster, and therefore the importance of focusing on the tube well value chain. As well as the irrelevance of some value chains selected from the grid exercise due to nature of the hazards. For instance, floods in Kazipur have a relatively slow onset, and therefore inhabitants are usually able to salvage materials to rebuild their homes reducing the importance of CGI sheets in disaster response. Additionally, fish fingerlings were determined to be a key input of the pond fisheries value chain and so there was no need for a separate analysis of the fingerlings value chain. Due to significant variances in dry food market systems, the study team narrowed down the selection to *chira* as it is a significant part of relief efforts in both regions which facilitated comparison. However, the need for clean drinking water was consistently cited in both Kazipur and Galachipa, and so an analysis of the tube well value chain was added to address the needs of the vulnerable in both regions. The final selected value chains can be seen in the chart below.

FINAL SELECTED VALUE CHAINS FROM RANKGING GRID		
	Kazipur	**Galachipa**
Economic Value Chains	• **Chili** • **Cattle**	• **Chili** • **Pond Fisheries**
Recovery Value Chains	• **Dry Food:** *Chira* • **Tube Wells**	• **Dry Food:** *Chira* • **Tube Wells** • **CGI Sheets**

3.3 Value Chain/Market Analysis

Analyses of selected value chains/markets were carried out through interviews and focus group discussions with market actors to gain a greater understanding of vulnerability, market trends, and the actors' roles and interrelationships. The goal of this step was to determine the relative vulnerability of different market actors and functions within the value chains as well as the key issues hindering growth and competitiveness. AFE carried out analyses in different geographical locations important for the selected value chains (including outside the target areas), as well as on a periodic basis to identify seasonal variations in vulnerability and enable the generation of seasonal calendars.

3.4 Identification of Market-Based Solutions

Potential market-based solutions were identified that can contribute to the rehabilitation of the targeted market systems during relief efforts and/or reduction of vulnerability prior to a disaster by addressing major constraints due to the vulnerabilities observed in the analysis.

For instance, the following example was taken from the "*Market Development for Disaster Risk Reduction: Kazipur Value Chain Analyses*" report analyzing the 'recovery' value chain *chira* (dry food). The *chira* value chain map discloses the 'key issues' due to 'major disruptions' in the market as a result of the natural hazards, namely flooding in Kazipur. The sample constraint exemplified below, correlates to various 'key issues' for the *chira* market at the processing and end user levels, as depicted on the map, including market distortion, higher costs to NGOs, and decreased sales for local *chira* mills. Below the 'market-based solution' is devised to address the 'constraint due to vulnerability', as well as explicit 'potential facilitation activities' that can be implemented through DRR programming.

	Constraint due to vulnerability	Market-based Solution	Potential Facilitation Activities
1	Misinformation and weak linkages between NGOs and *chira* suppliers have resulted in NGOs being unaware of the increased capacity of *chira* mills from 2004-2012. Therefore in times of disaster NGOs tend to source *chira* from Bogra and Naogaon and not from local *chira* mills as they have the misconception that local mills do not have sufficient supply. This results in market distortion, higher costs to NGOs, and loss of potential business for local Sirajganj and surrounding area mills.	Access to information for NGO staff about the availability of local *chira* suppliers	Support *chira* processors to contact local NGOs and/or establish relationships with NGO procurement people (may conduct local "DRR fairs" for NGOs and suppliers to meet)

3.5 Assessment of Market-Based Solutions:

During this step, the identified market-based solutions were assessed. Through this process, market actors were identified who can provide market-based solutions to reduce the vulnerability of the poor and/or improve the rehabilitation of targeted market systems during relief efforts in a sustainable and commercially viable manner. Opportunities to promote or expand "embedded" solutions[8] were also explored.

