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## Acronyms

BCCSP	Bangladesh Climate Change Strategy Paper
CLP	Chars Livelihoods Programme
CLP2	Phase 2 of the Chars Livelihoods Programme
CPHH	Core Participant Households
CRED	Centre for Research on the Epidemiology of Disasters
DFID	Department For International Development
DPER	Disaster Preparation / Emergency Response
DRR	Disaster Risk Reduction
EWS	Early Warning System
IEP	Infrastructure and Employment Programme
IFRC	International Federation of the Red Cross
IMO	Implementing Organisations
IPCC	Intergovernmental Panel on Climate Change
ISDR	International Strategy for Disaster Reduction
KII	Key Informant Interviews
LVV	Less Vulnerable Villages
MDMA	Master of Disaster Management at University of Copenhagen
NPDM	National Plan for Disaster Management
NGO	Non-Governmental Organisation
SN	Safety Net
UNISDR	United Nations International Strategy for Disaster Reduction
UP	Union Parishad
VDC	Village Development Committees
VSLG	Village Savings and Loans Groups
VVV	Very Vulnerable Villages
WDR	World Disaster Reduction Conference

## Executive Summary

Disaster Risk Reduction, Resilience and Climate Change are all concepts which are mentioned within Chars Livelihoods Programme documents. The CLP addresses certain aspects of these issues and the programme is a clear example of how livelihood projects build up disaster resilience. This study attempts to measure the impact that CLP has had on the disaster resilience of communities.

Many of CLP's research papers have shown that flooding and other hazards regularly effect households living on the chars. With the second phase of CLP (CLP2) ending in 2016, it is important that these shocks do not cause households to return to extreme poverty after graduating.

The methodology for this study used a mixed methods approach. Quantitative data was collected using questionnaires and then a score card was created. Key Informant Interviews were then performed to collect qualitative data to understand the findings of the survey.

The results of the study showed that the communities where CLP had provided support packages to households had significantly greater disaster resilience than the control communities. It was found in the study that female participants of the survey scored less than the males before CLP support. However in the areas where households had received the CLP support package, females scored higher than their male counterparts.

The key findings of the study were:

- The CLP programme dramatically improves the overall disaster resilience of communities in Disaster Preparedness and Response; Knowledge and Education; Governance; and Risk Assessment.
- Women's disaster resilience is greater than men after the CLP support package.
- All three KII groups (CLP office staff; IMO staff; and Local Government) understood what roles government and NGOs have to play in building disaster resilience of communities.
- Plinths are vital for sheltering from floods.
- New national policies will take time to be implemented.
- There is a lack of regular assessment on hazards and vulnerability.

The following recommendations are made with regards to operations in the CLP:

- Continue the current approach of building disaster resilience of communities in particular the Infrastructure and the disaster relief aspects.
- Partnerships need to encourage stakeholders working in the chars to perform risk assessments on the chars particularly for hazards and vulnerabilities. Involvement of the CLP's VDCs could be an effective way to approach this as they have the local knowledge of what hazards are impacting their area and where/who is vulnerable. This would create ownership of the assessment by the VDC as well as increasing awareness within the community.
- Distribution of Bangladesh's National Plan for Disaster Management and the Bangladesh Climate Change Strategy and Action Plan to CLP's Implementing Organisations (IMOs) and local government to increase awareness of these policies.

# 1. Background

The Chars Livelihoods Programme (CLP) works with extreme poor households living on island *chars* in North West Bangladesh. It aims to improve the livelihoods, incomes and food security of at least one million poor and vulnerable women, children and men living on the *chars*. The CLP provides a comprehensive package of interventions to its core participant households (CPHHs). A number of interventions also benefit the wider community. The main objectives of the programme are to improve social and economic assets, reduce environmental and economic risk and increase access to markets and services.

## 1.1 Introduction

Chars Livelihoods Programme improves the disaster resilience of households through a variety of its livelihoods activities.

### 1.1.1 Infrastructure Project

The infrastructure of CLP households is improved in three ways: raising of the house on a plinth two feet (60cm) above the highest known flood level; providing access to sanitary latrines; and providing access to improved water sources through tube wells. Each of these interventions reduces the vulnerability of households to hazards. Households are safer on a raised plinth, giving protection also to cattle and homestead gardens. The CLP sanitary latrines and tube wells are also raised two feet above the highest known flood level reducing the practice of open defecation and giving continuous access to improved water sources even during floods.

### 1.1.2 Asset Transfer Project

The Asset Transfer Project is the cornerstone of the CLP's model of poverty reduction. The programme rests on the assumption that the support package provided to core participant households is sufficient to help graduate households out of extreme poverty. The transfer of assets to the extreme poor, supported by other components of the programme, allows households to increase their income and build their asset base. The initial 'primary' asset transferred to the participant through the asset transfer project is conceived as the starting point for a continuous process of asset growth. This asset chosen is most often cattle (98%). The type of cattle that are found on the *chars* are very resistant to hazards as they can swim well and are able to be kept on plinths for long periods of time (Marks, 2010). Plinth borders are also used as an area to plant fodder, increasing the strength of the plinth and also providing a source of cattle feed (Marks, 2010).

### 1.1.3 Social Development Project

While on the CLP support package, participants attend Social Development group meetings for the entire 18 month period. At these meetings participants are taught a variety of modules including disaster preparedness. This covers multiple hazards including floods, cyclones and fires. These meetings along with other CLP organised meetings (Village Development Committees (VDCs); Adolescent Groups; Couples Orientation; and Men's Training) increase social capital, creating stronger links within villages, allowing for a better coordinated response to disasters.

### **1.1.4 Disaster Relief**

CLP has in place a disaster response strategy so when a disaster occurs, it does not negate the years of work which CLP has done. This includes an emergency fund which has been used previously to combat the food price rise of 2008; provide blankets during cold snaps; and repair houses after the cyclone in 2013. During previous floods, CLP also ferried char dwellers to the mainland when necessary.

### **1.1.5 Building Financial capital**

Another group meeting that is organised by the CLP is the Village Savings and Loans Groups (VSLGs). These provide households not only with access to microcredit in times of need but also with a way of saving money for when shocks occur.

## **1.2 Study Rationale**

Disaster Risk Reduction, Resilience and Climate Change are all concepts which are mentioned within CLP documents. The CLP addresses certain aspects of these issues and the programme is a clear example of how Livelihood projects build up disaster resilience. This study attempts to measure the impact that CLP has had on the disaster resilience of communities.

Many of CLP's research papers have shown that flooding and other hazards regularly effect households living on the chars. With CLP2 ending in 2016, it is important that these shocks do not cause households to return to extreme poverty after graduating.

## **1.3 Research questions**

### **1.3.1 Research statement**

To evaluate the impact CLP has on the disaster resilience of communities through CLP's livelihoods work.

### **1.3.2 Key evaluation questions / issues**

- What impact has CLP had on building disaster resilience of char communities?
- What are other agencies doing to address disaster resilience in char communities?
- What gaps are currently present in increasing the resilience of the communities and what can CLP/ partners do to address them?

## **1.4 Structure of report**

This report used a number of sources of information to answer the research questions. The concepts associated with disaster resilience are briefly outlined with previous CLP literature reviewed. Analysis of 238 questionnaires was carried out with participants from areas CLP has previously worked and with a control group where there has been no CLP intervention, as well as a small number of key informant interviews with persons from CLP Main office, Local government and CLP's Implementing Organisations (IMOs). The results are then analysed with key themes extracted. These are then discussed and recommendations made.

## 2. Literature Review

### 2.1 Conceptual Framework

#### 2.1.1 Disasters

Disaster is defined by the British Government's Department for International Development (DFID) as a:

*“Severe disruption to the survival and livelihood systems of a society or community, resulting from their vulnerability to the impact of one or a combination of hazards involving loss of life and/or property on a scale which overwhelms the capacity of those affected to cope unaided.”*

(White, P et al., 2004).

The Centre for Research on the Epidemiology of Disasters (CRED) classifies natural disasters according to five categories, as shown in table 1.

**Table 1: Different types of Natural Disasters Source: (Guha-Spaur et al., 2011, CRED)**

Disaster Subgroup	Definition	Disaster Main Types
<b>Geophysical</b>	Events originating from solid earth	Earthquake, Volcano, Mass Movement (dry)
<b>Meteorological</b>	Events caused by short-lived/small to meso scale atmospheric processes (in the spectrum from minutes to days)	Storm
<b>Hydrological</b>	Events caused by deviations in the normal water cycle and/or overflow of bodies of water caused by wind set-up	Flood, Mass Movement (wet)
<b>Climatological</b>	Events caused by long-lived/meso to macro scale processes (in the spectrum from intra-seasonal to multi-decadal climate variability)	Extreme Temperature, Drought, Wildfire
<b>Biological</b>	Disaster caused by the exposure of living organisms to germs and toxic substances	Epidemic, Insect Infestation, Animal Stampede

Bangladesh is impacted by multiple types of hazards including floods, earthquakes and cyclones. The table below shows the percentage of the population which is impacted by specific hazards, with a ranking compared to other countries. As can be seen, Bangladesh is first in population impacted by flooding. This reflects the high density of rivers and their tributaries in Bangladesh.

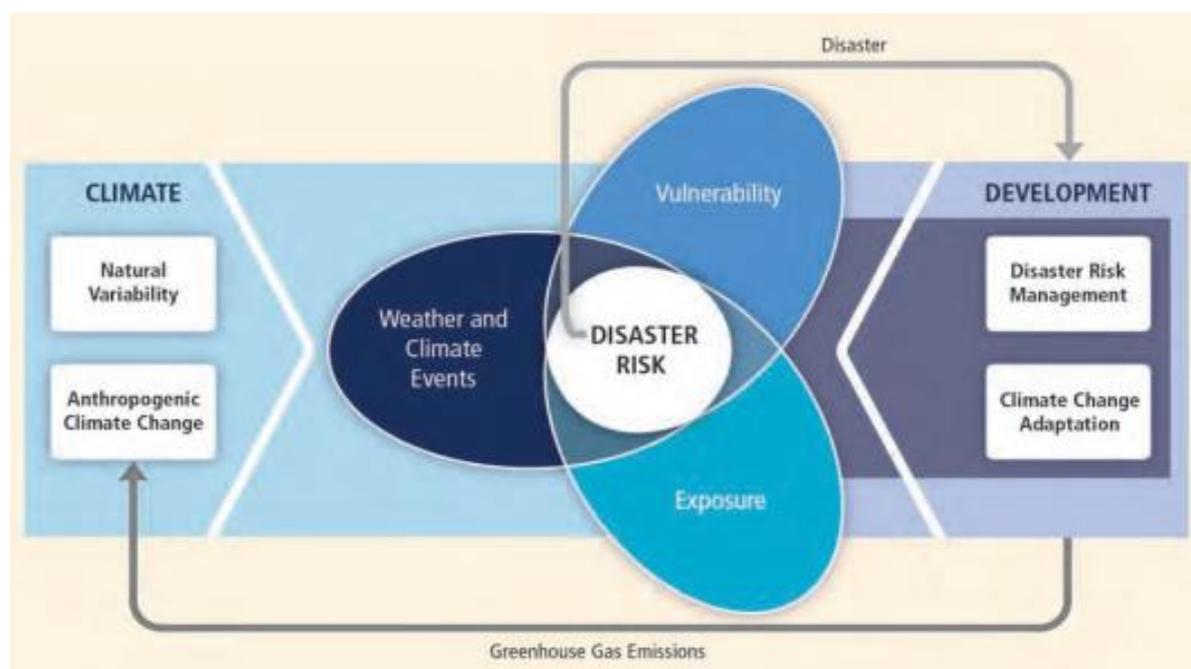
**Table 2. Human exposure in Bangladesh to natural hazards (Adapted from UNISDR, 2010)**

Hazard type	Population exposed	Percentage of population		Country ranking
		0	40	
Cyclone	4,641,060	10	10	6th out of 89
Drought	642,277	1	1	63rd out of 184
Flood	19,279,960	15	15	1st out of 162
Landslide	3,758	0	0	35th out of 162
Earthquake	1,330,958	1	1	17th out of 153
Tsunami	1,598,546	1	1	3rd out of 265

## Climate Change

In the past ten years scientific consensus has grown about the reality, scale and anticipated impact of climate change. It will be a challenge to reduce global warming to an average of two degrees Centigrade, and more likely on present trends that it will reach four degrees if not more. It is thought that because of this increase the weather patterns of the earth will become more extreme. This will mean that the frequency of natural hazards will become greater as well as the magnitude.