3.6 Identification and Selection of 'Potential Facilitation Activities'

Priorities for DRR programs working in each of the target value chains were established based on the assessment, and a set of potential facilitation activities were identified to address the challenges market actors face in delivering each of the assessed market-based solutions in each value chain. A sample 'potential facilitation activity' from the Kazipur analysis of the recovery *chira* dry food value chain can be seen in the chart in section 3.4 above Furthermore, the value chain map and accompanying analysis can provide a "baseline" for the market systems to help guide potential future relief efforts in their response to avoid distortionary effects, and to help ease the transition from relief and recovery efforts to development activities.

4. ADVOCACY, "SCALING UP," AND NEXT STEPS

Following the completion of the pilot mapping exercises, AFE organized a consultative workshop on January 29, 2013, for organizations including NGOs, donors, and the Government of Bangladesh engaged in DRR activities. The workshop was co-hosted by AFE and the SDC and included a range of development practitioners. The primary goal of the workshop was to solicit feedback and recommendations for next steps in incorporating market development approaches in DRR programming. The second goal was focused on promoting market development approaches for DRR in general, and included practical tips for organizations making the transition from traditional supply-led activities to more market-oriented approaches. AFE shared information about the approach and methodology that was utilized when conducting the pilot study and exemplified how organizations could implement 'potential facilitation activities' as a means of integrating market development approaches into DRR programming. The tertiary goal was to present the selected findings from the pilot study to the workshop participants. Ultimately the objective of the workshop was to develop a common strategy by DRR practitioners, endorsed by the government, to include market-based approaches in DRR programming. Specific recommendations for next steps provided by the participants include:

- Piloting a stand-alone project in a particular geographical area to learn lessons during implementation while demonstrating the efficacy of the approach;
- Attempting to integrate the approach in ongoing DRR/M4P projects;
- Develop simplified tools for project staff to apply the approach themselves;
- Facilitate discussions with international NGOs and donors to facilitate adoption of this approach in their programs;
- Tailor the presentation of the findings for each of the distinct "audiences" including 1) market development practitioners; 2) DRR practitioners; and 3) humanitarian actors according to the priorities of each;

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[8] Products / services provided by one value chain actor to another as part of their commercial relationship or transaction with each other (e.g. trader providing pre-financing to suppliers in addition to buying production).

- Advocate for policy makers to integrate M4DRR into national as well as international policy frameworks, including the new Hyogo Framework; and
- Organize more sharing and dissemination workshops to change mindsets and to sensitize and promote integration of the approach in development and relief programs.

A full discussion of feedback and the minutes recorded from the workshop can be found in **Appendix 5**.

APPENDICES

Appendix 1: Initial Lists of Potential 'Economic' and 'Recovery' Value Chains

Initial List of Potential 'Economic' Value Chains:

- Poultry- eggs
- Poultry- broilers
- Cattle- meat
- Cattle- dairy
- Fish cultivation
- Crab cultivation
- Shrimp culture
- Maize
- Sesame
- Pulses
- Oil Seed
- Rice
- Mustard
- Wheat
- Lentil
- Eggplant
- Barley
- Sugarcane
- Jute
- Tobacco
- Pan
- Poultry input supply
- Livestock input supply
- Agricultural input supply
- Agricultural labor
- Chile
- Sweet potato
- Watermelon
- Groundnut
- Soy bean

Initial List of Potential 'Recovery' Value Chains:

- Concrete
- Corrugated iron
- Bamboo
- Wood
- Plastic sheets
- Bottled water
- Water filters
- Oral Rehydration Salts
- Soap

- Washing powder
- Sanitary napkins
- Matches
- Cooking utensils
- Pots
- Plastic buckets
- Clothing
- Bedding
- Stoves
- Fuel
- Flashlights
- Mosquito nets
- Candle
- Blankets
- Rope
- Construction labor

Appendix 2: Short Listing Matrix Results for 'Recovery Value Chains' and 'Economic Value Chains'

Matrix 1: Economic Value Chains – Kazipur Upazila, Sirajganj District

"Economic" Value Chains
Kazipur Upazila, Sirajganj District

	Low	**Medium**	**High**
High	rice (boro) groundnut	chili pulses	jute rice (*aman*)
Medium	brinjal	maize	livestock (cattle)
Low			