There are two main drivers of confidence about more frequent and more severe disasters. They are not dependent on assumptions about extreme weather events – rather they derive from evidence about steadily increasing temperatures on the planet. This means that year-on-year the likelihood of crop failures due to elevated temperatures is increasing. With population growth combined with urban migration, more and more people are at risk of events like earthquakes and cyclones. Cyclones are a particular threat for many mega cities including Dhaka as they are located on the coast.



**Figure 1: Diagram showing relationship of Climate change and Development. Source: IPCC 2011**

Bangladesh is identified as one of the countries that will be most affected by climate change. Current indications are that, not only will floods and cyclones become more severe, they will also start to occur outside of their “established seasons”. A general change in rainfall patterns and increasing

temperatures can already be observed. Furthermore, it is projected that the possible sea level rise will affect the country by inundating large parts of the coastal areas, dislocating millions of people from their homes, occupations and livelihoods. If sea levels rise by only 45cm (about 1.5 feet), around 10% of the country may be inundated. This inundation is likely to cause a migration away from coastal areas which could impact the North West Bangladesh, creating greater competition for resources that are already scarce.

**Table 3. Climatic Element, critical vulnerable areas and impacted sectors. (UNDP, 2009)**

Climate and Related Elements	Critical Vulnerable Areas	Most Impacted Sectors
Temperature rise and drought	North-west	Agriculture (crop, livestock, fisheries) Water Energy Health
Sea Level Rise and Salinity Intrusion	Coastal Area Island	Agriculture (crop, fisheries, livestock) Water (water logging, drinking water, urban) Human settlement Energy Health
Floods	Central Region North East Region Char land	Agriculture (crop, fisheries, livestock) Water (urban, industry) Infrastructure Human settlement Health Disaster Energy
Cyclone and Storm Surge <sup>1</sup>	Coastal and Marine Zone	Marine Fishing Infrastructure Human settlement Life and property
Drainage congestion	Coastal Area Urban South West	Water (Navigation) Agriculture (crop)

**Stages of management after a disaster**

As can be seen in figure 2, there are three processes after a disaster: (1) Response to the disaster; (2) Recovery; and (3) Risk Reduction (MDMA, 2012). The response to the disaster (the relief phase) addresses basic needs of the affected community: food, clean water, medical assistance and shelter. The recovery phase then dominates - a transitional stage where the aim is to restore the communities and livelihoods of the affected population. However the standard of living before the disaster has not been reached. The final stage is where development and risk reduction occurs when the country is no longer effected by the disaster.

**Value For Money of Disaster Risk Reduction**

Traditionally, approaches to disaster have focused on response rather than readiness. It is thought that only 4% of humanitarian assistance is dedicated to preventive measures but it is thought that every one dollar spent on Disaster Risk Reduction (DRR) saves \$5 - \$10 in economic losses (Schwartz, 2006).

## 2.1.2 Disaster Risk Reduction

DRR is used to reduce the impact of a natural hazard. It requires a systematic analysis of the cause of a risk and implementing measures to reduce or remove the risk. DRR is a strategy to reduce the impact of a natural hazard, reducing the scale of a disaster. There are five broad ways to approach reducing the risk of a disaster through preparedness, warning, mitigation, recovery and livelihoods (IFRC, 2012).

Preparedness is focused on preparing the population for potential disasters. This includes actions such as training, awareness, building capacity, contingency planning and hazard mapping.

Warning involves creating systems to warn vulnerable people to prepare for an imminent disaster, such as the tsunami warning system implemented in the Indian Ocean after the Boxing Day Tsunami.

Mitigation methods often involve physical measures to reduce the frequency, scale and intensity of a disaster. This approach is usually associated with creating measures such as flood barriers or reforestation or building houses which are naturally hazard resistant. It also includes education to avoid the dangers. Mitigation is often popular with Non-Governmental Organisations (NGOs) when entering a disaster area as it is cheap and the results can be seen immediately. However often it does not address the root cause for the vulnerability of a community and may not improve the capacity of the community.

Recovery is building back infrastructure and buildings destroyed in a previous disaster. This is not just replacing the structures but building back better so the structures can withstand future natural hazards.

Improving the livelihoods of people in disaster prone areas makes them less vulnerable to future natural hazards. This is through making sure the population has access to a variety of assets to secure income and food supply.

No single group or organisation can address every aspect of DRR. DRR thinking sees disasters as complex problems demanding a collective response from different disciplinary and institutional groups – in other words, partnerships. This is an important consideration. CLP may have made an impact in certain aspects but it will have to think about how to work with other partners to ensure that other important aspects of DRR are addressed, rather than try to do it all by itself.

### **World Disaster Reduction Conference (WDRC)**

The World Disaster Reduction Conference was held in 2005 from the 18<sup>th</sup> to 22<sup>nd</sup> January in Hyogo, Japan. Its main aim was “to take stock of progress in disaster risk reduction accomplished since the Yokohama Conference of 1994 and to make plans for the next ten years” (UNISDR, 2012). It took place just a month after the Indian Ocean Tsunami which killed up to 230,000 lives (UNISDR, 2005).



**Figure 2 Stages of management after a disaster (Source: MDMA, 2012)**

Four documents were produced at the WDRC:

- Review of the Yokohama Strategy and Plan of Action for a Safer World
- Hyogo Declaration
- Hyogo Framework of Action 2005-2015: Building the resilience of Nations and Communities to Disasters
- Common Statement of the Special Session on the Indian Ocean Disaster: risk reduction for a safer future

***Hyogo Framework of Action 2005-2015: Building the resilience of Nations and Communities to Disasters***

The Hyogo framework was produced after 168 governments agreed to adopt the 10-year plan (Prevention web, 2012). It was created by the International Strategy for Disaster Reduction to assist nations and communities to become more resilient and able to adapt to the disasters which affect them (ISDR, 2005a). It has five priorities for action (ISDR, 2005b).

1. Ensure that disaster risk reduction (DRR) is a national and a local priority with a strong institutional basis for implementation
2. Identify, assess and monitor disaster risks and enhance early warning
3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels
4. Reduce the underlying risk factors
5. Strengthen disaster preparedness for effective response at all levels

There are four cross cutting issues which are highlighted in the Hyogo framework:

- Having a multi-hazard approach when implementing the DRR
- Allow the DRR to be sensitive to gender and culture
- Participation of the community and volunteers are key to successful DRR
- Capacity building and transfer of technology between stakeholders are essential.

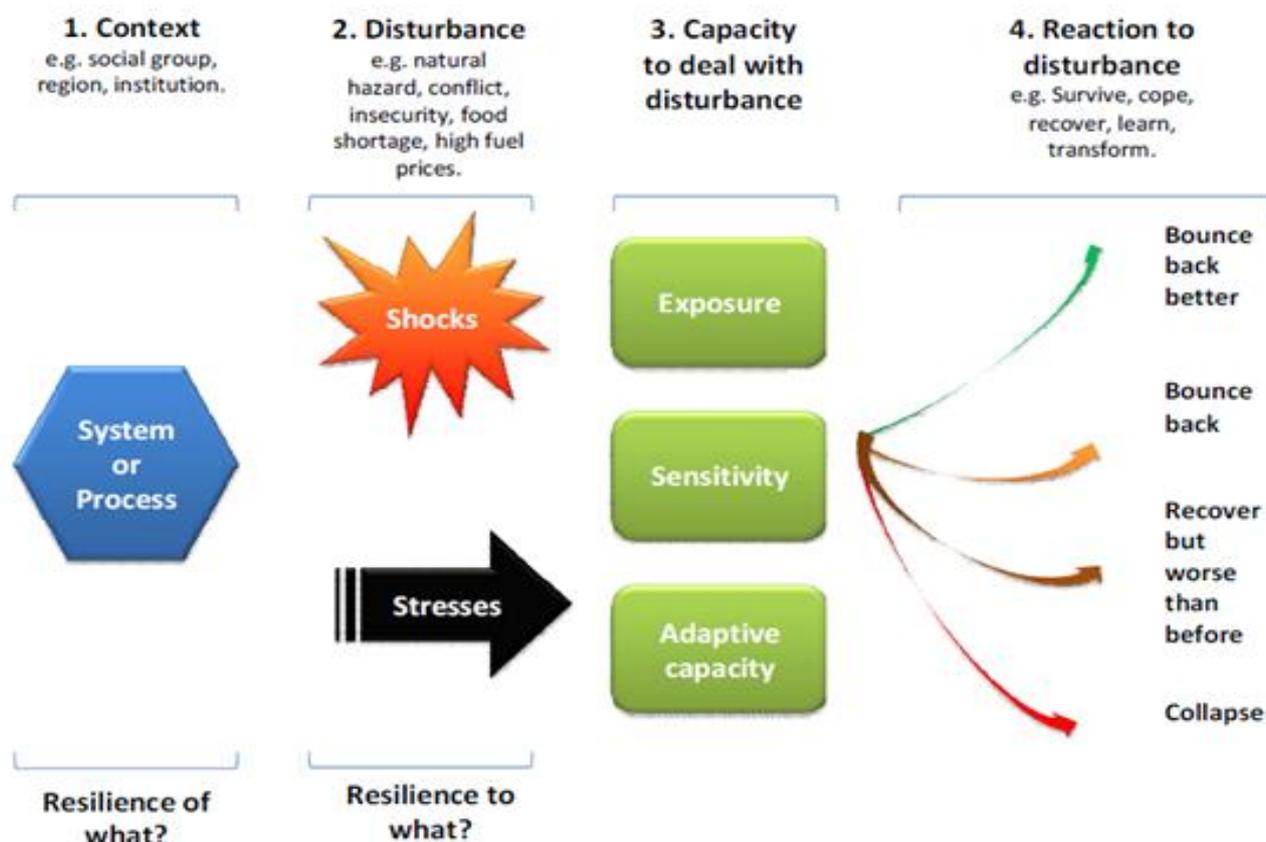


Figure 3. The four elements of a resilience framework. Source: DFID 2011.

### *Disaster Management and Climate Change preparedness at the Bangladesh National level*

Responding to the Hyogo Framework for Action and realising the impact that climate is going to have in the future, Bangladesh has created a number of national policies and legislative frameworks.

The Standing Orders on Disaster Management were published in 2010, although has been in effect since 1997. It outlines the tasks and responsibilities of the citizen, public representatives, ministries, agencies and NGOs. Complementing this is the National Plan for Disaster Management 2010-2015. This document outlines how the Bangladesh Government plans to meet their regional and global commitments to disaster management.

Another import document is the Bangladesh Climate Change Strategy and Action Plan (2009). This document outlines first what hazards occur in Bangladesh and what impact climate change is going to have on them. It then outlines how the Bangladesh government plans to reduce its greenhouse gases, the cause of climate change, and prepare to adapt and mitigate the effects of climate change.

### 2.1.3 Resilience

Resilience is a term which has become more prominent in the development world in the past five years, spearheaded by the Department of International Development. They define it as *“the ability of countries, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses - such as earthquakes, drought or violent conflict - without compromising their long-term prospects”* (DFID, 2011).

Thematic Areas		Components of Resilience
1	Governance	<ul style="list-style-type: none"> <li>• Policy, planning, priorities and political commitment</li> <li>• Legal and regulatory systems</li> <li>• Integration with development policies and planning</li> <li>• Integration with emergency response and recovery</li> <li>• Institutional mechanisms, capacities and structures; allocation of responsibilities</li> <li>• Partnerships</li> <li>• Accountability and community participation</li> </ul>
2	Risk Assessment	<ul style="list-style-type: none"> <li>• Hazards/risk data and assessment</li> <li>• Vulnerability/capacity and impact data and assessment</li> <li>• Scientific and technical capacities and innovation</li> </ul>
3	Knowledge and Education	<ul style="list-style-type: none"> <li>• Public awareness, knowledge and skills</li> <li>• Information management and sharing</li> <li>• Education and training</li> <li>• Cultures, attitudes, motivation</li> <li>• Learning and research</li> </ul>
4	Risk Management and Vulnerability Reduction	<ul style="list-style-type: none"> <li>• Environmental and natural resource management</li> <li>• Health and well being</li> <li>• Sustainable livelihoods</li> <li>• Social protection</li> <li>• Financial instruments</li> <li>• Physical protection; structural and technical measures</li> <li>• Planning régimes</li> </ul>
5	Disaster Preparedness and Response	<ul style="list-style-type: none"> <li>• Organizational capacities and coordination</li> <li>• Early warning systems</li> <li>• Preparedness and contingency planning</li> <li>• Emergency resources and infrastructure</li> <li>• Emergency response and recovery</li> <li>• Participation, voluntarism, accountability</li> </ul>

**Figure 4. Community Disaster Resilience characteristics created by John Twigg for DFID, showing the five thematic areas of resilience which are then broken down into their components (Twigg, 2009)**

The focus of resilience puts greater emphasis on what communities can do for themselves when a shock or stress arises. When trying to increase the resilience of a community their capacities are strengthened rather than focussing on their vulnerabilities (Twigg, 2009). Resilience is often seen as the opposite of vulnerability.

#### ***Characteristics of Disaster Resilience at the community level***

John Twigg created a list of characteristics for what a 'disaster-resilient community' should consist of (Twigg, 2009). The five main themes correspond to the five Priorities of Action of the Hyogo Framework for Action 2005-2015. The five themes are:

1. Governance
2. Risk Assessment
3. Knowledge and Education
4. Risk Management and Vulnerability Reduction
5. Disaster Preparedness and Response

Each thematic area is broad and so is broken down into Component of Resilience; Characteristics of a Disaster Resilient Community; and Characteristics of an Enabling Environment

A perfectly disaster resilient community has organisations, both government and non-government who have DRR policies, and taking action. The communities will also have regular risk assessments carried out, focussing on the type of hazards that impact the community as well as indicating areas/people which are most vulnerable. A disaster resilient community will also have been educated on hazards which impact them and have been trained in how to respond to hazards. In a perfect community households would also have enough assets so if there was a disaster they would be able to use their assets to survive and bounce back. Communities would also have access to Early Warning Systems (EWS) and have contingency plans for specific hazards. There are 167 specific characteristics in total outlined by Twigg for a disaster resilient community. The list of these characteristics can be found in annex 3.

The characteristics of an enabling environment acknowledges that policies, organisations and other factors at the national level will have an impact on the disaster resilience of communities. These characteristics have not been analysed extensively in this study as the characteristics of the community.

## 2.2 CLP literature

Disaster Risk Reduction, Resilience and Climate Change are all concepts which are mentioned within CLP documents. The CLP addresses certain aspects of these issues and the programme is a clear example of how Livelihood projects build up disaster resilience. This review focuses on the CLP literature which refers to aspects of disaster resilience.

In 2007, Bangladesh saw the worst flood in the life time of CLP. The Government of Bangladesh requested that CLP, with support from the Department for International Development, provide relief to 11,420 island char-based, core beneficiary households (Marks and Islam, 2007). This was CLP's first experience in giving disaster relief and afterwards undertook a Customer Satisfaction Survey to determine the feelings and reactions of beneficiaries to the relief given as well as the success of flood prevention and alleviation methods already in place. It was found from the survey that the relief effort after was a great success that was greatly appreciated by households. Facts and figures are represented in the table below:

**Table 4. Household opinions of adequacy of food provided during the CLP relief effort (Marks and Islam, 2007).**

Food item	Received (%)	Considered sufficient (%)	Quality of food			Satisfaction level		
			Good (%)	Fair (%)	Poor (%)	High (%)	Fair (%)	Poor (%)
<b>Rice</b>	99.7	90.6	91.4	7.8	0.8	77.5	22.0	0.5
<b>Puffed rice</b>	98.7	95.5	95.3	4.5	0.2	82.1	17.9	0.1
<b>Molasses</b>	99.3	95.3	95.6	4.3	0.0	81.2	18.7	0.1
<b>Cattle feed</b>	99.7	90.1	94.1	5.9	0.0	77.6	21.5	1.0

As can be seen, the results shows a positive impact on the households. The amount of food provided in the form of rice and molasses was seen as sufficient for at least 9 out of 10 families, with similar response for cattle feed. Quality of food was rated "Good" in all categories by over 90% of households. Less than 1% households said they were dissatisfied with the relief effort.

In 2008, CLP performed a study to look at the coping strategies of CLP households during the monga season (Conroy and Marks, 2008). Monga is a time period during the year where employment

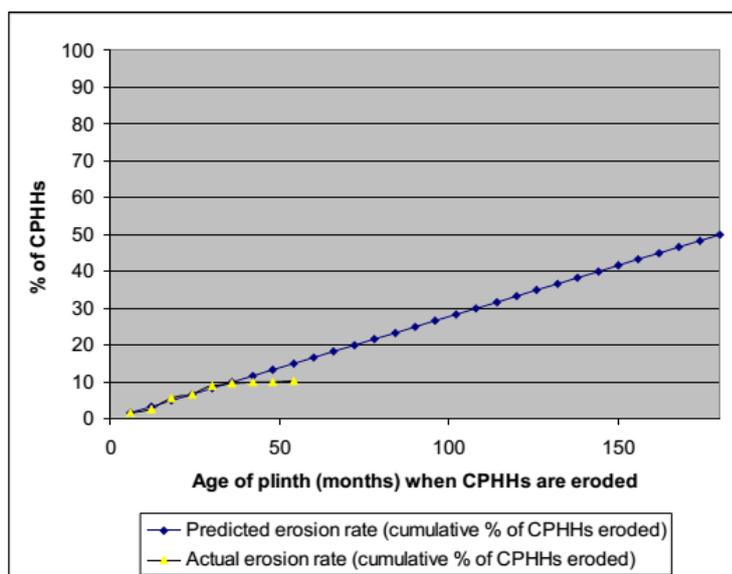
opportunities and food production is greatly reduced from the impact of flooding and land erosion. The study found that households who had received the CLP support package were able to accumulate more income per capita through Safety Net (SN) grants and Infrastructure and Employment Programme (IEP) and so used coping strategies less. Coping strategies included reducing food consumption; taking out cash loans; distress asset sales; selling of labour at a reduced amount; and, as a last resort, begging.

A brief published in 2009 showed how planning for seasonality can greatly improve the impact of CLP on reducing the vulnerability of the extreme poor. As can be seen in the table below the frequency of certain hazards are greater at different times of the year.

**Table 5. Overview of CLP 'seasonality smoothing' interventions (CLP, 2009)**

Bangladeshi seasons		Sheet		Barshanto		Grismo		Barsha		Sharat		Hemanto	
		J	F	M	A	M	J	J	A	S	O	N	D
Seasonal Climatic Events	Hunger season		Little Boro							Monga			
	Drought												
	Monsoon/Acute Floods												
CLP Response	Asset Transfer												
	Dry Season CFW												
	IEP												
	IEP Safety net												

A study was undertaken in January 2011 to evaluate the Rapid Blanket Distribution to tackle the particularly cold winter that year. This hit the most vulnerable, including the elderly and children, the hardest with many cases of cold related diseases such as pneumonia. At this time the CLP Emergency Grant Fund was used to finance 13,580 blankets. There was no other widespread distribution of blankets in the chars area by either government or NGOs. Some minor difficulties were found with IMO's purchasing poor quality blankets. This lesson has been learnt and now all IMO's have a better understanding of the standard CLP expects.



**Figure 5. Actual and predicted rates of erosion of CPHHs**

The raising of houses on plinths are a key intervention that is carried out by the CLP to reduce vulnerability of households to hazards. A study was undertaken to find out the rate of erosion of CLP plinths. It was previously predicted that plinths would have an average life span of 15 years (Kenward and Islam, 2011). The graph below from the study found that the actual rate of erosion was less, suggesting that all plinths are likely to be fully eroded after 33 years.

After the flooding of 2012, a study was undertaken to assess the performance of CLP raised plinths, low cost latrines and access to clean water during the flood (Kenward et al, 2012). The findings of the survey showed that

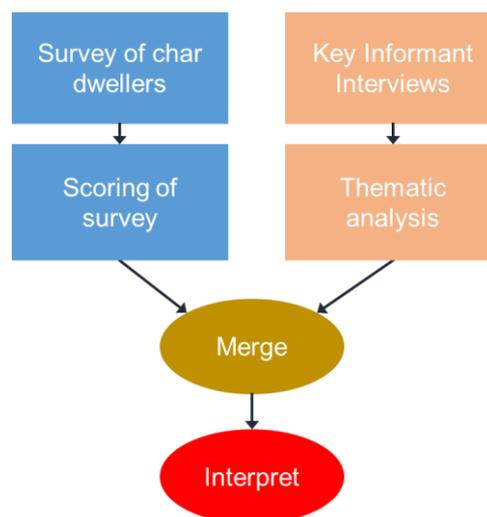
plinths fared well, with 65% fully intact, 29% partially eroded and only 8% submerged. The plinths were found to not only protect household members but also cattle; food and fodder reserves and even provide shelter for non-core participant neighbours, creating "a social and communal good". This was the first time that CLP's low cost latrines had been tested by flooding and proved to be successful with only 4% being destroyed, allowing recipients to maintain access to sanitation during

the flood. During the flood, 84% of tube wells remained intact; however, only 33% of households had access to improved water. This was because of a large amount of tubewells did not meet the CLP standard of having a intact concrete platform.