Number of MSMEs Involved (vertical axis)
Vulnerability to Hazards (horizontal axis)

Matrix 2: Economic Value Chains – Galachipa Upazila, Patuakhali District

"Economic" Value Chains
Galachipa Upazila, Patuakhali District

	Low	**Medium**	**High**
High		chili catch fisheries pulses	rice (*aman*)
Medium	Potato		pond fisheries Watermelon Betel leaf
Low			

Number of MSMEs Involved (vertical axis)
Vulnerability to Hazards (horizontal axis)

Based on the results of the short listing matrix, the following **'economic'** value chains were selected for further assessment:

Economic Value Chains selected for further assessment	
Kazipur Upazila, Sirajganj district	**Galachipa Upazila, Patuakhali district**
Jute	Rice
Rice (aman)	Pond Fisheries
Chili	Watermelon
Pulses	Beetle leaf
Livestock	Catch fisheries
	Chili
	Pulses

Matrix 3: Recovery Value Chains – Kazipur Upazila, Sirajganj District

**"Recovery" Value Chains
Kazipur Upazila, Sirajganj District**

Number of vulnerable HHs affected

High — Dry food: chira, Dry food: muri

Medium — Soybean Oil | Suji / Dry food: gur / CGI Sheet

Low

Low — Medium — High

Vulnerability of Market Systems to Hazards

Matrix 4: Recovery Value Chains – Galachipa Upazila, Patuakhali District

"Recovery" Value Chains
Galachipa Upazila, Patuakhali District

	Dry Food Fish fingerlings	CGI Sheet

Number of Vulnerable HHs affected (vertical axis: High, Medium, Low)

Low · Medium · High

Vulnerability of Market Systems to Hazards

Based on the results of the short listing matrix, the following **'recovery'** value chains were selected for further assessment:

Recovery Value Chains selected for further assessment	
Kazipur Upazila, Sirajganj district	**Galachipa Upazila, Patuakhali district**
Dry food: *chira*	CGI Sheet
Dry food: *muri*	Fish fingerling
Tube Wells	Tube Wells
	Dry food: *chira*
	Dry food: *muri*

Appendix 3: Results of Ranking Grid Results for Economic and Recovery Value Chains

Ranking Grid Results: Economic Value Chains - Kazipur Upazila, Sirajganj District										
Criteria	Weight	Jute		Rice (*aman*)		Chili		Pulses		Livestock (cattle)	
		Rating	Score	Rating	Score	Rating	Score	Rating	Score	Rating	Score
# of MSMEs	3	5	15	4	12	5	15	4	12	3	9
Vulnerability to hazards	3	5	15	4	12	3	9	2	6	5	15
Unmet demand	3	3	9	4	12	4	12	4	12	4	12
Presence of "lead firms"	2	4	8	2	4	2	4	2	4	3	6
Potential to increase incomes	2	2	4	2	4	4	8	3	6	2	4
Potential to smooth incomes	2	2	4	3	6	4	8	3	6	4	8
Supportive enabling environment	1	2	2	2	2	2	2	2	2	2	2
No harmful environmental impact	2	5	10	3	6	3	6	5	10	4	8
Importance in DRR/relief efforts	1	2	2	5	5	2	2	4	4	4	4
Total Weighted Score	**90**		**69**		**63**		**66**		**62**		**68**

Ranking Grid Results: Economic Value Chains - Galachipa Upazila, Patuakhali District														
Criteria	Weight	Water melon		Rice (*aman*)		Chili		Pulses		Pond Fisheries		Catch Fisheries		Betel Leaf	
		R	S	R	S	R	S	R	S	R	S	R	S	R	S
# of MSMEs	3	2	6	5	15	5	15	5	15	3	9	5	15	2	6
Vulnerability to hazards	3	4	12	4	12	4	12	3	9	5	15	4	12	4	12
Unmet demand	3	3	9	4	12	4	12	4	12	4	12	4	12	4	12
Presence of "lead firms"	2	2	4	2	4	2	4	2	4	2	4	4	8	2	4
Potential to increase incomes	2	4	8	2	4	3	6	3	6	4	8	3	6	3	6
Potential to smooth incomes	2	2	4	3	6	3	6	3	6	4	8	3	6	4	8
Supportive enabling environment	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
No harmful environmental impact	2	1	2	3	6	3	6	4	8	3	6	0	0	3	6
Importance in DRR/relief efforts	1	1	1	5	5	2	2	4	4	4	4	2	2	1	1
Total Weighted Score	**90**		**48**		**66**		**65**		**66**		**68**		**63**		**57**

- **R= Rating, S= Score**

Based on the results of the ranking exercise and following discussions on the economic value chains that would be the most high priority in terms of best fulfilling each predetermined criteria, the following value chains were selected:

- pond fisheries
- chili (this value chain is applicable for both target areas)
- cattle

Ranking Grid Results: Recovery Value Chains

Ranking Grid Results: Recovery Value Chains - Kazipur Upazila, Sirajganj District							
Criteria	Weight	Dry food: Chira		Dry food: muri		CGI Sheet	
		Rating	Score	Rating	Score	Rating	Score
# of HHs affected	3	5	15	5	15	3	9
Vulnerability of market systems to hazards	3	4	12	4	12	2	6
Unmet demand	3	4	12	3	9	2	6
Presence of "big traders"	2	3	6	3	6	3	6
Potential to increase incomes	1	2	2	2	2	2	2
Potential to source locally	2	3	6	3	6	3	6
Importance in DRR/relief efforts	3	4	12	4	12	3	9
Total Weighted Score	70		65		62		44

Ranking Grid Results: Recovery Value Chains - Galachipa Upazila, Patuakhali District									
Criteria	Weight	CGI sheet		Dry food: chira		Dry food: muri		Fish Fingerlings	
		Rating	Score	Rating	Score	Rating	Score	Rating	Score
# of HHs affected	3	5	15	5	15	5	15	5	15
Vulnerability of market systems to hazards	3	4	12	4	12	4	12	3	9
Unmet demand	3	3	9	4	12	4	12	3	9
Presence of "big traders"	2	3	6	2	4	3	6	1	2
Potential to increase incomes	1	2	2	2	2	2	2	3	3
Potential to source locally	2	3	6	3	6	3	6	1	2
Importance in DRR/relief efforts	3	4	12	5	15	4	12	3	9
Total Weighted Score	70		62		66		65		49

Based on the results of the ranking exercise and following discussions on the recovery value chains that would be the most high priority in terms of disaster risk reduction, the following value chains were selected:

- dry food: *chira* (applicable for both target areas)
- dry food: *muri* (applicable for both target areas)
- CGI sheets
- fish fingerlings

Appendix 4: Question Guidelines for Key Informants of 'Economic' and 'Recovery' Value Chains

Question Guide for Key Informants: Key Market Actor Informants of 'Economic' Value Chain Selection Exercise

What are the most common agricultural commodities being produced in the target area?

Is there a strong market/demand for these commodities?

What commodities do you see the greatest growth potential for going forward?

Is there a strong demand for any commodity that is not produced widely here?

>   If so, why is it not being produced?

What commodities are being grown that do not have a very strong market?

>   Why are they still being produced?

What commodities have the potential to be taken up by a large number of people?

What types of natural hazards (floods, tidal surges, cyclones, etc.) may affect these commodities

>   How vulnerable are these commodities to natural hazards (floods, tidal surges, cyclones, etc.)?

How many MSMEs are involved with production in these value chains?

>   How vulnerable are these households to natural hazards (floods, tidal surges, cyclones, etc.)?

Are there any firms in this VC with a large number of forward and backward linkages?

Are there any firms either in Dhaka, or locally that are currently sourcing from a large number of producers in the target area?

>   If so, who are they? What are they sourcing? What is the nature of their relationship with producers?

What challenges do producers face with regards to agricultural and livestock inputs?

Are agricultural/poultry/cattle input providers active in the region? Are distributers prevalent?