A recent study found that river erosion was the most common form of hazard to cause a house to decrease in asset values (Barrett et al, 2013). The study was undertaken as previous research has shown that there exist two outlier groups among previous participants of the CLP. One group has built up significant assets while the other group has not, and, in some cases, has fallen back to being assetless (Blackie and Alam, 2012). The study analysed the causes for such different outcomes. Within the assetless group it was found that natural disasters were a common problem, with river erosion being the greatest hazard to accumulating assets, particularly when a household invested solely in land.

### 3. Methodology

The methodology for this study used a mixed methods with a concurrent nested design (figure 6.). Quantitative data were collected using questionnaires and then a score card was created. Key Informant Interviews were then performed to collect qualitative data to understand the findings from the survey.



#### 3.1 Quantitative analysis

Using the Disaster Resilient characteristics created by John Twigg for DFID, questionnaires were created covering four main themes that make up a disaster-resilient community: Disaster Preparedness and response; Knowledge and Education; Risk Assessment and Governance. The fifth theme in John Twigg’s characteristics, Risk Management and Vulnerability reduction has been measured substantially in other CLP studies and so was not included in this study. CLP’s assessments to date have shown that households substantially improve their risk management and have their vulnerability greatly reduced after receiving the CLP support package.

Figure 6. Concurrent Nested Approach

To create the questionnaires on the disaster resilience themes, certain components of resilience were selected and questions were created to be answered by the household.

Table 6. Components of resilience selected for study

Theme	Governance	Risk Assessment	Knowledge and Education	Disaster Preparedness and Response
Component of resilience	DRR Policy, Planning, priorities, and political commitment	Hazards/risk data and assessment	Public awareness, knowledge and skills	Organisational capacities and co-ordination
	Integration with Development and emergency policies and planning; allocation of responsibilities	Vulnerability/capacity and impact data and assessment	Information management and sharing	Early Warning Systems
	Partnerships		Education and sharing	Preparedness and contingency planning
	Accountability and community participation			Emergency Resources and Infrastructure
				Emergency response and recovery

A question was created to draw out the information for each component of resilience selected. Each question was then scored on a scale out of five, one for 'no resilience' and five for 'complete resilience' to disasters.

The theme Disaster Preparedness and Response of households was scored on:

- the types of community hazard responses
- access to early warning systems
- access to an emergency shelter
- access to an emergency shelter for their cattle
- types of preparation each participant knew
- access to disaster relief and what type
- whether a Disaster Preparedness / Emergency Response Committee was working in their area.

Knowledge and education of disasters was scored by:

- knowledge of hazards;
- knowledge of vulnerabilities;
- knowledge of natural resources which are at risk to hazards;
- information received from NGOs/Government on disaster preparedness and response
- training received from NGOs/Government on disaster preparedness and response

Governance was scored by looking at the work that Non-Governmental Organisations (NGOs) and local government were doing on disaster risk reduction. This was a reflection on the policies and priorities of the organisations.

Risk assessment was scored by whether risk assessments had been made by organisations and what type.

To see exact the exact criteria for the scoring read Annex 2.

The questionnaires were carried out within all six cohorts. Because cohort 2.6 has not been supported yet by CLP, they acted as the control for the study. Information was collected from IMOs about the frequency of flooding, erosion and other hazards and then villages were selected and categorized as either being a Very Vulnerable Village (VVV), or a Less Vulnerable Villages (LVV). Two villages were included in the study from each cohort, one VVV and one LVV. Within each village, 20 people were surveyed, 10 males and 10 females. This meant that the total sample was 280 (240 CLP-supported and 40 control). The intervention villages were selected from Kurigram as CLP has done a major part of its work in this district, with interventions for all cohorts. There are villages in Kurigram where CLP has not worked however there are villages nearby which could affect the disaster resilience of the chosen village through spill over effect. To reduce the spill-over effect, Tangail was the area from which control villages were selected, because CLP has done the least work in this district. The table on the following page shows the villages which were selected.

**Table 7. Villages selected for study**

<b>Cohort</b>	<b>District</b>	<b>Upazilla</b>	<b>Village name</b>	<b>Type of Village</b>
2.1	Kurigram	Chilmari	Natar Kandi	VVV
2.1	Kurigram	Chilmari	Modafot Kalikapur	LVV
2.2	Kurigram	Kurigram Sadar	Khaser Char	VVV
2.2	Kurigram	Kurigram Sadar	Nayar Hat	LVV
2.3	Kurigram	Ulipur	Berahir	VVV
2.3	Kurigram	Ulipur	Uttar Baladoba	LVV
2.4	Kurigram	Nageswari	Char Pattala	VVV
2.4	Kurigram	Nageswari	Dohinirampur Uttor	LVV
2.5	Kurigram	Nageswari	Poshchim Balar Hat	VVV
2.5	Kurigram	Nageswari	Konnamoti	LVV
2.6	Tangail	Bhunpur	Sosua	VVV
2.6	Tangail	Bhunpur	Gobinda Pur	LVV

The resilience of different cohorts were then compared as well as with a control. Disaster resilience scoring of women and men was also compared.

### **3.2 Qualitative analysis**

Key Informant Interviews (KII) were carried out with persons with the greatest understanding of the disaster resilience interventions which are currently being carried out in the selected areas. This included Upazila chairmen who are the heads of the Disaster Preparedness/Emergency Response Committees at the Upazila level; Programme Managers who run the IMO's carrying out CLP's interventions; and CLP Secretariat staff. Information gathered from the KII were used to get a better understanding of the larger picture and what actions Governments and Non-Governmental organisations were doing in the background to improve the resilience of the char communities.

Each interview was split into the same four themes as the quantitative data of Governance; Risk assessment; Knowledge and Education; and Disaster Preparedness and Response. Responses to the interviews were then thematically analysed to find common themes. The themes were then used to explain why there were certain differences in the disaster resilience of communities.

## 4. What are char dwellers doing to prepare for hazards and how do they respond?

This chapter presents and analyses the scores on the Disaster Preparedness and Response scoring. The following diagram shows the scores of the intervention group (the villages which had been supported by the CLP) versus the control group (villages which have had no support from the CLP):

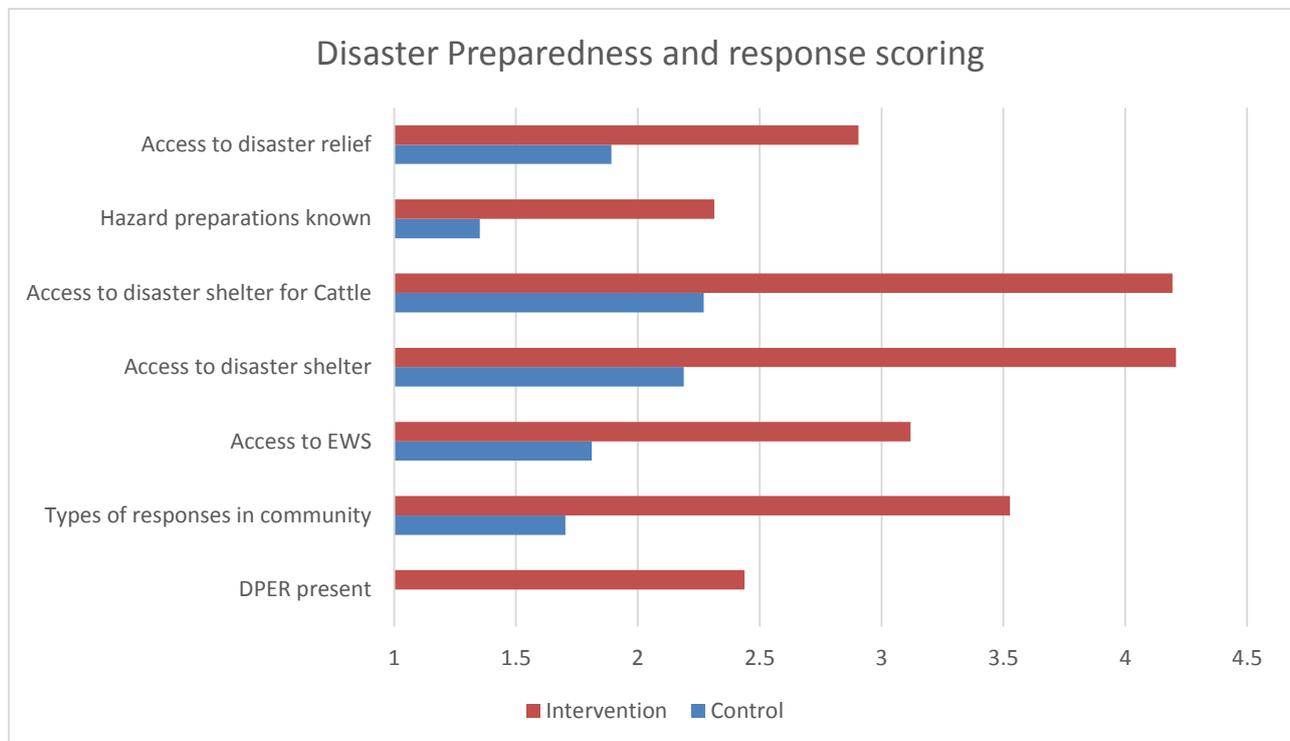


Figure 7. Disaster Preparedness and Response scoring

### 4.1 Access to Disaster Relief

As can be seen in Figure 7., survey participants in the intervention group had an average score of 2.91 out of 5 whereas the control group averaged only 1.89. CLP was the organisation providing most of this disaster relief for the intervention group. Relief was provided in the form of emergency grants, cattle feed and food; and occasionally with an advanced stipend. An emergency grant is only distributed after a damage assessment has been carried out to find the most vulnerable. CARE, through their Shouhardo programme, also gave relief to a small number of houses.

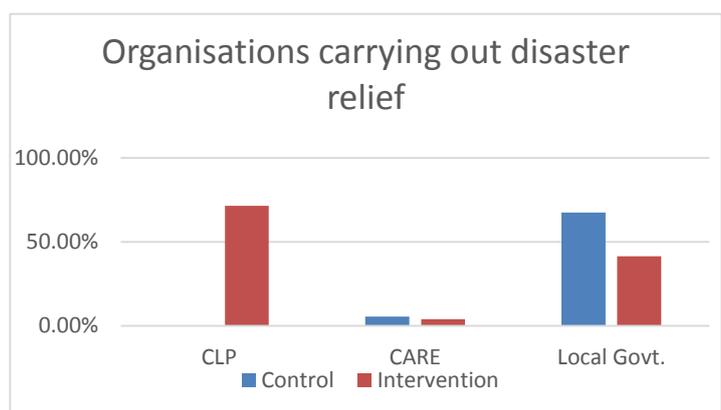


Figure 8. Organisations carrying out disaster relief in control and intervention areas

Local Government gives significant relief in both groups in the form of cash grants. Some IMOs, such as Manab Mukti Sangstha (MMS) stated in the KIIs that they have their own emergency fund to help

in the response to disasters. This would probably be assumed to be part of the CLP disaster relief by the households.

Having this access to disaster relief is an important to households as it allows them to bounce back after a disaster has occurred. It gives them a source of cash and food to allow the family to function and reduce the loss of assets. CLP in the intervention areas plays this role with support from local government. In control groups, households are more reliant on local government. When CLP finishes in 2016, it needs to encourage its current IMO's to carry on providing disaster relief to increase the sustainability of CLP interventions.

## 4.2 Hazard Preparations known

As can be seen in Figure 7, the intervention group, with a score of 2.31 out of 5, had a better understanding of how communities should respond to a disaster than the control group, with a score of 1.35. The types of answer given by both groups included preparing boats for oncoming floods; building rafts; and preserving resources. The very low score of the control group implies that they know little about hazard preparations, which could lead to the conclusion that little is done.

## 4.3 Access to disaster shelter

Households in the CLP intervention area classified their houses raised on a plinth as disaster shelters, particularly for floods. Households in the control area mentioned neighbours' plinths for refuge during disasters the most (51%) whereas communities where CLP had given support described their own raised plinth as the most common form of disaster shelter (85%) as shown in Figure 7. This decisively shows that CLP's plinth-raising is achieving its goal of reducing vulnerability.

Local markets, school compounds and roads were also used to shelter in disasters. Schools were expected to be used as disaster shelters as many schools through other NGO work has been turned into cyclone shelters, something a plinth would protect you less from. Cyclones, however, rarely cause serious damage in the CLP2 working area as it is so far inland.

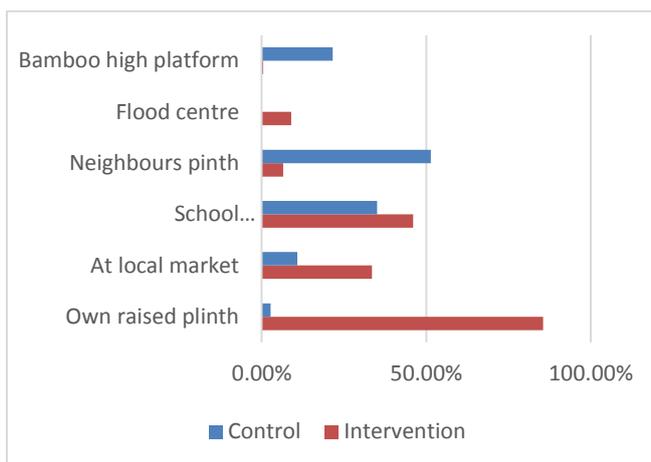


Figure 9. Access to Emergency shelter scoring

## 4.4 Access to disaster shelter for cattle

Disaster shelter for cattle was very similar to the disaster shelter for people implying that cattle are often kept with the owners. A few houses mentioned the use of bamboo rafts to shelter cattle, but it is difficult to imagine keeping cattle on a raft for any significant period of time.

Again this shows the importance of the work CLP is doing in plinth-raising. Another resource that is protected by the plinth is the

homestead gardens, an activity CLP promotes as part of the support package. The plinth does not just protect the household from disasters but also protects their livelihoods.

## 4.5 Access to Early Warning Systems

When looking at the access of households to early warning systems, over half in both groups were warned in advance of a disaster. Over 60% of households in both areas received microphone announcements. The organisation providing the majority of early warning systems was from local government (52%) and the media (39%). Early warning systems from Non-Governmental Organisations accounted for just over 1%. This is supported by the KIIs in which all

three groups stated that it was the government's role to provide the early warning system on the *chars* as they have the capacity and ministries to fulfil this role. The Disaster Management Bureau of Bangladesh works in partnership with the Flood Forecasting and Warning Centre and the Bangladesh Meteorological Department to distribute information specifically for flooding, the most common problem on the *chars*. There were issues raised in the KIIs of the information not being prompt enough to give adequate time for char dwellers to prepare. During KIIs, interviewees indicated CARE had previously provided DRR equipment, including mikes for EWSs, in some of the working areas however this was mentioned rarely by the survey participants. This may be because survey participants did not know CARE provided the equipment.

Some KIIs felt that there was not a high demand for early warning systems as the hazards which impact the *chars* – flooding, erosion and extreme cold – were slow onset hazards which participants were warned of through simple observation, such as rising river levels and dropping temperatures.

CLP does not directly give out early warnings to our households but the intervention area still scored higher than the control group. This may be because CLP's work with local government and NGOs has created stronger communication links between *chars* and the mainland.

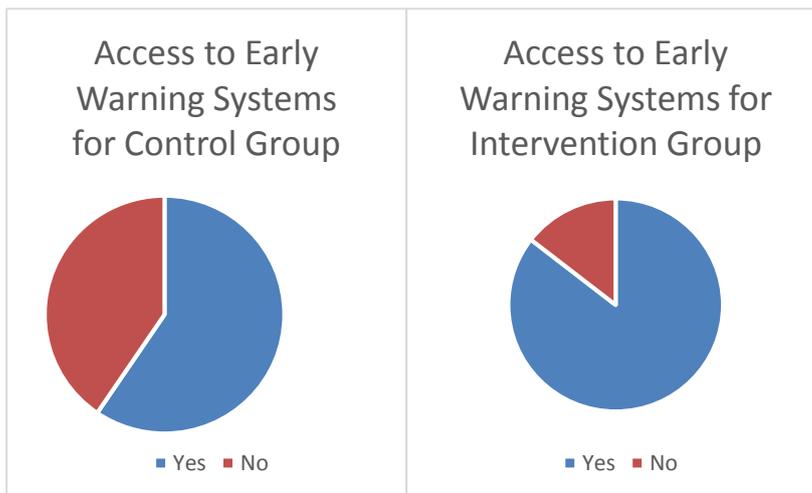


Figure 10. Access to Early Warning Systems in control group compared to intervention group

## 5. What do char dwellers know about the hazards that impact them and how are they educated about them?

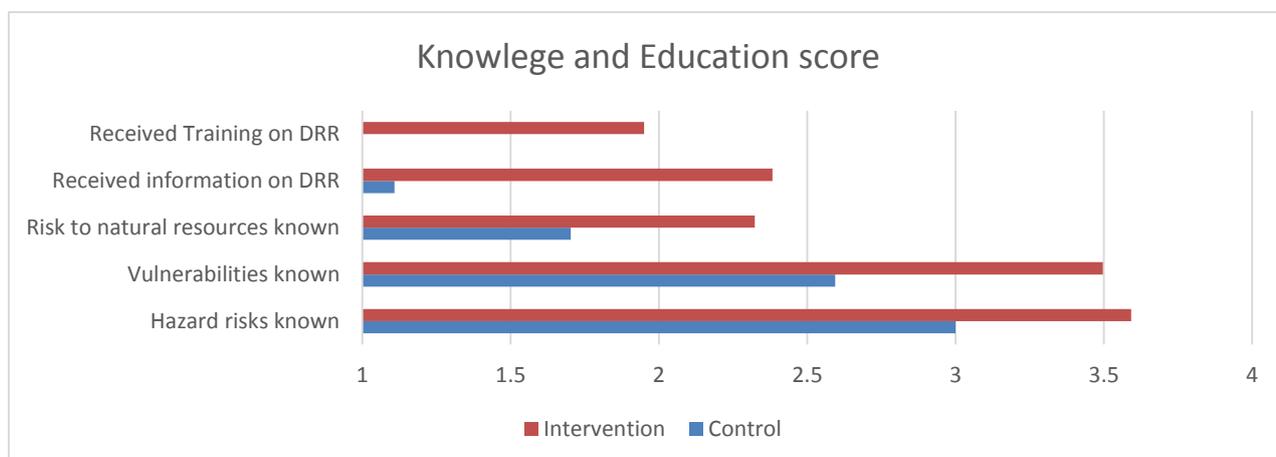


Figure 11. Knowledge and Education scores of intervention group and control

### 5.1 Knowledge of Hazard Risks and Vulnerabilities

To create an appropriate response plan you need to understand what type of hazards are likely to impact you and how. Although the intervention group still scored higher (3.50), the control group scored highest in the category of “Hazard risks known” (3.00). This shows that communities in the control area have a relatively good understanding of what type of hazards impact them. Flood was the hazard discussed the most (93%) in the questionnaires along with soil erosion (71%) and cyclones/storms (61%).

Both groups had a relatively good understanding of vulnerabilities. In the CLP intervention area, households mentioned significantly more about specific vulnerable persons such as disabled, elderly and pregnant women. In both categories, households saw the most common reason for vulnerability as having low income and a lack of food.

Having knowledge of vulnerabilities and hazard risks is important; however, you also need to have the resources to make preparations for the hazard and/or know how to prepare for them. CLP-supported households are able to prepare and they ensure that vulnerable persons are included in those preparations.

### 5.2 Received information on DRR

Participants in the intervention area scored higher (2.38) than the control group households, which rarely received any information on how to prepare for disasters (score of 1.11). It was found that 71% of survey participants in the intervention group received information on disaster preparedness. This statistic jumps to 94.6% when only looking at the survey results of women. This is complementary to the statistic that 95.2% of information was received from CLP showing that the CLP intervention is the reason for this change in disaster resilience knowledge, as the CLP core support package is focussed on women.

CLP distributes information through its social development project which has a module on disaster preparedness. Other group meetings including the Village Development Committees (VDCs) are also ways in which information on disaster preparedness is disseminated.

CARE, with its Shouhardo programme, is mentioned frequently in the KIIs by the Upazila Chairman and the IMO PMs, but less so in the questionnaires. It may be that survey participants, knowing that the survey was being performed for CLP, told the interviewer what he or she wanted to hear.

A form of disaster preparedness information exchange mentioned by survey participants was through passing down indigenous knowledge from generation to generation. It is crucial to encourage this practice as often this type of information is the most appropriate for the location.

### **5.3 Received training on DRR**

No household in the control group received any training compared to households in the intervention. In the intervention group, 42.5% participants received training on disaster preparedness, with 87.5% of women receiving training. In the KIIs, training households in how to prepare for disasters was seen as role which NGOs should fulfil rather than government. This supports the idea that any single organisation (whether government or non-government) should not attempt to meet all the disaster resilience needs of a community. Organisations should focus on one aspect, or a limited range, which would cause activities to be more focused and implemented to a higher standard.

It was found that a lot of the answers given for “Received training on DRR” overlapped with the previous category of “Received information on DRR”. This could be addressed in future questionnaires with a clearer definition on what we mean by ‘receiving information’ and what we mean by ‘receiving training’.

KII respondents mentioned that training in disaster preparedness was given by CLP to local government. This may not directly create disaster resilience in the community but creates an enabling environment for DRR work to be carried out.

It was also mentioned in the KIIs that disaster response volunteers were trained in communities to help in the wake of a disaster. This was not mentioned by survey participants, indicating that this policy may not be being implemented effectively (or at all).