Question Guide for Key NGO Informants of 'Recovery' Value Chain Selection Exercise

What types of natural hazards (floods, tidal surges, cyclones, etc.) may affect the target areas? How often and when do they occur?

In what value chains are you working?

>   What types of programs do you have in these value chains?

After a natural disaster, what are the most common construction materials needed in the target area?

From where do you source construction materials for distribution?

After a natural disaster, what are the most common Non-Food Items (NFIs) needed in the target area?

From where do you source NFIs for distribution?

After a natural disaster, from where do you source water for distribution to beneficiaries?

Are there any firms or vendors in this VC in the target area with a large number of forward and backward linkages?

Are there any firms either in Dhaka or locally that are currently distributing these materials/NFIs to the target area?

If so, who are they? What are they sourcing? What is the nature of their relationship with producers?

Question Guide for Key Market Actor Informants of 'Recovery' Value Chain Selection Exercise

What types of natural hazards (floods, tidal surges, cyclones, etc.) may affect the target areas?

After a natural disaster, what are the most common construction materials needed in the target areas?

From where do you source construction materials?

How vulnerable is your supply chain to natural hazards?

After a natural disaster, what are the most common Non-Food Items (NFIs) needed in the target areas?

From where do you source NFIs?

How vulnerable is your supply chain to natural hazards?

Are there any firms or vendors in this VC in the target area with a large number of forward and backward linkages?

Are there any firms either in Dhaka or locally that are currently distributing these materials/NFIs to the target area or have done so in the past?

If so, who are they? When do they do so? What are/were they distributing? What is the nature of their relationship with households?

Appendix 5: Workshop Minutes on Making Markets Work for Disaster Risk Reduction

**Workshop Minutes
On
Making Markets Work for Disaster Risk Reduction**

Date: 29 January, 2013

Venue: Hotel Royal Park, Banani, Dhaka

Background
A study was commissioned by the Swiss Agency for Development and Cooperation (SDC) for applying market development approaches to reduce the risk of vulnerable people to natural hazards. Action for Enterprise (AFE) conducted the study during July, 2012 to January, 2013 of potential value chains to address constraints due to hazards in two different disaster prone areas of Kazipur sub-district under Sirajganj district and Galachipa sub-district under Patuakhali district in Bangladesh. The workshop was organized to share findings from the study and to discuss how to integrate market development approaches into disaster programming and generate recommendations for next steps.

The participants were from the relevant key government institutions, international NGOs and donor communities that are funding and operating disaster and market development programs in Bangladesh.

Workshop Objectives:

- Present selected study findings
- Share information about the approach and methodology
- Solicit feedback and recommendations for next steps to integrate market development approaches in disaster programming

Opening and Introductions
Mr. Stefan Gamper, First Secretary and Program Manager, Embassy of Switzerland inaugurates the workshop session by welcoming all the participants. He cited the importance of conducting the study in Bangladesh's context and triggering the role of Making Markets Work approach to address Disaster Risk Reduction (DRR). He hoped the initiatives will open new windows for taking greater actions to consider relief efforts in development continuum in Bangladesh.

Suggestions from the attendees:

Approach and Methodology

The Making Markets Work for Disaster Risk Reduction (M4DRR) approach focuses on increased sustainability of economic gains through changing and strengthening market systems, reduced vulnerability from natural hazards through improving coping mechanisms within market systems and improved targeting of relief efforts in the event of disasters through using increasing effectiveness of EMMA toolkit and other relief approaches.

Feedback: Attendees shared that the M4DRR approach seems to be a demand led idea to reduce vulnerability due to a regular occurrence of natural hazards in Bangladesh and addressing the constraints due to hazards in a sustainable way. They shared that the approach could be useful for both economic development and humanitarian program implementation. It is triggering the importance of developing 'Tool Base and Guidelines' to acquaint with this innovative approach and internalization and sensitization

of the approaches in implementation phase. Some of the organizations have the opportunity for incorporating the issues in their ongoing program but need technical support during implementation.