## 6. How is Disaster Resilience being governed and assessed on the chars?

### 6.1 Governance

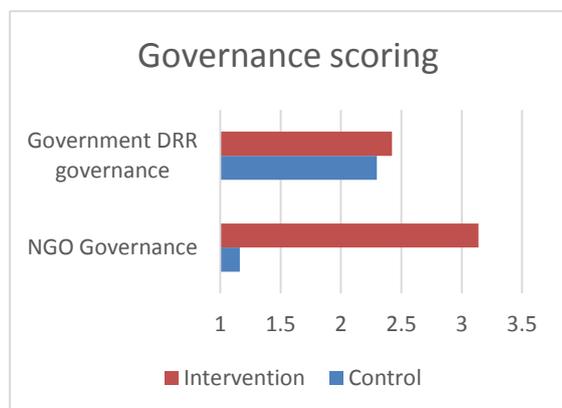


Figure 12. Governance scoring of intervention group compared to control

#### 6.1.1 Government and NGO scoring

For a community to score highly in the governance theme of disaster resilience, both NGOs and local government need to be doing more than one type of activity addressing disaster risk reduction in the geographical area. This is to reflect that they not only have policies to improve the disaster resilience of the communities but also carrying out a diversity of activities.

When looking at the government's DRR governance score it can be seen that the scores are very similar, with intervention groups scoring marginally more than their control group counterparts. However when looking at

the work of NGOs, participants in the control area score very poorly, with very little work done by NGOs. The only work that was done in the control area was performed by CARE through Shouhardo.

In the Intervention area, 98% of households identified CLP as an organisation that was carrying out disaster risk reduction activities in the area. CARE was the second highest-mentioned organisation in the intervention area, with 17% of participants mentioning them. Other organisations mentioned doing DRR work in the intervention area included Rangpur Dinajpur Rural Service (RDRS), Muslim Aid and the World Food Programme (WFP). The fact that there were more types of organisations working in the intervention area compared to the control area, even if CLP wasn't there, suggests that the intervention area, Kurigram, had more general support from NGOs compared to the control area, Tangail.

Community involvement in the creation of DRR policies was mixed. In the survey, participants answered that they always had input in the disaster resilience activities. However this was expected, as it is unlikely they would know about activities which did not have community involvement. Some KIIs from local government felt that it was difficult to include input from "victims". It is important that CLP carries on getting input from the communities as it creates ownership of the outputs increasing the chance of sustainability.

#### 6.1.2 National Policies

Bangladesh has a number of policies at the national level to implement disaster risk reduction activities in response to the Hyogo framework. The National Plan for Disaster Management (2010-2015) (NPDM) and the Bangladesh Climate Change Strategy Paper 2009 (BCCSP) were both only recently put into action. A main part of the NPDM was the creation of Disaster Preparation / Emergency Response (DPER) Committees. These DPER committees work at multiple levels from the National level all the way down to the Union Parishad level. Within survey participants in the intervention area, 36.5% said that there was a DPER committee working with their community; no-one in the control area said this. Each of the Upazila chairman interviewed ran their DPER committee at the Upazila level and stated that they were running at full capacity. However, the

survey responses do not reflect this. CLP also gives training to government staff at the Union Parishad (UP) level which includes disaster preparedness modules. It is important that this training is continued and that DPER committees are fully functioning and are working with communities on the chars.

## 6.2 Risk Assessment

Risk assessment was judged by a question asking what risk assessment had been carried out, who had performed it and was there community participation. When asked what type of risk assessment survey participants were involved in, the only type mentioned was social mapping of vulnerable areas in the villages. The majority of assessments (98%) were carried out during CLP social development programme with a small proportion (2%) by CARE through their Shouhardo programme. The CLP assessment is the initial step of the Social Development training which uses Participatory Rural Appraisal techniques to perform local hazard and vulnerability mapping.

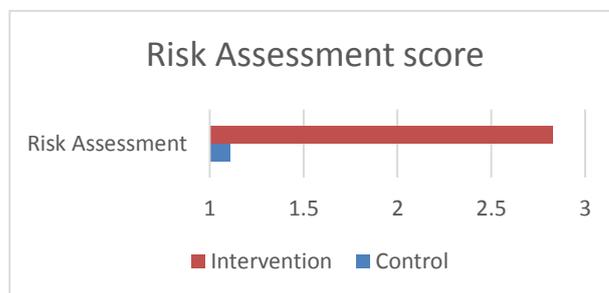


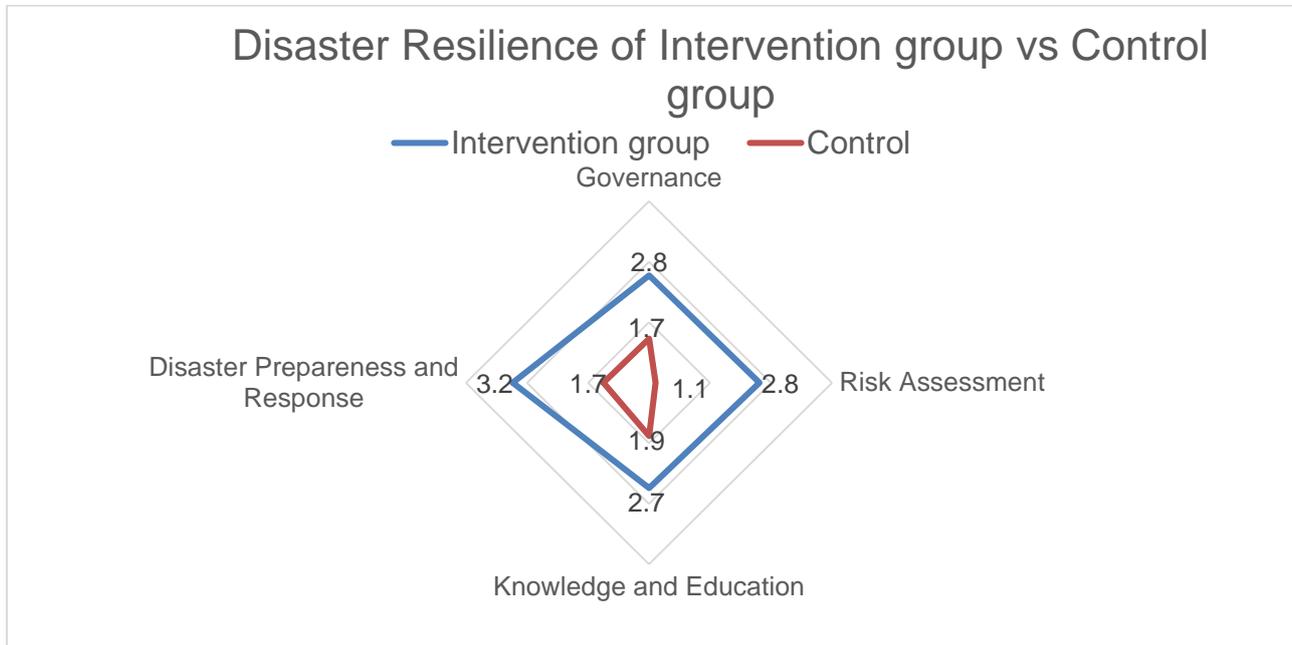
Figure 13. Risk Assessment score of intervention group compared to control

The lack of other risk assessments being mentioned may be a reflection of a lack of community involvement; during the KIIs, other assessments were discussed. For instance when CLP first came to the *chars* it carried out hazard and vulnerability assessments to identify areas of high priority. This assessment was carried out in 2004 and so the participants may have forgotten or, more likely, migrated to the area only after it had been carried out.

Damage assessments after a disaster struck were the main type of assessment discussed in the KIIs. These assessments would be carried out by the NGOs with all the information being sent to the local government's DPER. Each organisation's role appeared to be understood, however, some Upazila chairmen stated that sometimes NGO reporting was poor, creating problems in coordination. NGO KIIs on the other hand indicated that sometimes lists of vulnerable persons who had been impacted by the disaster were changed by local government to supporters of the current political party in power. The breakdown in communication is related to the recently created disaster management policies which both parties will need to adjust to.

## 7. Disaster Resilience Diamonds

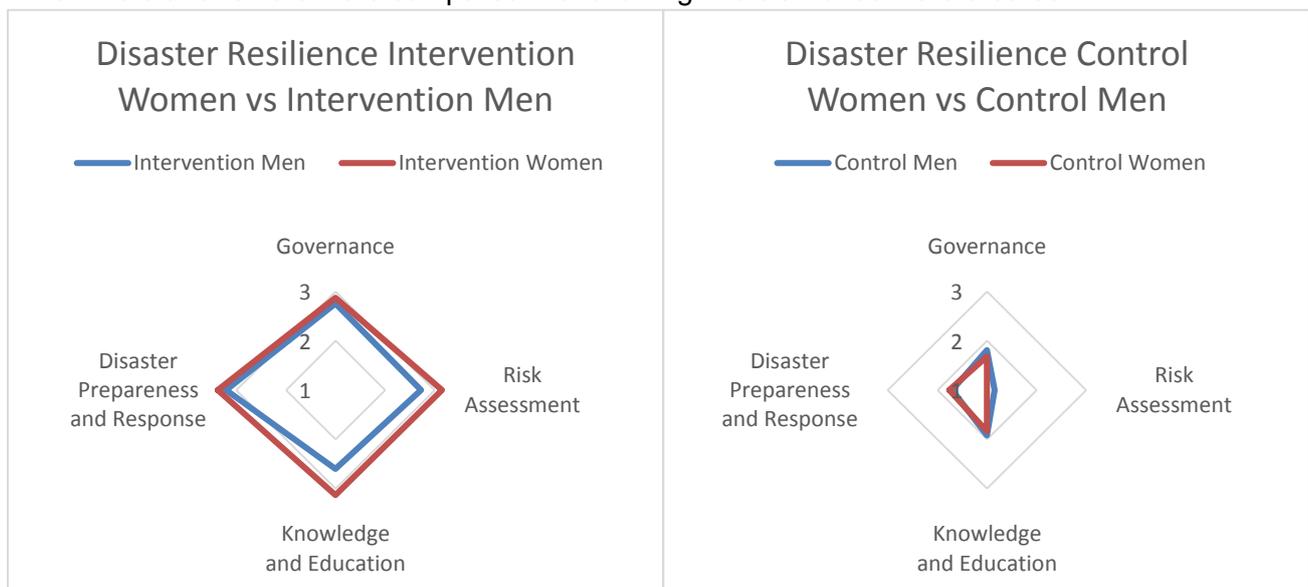
After scoring the data collected from households into themes, the following graph was created showing the disaster resilience of households which have been supported by the CLP compared to the control group which has had no intervention:



**Figure 14. Disaster Resilience of Intervention Group vs Control**

It can be seen that in all four thematic areas the intervention group scores higher than the control. Disaster resilience is at a similar level in each of the four theme areas except with the Disaster Preparedness and Response, intervention communities scored slightly greater and the Risk Assessment score of the control group communities was significantly lower. This shows quantitatively that the interventions that CLP are carrying out on the *chars* are significantly improving the disaster resilience of communities on the *chars*.

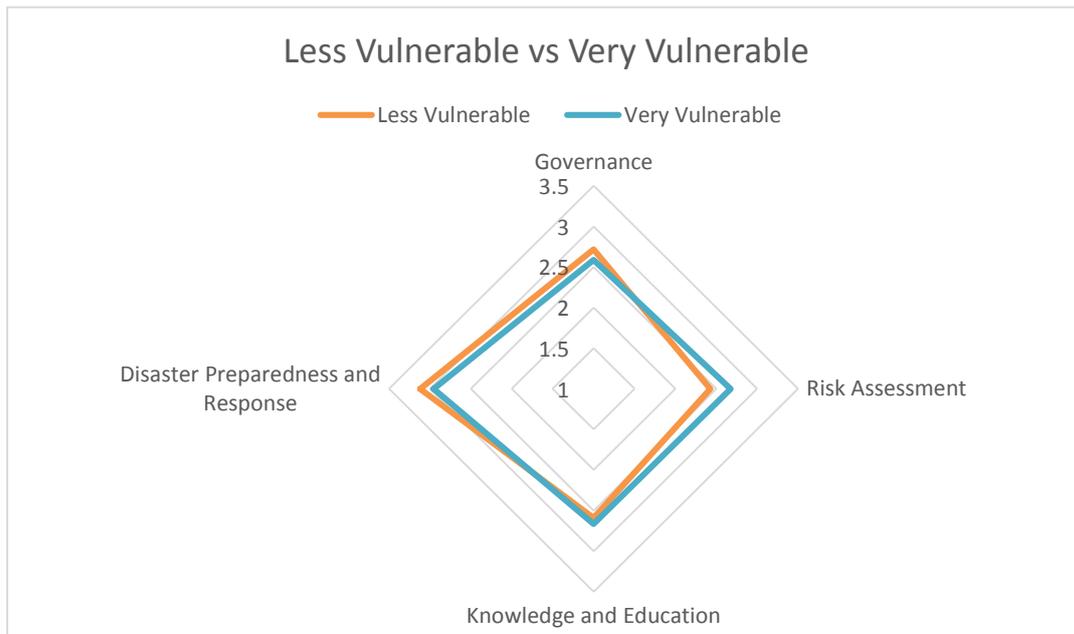
When male and female were compared the following two diamonds were created:



**Figure 15. Disaster resilience of men and women in different groups**

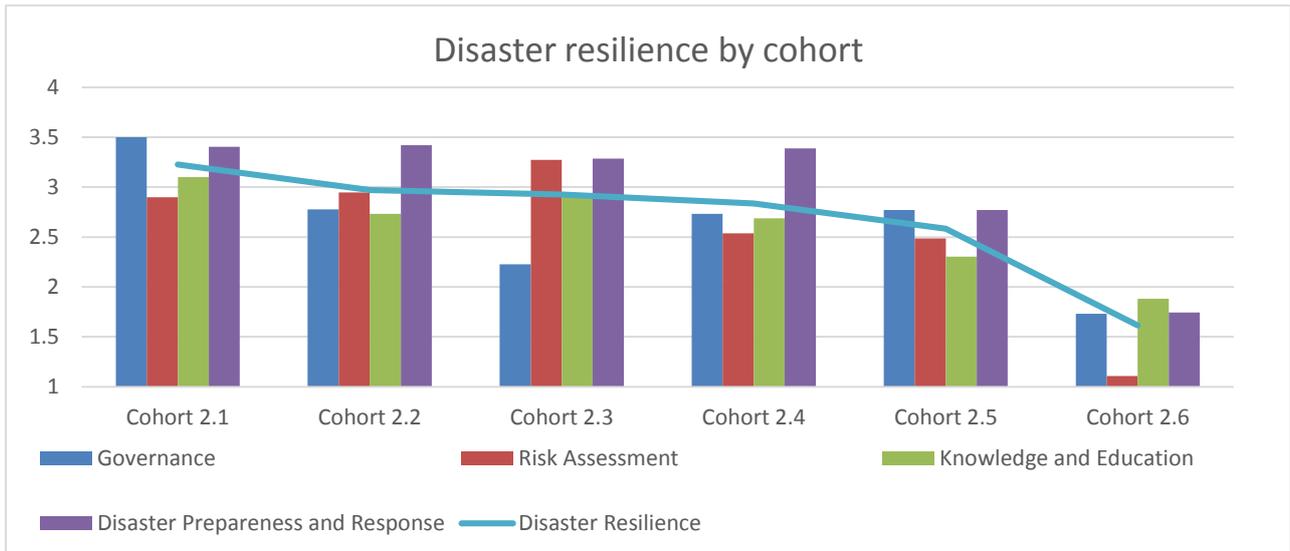
As can be seen in the graphs in the intervention group, women have greater resilience than men whereas in the control group the men have marginally more resilience than women. This shows that not only has CLP improved the resilience of the community but also empowered women in the process. One of CLP's core outputs is "Enhanced status of females and girls". This result shows that DRR training and support helps achieve this output. With more resilience to disasters and knowledge in how to respond to them, females will play a greater role in the response and will grow in status in the household.

When villages classified as LVVs were compared to VVVs the following graph was produced:



**Figure 16. Disaster resilience of Less Vulnerable Villages compared with Very Vulnerable Villages**

The resilience of households are very similar. VVVs scored marginally higher in the risk assessment theme and the LVVs scored marginally higher in the Disaster preparedness and Response as well as the Governance themes. This was a surprising find. It was predicted that communities that are very vulnerable to hazards would be more regularly hit by disasters which would reduce their resilience. Instead these villages are able to sustain the same level of disaster resilience at the community level.



**Figure 17. Disaster resilience by cohort**

Figure 17 demonstrates the resilience of participants split into cohorts. The highest resilience scores are in cohort 2.1 and 2.2. It shows that instead of households losing disaster resilience after the CLP support package ends, disaster resilience sustains and even grows. This may be from spill over effect of being in villages which are in close proximity to villages which have been supported by the CLP package. Men are also learning from the women about disaster resilience and as they learn the whole community's resilience increases.

Participants in Cohort 2.5 were just starting to be supported by the CLP package when surveyed and so not all core households had received plinths or completed the CLP social development course. Even so their resilience is still significantly greater than the control group although is not as high as the resilience of communities which have completed the CLP support package.

## 8. Conclusion

### 8.1 Key Findings

#### *CLP has improved the disaster resilience of communities*

The disaster resilience of communities in the intervention group is significantly greater in all four themes of Disaster Preparedness and Response; Knowledge and Education; Risk Assessment; and Governance. When looking at the resilience of earlier cohorts compared to later cohorts, resilience does not reduce after the CLP support package has ended and instead sustains, appearing even to steadily grow.

#### *Women's disaster resilience is greater than men after the CLP support package*

The disaster resilience of women in the control group is less than the men. During the CLP support package the disaster resilience of both men and women grow but more so for women, meaning that after the CLP support package, disaster resilience was greater in women than men. Specifically in the knowledge and education theme they out-scored their male counterparts. The overall resilience of communities carried on growing after the CLP support package. This is partly from the transfer of information from women to men.

One of CLP's core outputs is "Enhanced status of females and girls". This finding supports one of CLP's core outputs, which is to enhance the status of females and girls. With more resilience to disasters and knowledge in how to respond to disasters, females will play a greater role in the response and will grow in status in the household.

#### *Allocation of Roles and Partnerships*

It was found in the KIIs that all three groups (CLP office staff; IMO staff; and Local Government) understood what roles government and NGOs have to play in building disaster resilience of communities. The Government's role was to coordinate the response when a disaster happened and give out early warnings to an oncoming disaster, with NGOs performing the assessments and relaying the information back. It was also the NGOs' role to perform any training or distributing of information on disaster preparedness.

This allocation of roles is a sensible approach to building disaster resilience as it means each task is more focused and applied to a higher standard. It is important that all tasks are allocated to an organisation, however, no actors appeared to be conducting any regular risk assessments.

#### *Plinths are vital for sheltering from floods*

Access to emergency disaster shelter was greatly improved after the CLP support package. Having a house raised on a plinth meant that households did not need to migrate during flooding. Cattle were also kept on the plinth during this time and so greatly improved the household's livelihood resilience. Having assets which are resilient to shocks and stresses will greatly improve the sustainability of CLP's interventions. This study decisively shows that CLP's plinth-raising is achieving its goal of reducing vulnerability.

#### *National policies*

There have been national policies which have been introduced in the last few years. Both NGOs and Government found difficulties in the reporting process during damage assessments. Key informants reported that the process of relaying information will become smoother as stakeholders gain more experience of the systems.

### ***Lack of assessment***

There appeared to be a lack of regular hazard and vulnerability assessments on the chars. This may be from local government and NGOS believing households already have a good understanding of the local hazards. With climate change increasing the magnitude and frequency of hazards, it is important that assessments are carried out more regularly as hazards change. Assessment is regularly an aspect of DRR that is overlooked. It will be CLP's responsibility to find the appropriate stakeholder to perform this task as it is not currently under CLP's mandate and, with CLP finishing in 2016, unlikely to be added.

## **8.2 Recommendations**

The following recommendations are made with regards to operations in the CLP:

- Continue the current general approach of building disaster resilience of communities.
- Partnerships need to encourage stakeholders working in the *chars* to perform risk assessments on the *chars*, particularly for hazards and vulnerabilities. Involvement of the CLP's VDCs could be an effective way to approach this, as they have the local knowledge of what hazards are impacting their area and where/who is vulnerable. This would create ownership of the assessment by the VDC as well as increasing awareness within the community (Haneef et al, 2014).
- Distribution of Bangladesh's National Plan for Disaster Management and the Bangladesh Climate Change Strategy and Action Plan to CLP's Implementing Organisations (IMOs) and local government to increase awareness of these policies.

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## Annex 1: Household Questionnaire

### Chars Livelihoods Programme-2 Household Questionnaire for Disaster Resilience Study

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
DD MM YYYY

CLP Phase	1=CLP1 2=CLP2
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ATP Phase:	1, 2, 3, 4, 5, 6
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	NAME	CODE
DISTRICT:		
UNION:		
IMO:		

	NAME	CODE
UPAZILA:		
VILLAGE:		
HH HEAD:		

BENEFICIARY NAME:	<b>BenName</b>
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SPOUSE PRESENT:	<b>SpoPre</b> (1 = Yes, 2 = No, 3 = NA)
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Religion:	<b>Reli</b> (1=Islam, 2=Hindu, 3=Buddhist, 4=Christian, 5=Others)
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**PLEASE ASK THE PERMISSION OF THE RESPONDENT TO ASK A SERIES OF QUESTIONS RELATED TO THEIR HOUSEHOLD. INFORM THAT AT ANY TIME THEY CAN REFUSE TO ANSWER A QUESTION IF THEY WISH.**

**It is the responsibility of the Enumerator to treat all respondents with respect and to complete this questionnaire faithfully and accurately. Permission should be sought from the respondents to ask the following questions and to enter the household (if appropriate). If deemed necessary, the Enumerator must revisit any household if the data collected is considered incomplete. At no time should the Enumerator accept anything from any household. Non-compliance with these conditions will be considered gross mis-conduct.**

**It is the responsibility of the Field Supervisor to ensure the quality of the Enumerators work and conduct. This should be achieved by both spot check visits during interviews and by thoroughly checking every questionnaire submitted by the Enumerators they are responsible for. At no time should the Field Supervisor accept anything from any household. Non-compliance with these conditions will be considered gross mis-conduct.**