Execution and Implementation

The difficulty for execution of the approach is changing the mindsets of two different sets of people who are engaged in implementing Disaster Risk Reduction Program in the form of relief & rehabilitation efforts and Market Development in the form of facilitation of economic development activities. So, there needs to be careful attention to bring a common vision between the groups as well as capacity building of staff for implementation.

Feedback: Participants shared that the process could be started incorporating the approach in ongoing DRR programs in a pilot scale at an individual organization level and subsequently can expand to a wider scale level. They also suggested providing technical assistance to ongoing DRR projects to incorporate the approaches as well. Sharing of knowledge, views and findings needs to continue in order to propel the approach forward.

Capacity Building

Capacity building of relevant staff/stakeholders on market assessment and program design for addressing disaster risk reduction will be a crucial factor. There is a need to combine the relief efforts and economic development efforts.

Feedback: Participants shared that relevant training and tools on M4DRR based assessment can enrich capacity building of project staff as well as assist in developing a knowledge base in this potential field.

Collaboration and Coordination Efforts

Government, NGOs and other development partners are continuing efforts and working together to address the constraints and rolling out of poverty due to natural hazards in Bangladesh.

Feedback: Participants shared that ECHO is funding, supporting, and implementing disaster programming in Bangladesh for most of the organizations and needs to incorporate them as well as Local Consulting Group (LCG) and other donor consortium for execution of this approach in forward. It is also noted to integrate and collaborate with relevant government agencies, NGOs and private sectors in the M4DRR program design phase. Moreover, sharing of exchange, views and findings for this workshop needs to circulate and continuation of further dialogue is required for more internalization, sensitization and reception.

Gender Issues and Environmental Aspects

Women are important part of economic activities and in most case their role; issues of their working environment and health risks are neglected. More focus needs to be emphasized on gender issues and environmental aspects during M4DRR program design and implementation phase.

Feedback: Participants shared that women issues need to be addressed in accessing market, getting equal labor wages as well as consider health risk during performing hazardous work. M4DRR projects needs to ensure in considering these issues during project design and implementation phase. This approach provide impetus for adopting similar approach to address vulnerability in workplace like disability, health risk, accident in various industrial sectors as well as in agricultural work.

Policy Framework

The Government of Bangladesh has a very good policy framework and contingency plan to address disaster management and relief operation but have a room for improvement during implementation. Current Hyogo Framework for Action (HFA) for building the Resilience of Nations and Communities to Disasters by the United Nations Office for Disaster Risk Reduction (UNISDR) will end on 2015.

Feedback: The participants cited to make a combination between plan and implementation level as well as to address advocacy works for new phase of Framework for the next ten year Hyogo Framework from donor, INGOs, government and relevant stakeholders level to fit in the M4DRR approach for building the resilience of Nations and Communities. Moreover, Damage, Loss and Needs Assessment (DaLA) guidance sheet from Global Facility for Disaster Reduction and Recovery (GFDRR) needs to be incorporated during estimating the Socio-Economic and Environmental Effects of Disasters.

Next Steps:

- Directly incorporate this approach into new activities may be conflicting with existing ongoing DRR projects particularly for sector selection, market analysis and intervention design. So, suggestions came for pilot stand-alone project in a particular geographical area to learn lessons during demonstration and implementation. Moreover, some of them suggested conducting and integrating the initiatives within ongoing DRR/M4P project.
- Tools development and further analyses is required to make the assessment handy and easy for the staffs
- Need to discuss and involve more INGOs and other donors for exploration, internalization, execution of this approach in a coordinated manner.
- Need to tailor presentation according to audience members we are addressing, i.e., market developers, humanitarians, DRR
- Alliance from the donors and INGOs are required for advocacy work to influence policy makers as well as raise issues to integrate need for M4DRR issues into national as well as international level during the policy framework formulation.
- Organize more sharing and disseminating workshop to change mindsets, sensitize and integrate the Market Development approach in practice during implementing Disaster Risk Reduction.