**It is the responsibility of the Data Entry Clerk to ensure accurate and high quality data entry.**

Enumerator	Field Supervision Check	Data Entry Check
Name:	Name:	Name:
Date:	Date:	Date:

**Governance**

<b>1. What local NGOs/CBOs currently work in your community that engage in disaster preparedness activities? Was the community involved?</b>			
NGO/CBO	Activity	Community involved?	Was it before, during or after CLP?
1a	1b	1c	1d

<b>2. What disaster preparedness activities has the local government carried out in your community? Was the community involved?</b>		
Activity	Community involved?	Was it before, during or after CLP?
2a	2b	2c

**Risk Assessment**

3.	<b>Has a Hazard Risk or Vulnerability Assessment been carried out with your community?</b>	1=yes 2=no
If yes, fill out following table		
Who performed the assessment	How was the assessment carried out? How were you involved?	Was it before, during or after CLP?
3a	3b	

**Knowledge and Education**

4.	What risks do <b>households</b> face and how do they prepare for them and react to them?	
Risk	Preparation for hazard	Reaction for hazard
5a	5b	5c

5.	<b>What makes a household more vulnerable to hazards?</b>

6.	<b>What natural resources are available on the chars and what risks are associated with them?</b>
----	---------------------------------------------------------------------------------------------------

Natural Resource	Risks associated
7a	7b

7.	<b>Have you received information about preparing for disasters?</b>		1=yes 2=no	
If yes, fill out following table:				
Who provided the information?	What type of information was provided?	In what form was the information?	Was it before, during or after CLP?	
8a	8b	8c		
8.	<b>Have you received training in preparing for a disaster and/or reducing the risk of hazards?</b>		1=yes 2=no	
If yes, fill out the following table:				
Who provided the training?	What did the training prepare you for?		Was it before, during or after CLP?	
9a	9b			

**Disaster preparedness and response**

9.	<b>Is there a disaster preparedness/emergency response committee present?</b>	1=yes 2=no
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10.	<b>How does your community respond to a disaster? Who leads the response?</b>

11.	<b>How is your community warned of a potential disaster occurring? Are there any early warning systems in place?</b>

12.	<b>Is there emergency shelter available for people within the community? If yes, in what form?</b>

13.	<b>Is there emergency shelter available for livestock within the community? If yes, in what form?</b>

14.	<b>What emergency supplies are prepared for disasters by the community?</b>

15.	<b>What support/aid is available from agencies for relief after a disaster? How do you access it?</b>		
Who supplies relief?	What type of relief do they give?	How often do they give relief out?	How helpful is it?

Any extra notes

## Annex 2: Scoring of household questionnaires

### Question 1

- 1- No work done
  - 2- 1 activity by NGO
  - 3- multiple activities by one NGO or 1 activity done by 2 or more NGOs
  - 4- multiple activities by multiple NGOs
  - 5- More than 4 activities done by 2 or more NGOs
- (+3 if Government is mentioned here but not in question 2)

### Question 2

- 1- No work done
- 2-
- 3- One activity done by government
- 4-
- 5- Multiple activities done by government

### Question 3

- 1- No work done
- 2-
- 3- One assessment carried out
- 4-
- 5- Multiple assessments carried out

### Question 4

- 1- No risk known
- 2- 1 risk known, little prep or reaction known
- 3- 2 risks known, a couple of preps/reactions known
- 4- 3-4 risks known, lots of prep and reaction known
- 5- More than 5 risks known with multiple prep and reaction known

### Question 5

- 1- No vulnerabilities known
- 2- 1 vulnerability known
- 3- 2-3 vulnerabilities known
- 4- 4-5 vulnerabilities known
- 5- 6 or more vulnerabilities known

### Question 6

- 1- No Natural hazard identified at risk to hazards
- 2- One Natural hazard identified at risk to hazards
- 3- Two Natural hazards identified at risk to hazards
- 4- Three Natural hazards identified at risk to hazards
- 5- Four or more Natural hazards identified at risk to hazards

### Question 7

- 1- No information received
- 2- Information received covering one type of prep
- 3- Information received covering two or more types of prep
- 4- Information received covering two or more types of prep in two or more forms of media

- 5- Information received covering two or more types of prep in two or more forms of media from two or more sources

#### **Question 8**

- 1- No training received
- 2- Training received covering one type of prep
- 3- Training received covering two types of prep
- 4- Training received covering two types of prep from two or more organisations
- 5- Training received covering two or more types of prep in two or more forms of media from two or more sources

#### **Question 9**

- 1- No DPER
- 2-
- 3-
- 4-
- 5- DPER present

#### **Question 10**

- 1- No work done
- 2- One types of response by community
- 3- Two types of response by community
- 4- Three types of response by community
- 5- Four types of response by community

#### **Question 11**

- 1- No access to EWS
- 2- One type of EWS from one source
- 3- Two or more types of EWS from one source
- 4- Two or more sources give one type of EWS
- 5- Access to two or more types of EWS from two or more sources

#### **Question 12**

- 1- No disaster shelter
- 2- Raised communal area nearby (code 4,5)
- 3- Multiple areas excluding CLP Raised plinth
- 4- Raised Plinth by CLP (code3)
- 5- Multiple areas mentioned including CLP

#### **Question 13**

- 1- No disaster shelter for cattle
- 2- Raised communal area nearby (code 4,5)
- 3- Multiple areas excluding CLP Raised plinth
- 4- Raised Plinth by CLP (code3)
- 5- Multiple areas mentioned including CLP

#### **Question 14**

- 1- No preparation
- 2- One form of preparation
- 3- Two forms of preparation
- 4- Three forms of preparation

5- Four or more forms of preparation

**Question 15**

- 1- No Relief
- 2- One form of relief from one organisation
- 3- Two forms of relief from one organisation
- 4- Two organisations giving one type of relief
- 5- Multiple forms of relief from multiple organisations

## Annex 3: Characteristics of Disaster Resilient Community

### 9.1 Thematic area: Governance

Component of Resilience	Characteristic of a disaster-resilient community
1. DRR policy, planning, priorities, and political commitment.	<p>1.1. Shared vision of a prepared and resilient community.</p> <p>1.2. Consensus view of risks faced, risk management approach, specific actions to be taken and targets to be met</p> <p>1.3. Vision and DRR plans informed by understanding of underlying causes of vulnerability and other factors outside community's control.</p> <p>1.4. Community takes long-term perspective, focusing on outcomes and impact of DRR.</p> <p>1.5. Committed, effective and accountable community leadership of DRR planning and implementation.</p> <p>1.6. Community DRR (and DP) plans, developed through participatory processes, put into operation, and updated periodically.</p>
2. Legal and regulatory systems	<p>2.1. Community understands relevant legislation, regulations and procedures, and their importance.</p> <p>2.2. Community aware of its rights and the legal obligations of government and other stakeholders to provide protection</p>
3. Integration with development policies and planning	<p>3.1. Community DRR seen by all local stakeholders as integral part of plans and actions to achieve wider community goals (e.g. poverty alleviation, quality of life).</p>
4. Integration with emergency response and recovery	<p>4.1. Community and other local level actors in sustainable development and DRR engage in joint planning with community and local-level emergency teams and structures.</p>
5. Institutional mechanisms, capacities and structures; allocation of responsibilities	<p>5.1. Representative community organisations dedicated to DRR/ DRM.</p> <p>5.2. Local NGOs, CBOs and communities of interest engaged with other issues capable of supporting DRR and response.</p> <p>5.3. Responsibilities, resources, etc., defined in community disaster plans.</p> <p>5.4. Shared understanding among all local stakeholders regarding DRR responsibilities, authority and decision making.</p> <p>5.5. Community-managed funds and other material resources for DRR and disaster recovery.</p> <p>5.6. Access to government and other funding and resources for DRR and recovery.</p>
6. Partnerships	<p>6.1. Local stakeholders committed to genuine partnerships (with open and shared principles of collaboration, high levels of trust).</p> <p>6.2. Clear, agreed and stable DRR partnerships between local stakeholder groups and organisations (communities and CBOs with local authorities, NGOs, businesses, etc.).</p> <p>6.3. Processes are community led (supported by external agencies).</p> <p>6.4. Local capacity and enthusiasm to promote DRR and scale up activities (through community external actor partnerships).</p>

Component of Resilience	Characteristic of a disaster-resilient community
	6.5. Community and local groups/ organisations have capacity to recruit, train, support and motivate community volunteers for DRR, and work together to do so.
7. Accountability and community participation	7.1. Devolved DRR structures facilitate community participation. 7.2. Access to information on local government plans, structures, etc. 7.3. Trust within community and between community and external agencies. 7.4. Capacity to challenge and lobby external agencies on DRR plans, priorities, actions that may have an impact on risk. 7.5. Participatory M&E systems to assess resilience and progress in DRR. 7.6. Inclusion/representation of vulnerable groups in community decision making and management of DRR. 7.7. High level of volunteerism in DRR activities.

## 9.2 Thematic Area: Risk Assessment

Component of Resilience	Characteristic of a disaster resilient community
1. Hazards/risk data and assessment	1.1. Community hazard/risk assessments carried out which provide comprehensive picture of all major hazards and risks facing community (and potential risks). 1.2. Hazard/risk assessment is participatory process including representatives of all sections of community and sources of expertise. 1.3. Assessment findings shared, discussed, understood and agreed among all stakeholders, and feed into community disaster planning. 1.4. Findings made available to all interested parties (within and outside community, locally and at higher levels) and feed into their disaster planning. 1.5. Ongoing monitoring of hazards and risks and updating of assessments. 1.6. Skills and capacity to carry out community hazard and risk assessments maintained through support and training.
2. Vulnerability/capacity and impact data and assessment	2.1. Community vulnerability and capacity assessments (VCAs) carried out which provide comprehensive picture of vulnerabilities and capacities. 2.2. VCA is participatory process including representatives of all vulnerable groups. 2.3. Assessment findings shared, discussed, understood and agreed among all stakeholders and feed into community disaster planning. 2.4. VCAs used to create baselines at start of community DRR projects. 2.5. Findings made available to all interested parties (within and outside community) and feed into their disaster and development planning. 2.6. Ongoing monitoring of vulnerability and updating of assessments.

Component of Resilience	Characteristic of a disaster resilient community
	2.7. Skills and capacity to carry out community VCA maintained through support and training.
3. Scientific and technical capacities and innovation	3.1. Community members and organisations trained in hazards, risk and VCA techniques and supported to carry out assessments. 3.2. Use of indigenous knowledge and local perceptions of risk as well as other scientific knowledge, data and assessment methods.

### 9.3 Thematic Area 3: Knowledge and Education

Component of Resilience	Characteristic of a disaster resilient community
1. Public awareness, knowledge and skills	1.1. Shared vision of a prepared and resilient community. 1.2. Whole community has been exposed to/taken part in ongoing awareness campaigns, which are geared to community needs and capacities (e.g. literacy levels). 1.3. Community knowledge of hazards, vulnerability, risks and risk reduction actions sufficient for effective action by community (alone and in collaboration with other stakeholders). 1.4. Possession (by individuals and across community) of appropriate technical and organisational knowledge and skills for DRR and response actions at local level (including indigenous technical knowledge, coping strategies, livelihood strategies). 1.5. Open debate within community resulting in agreements about problems, solutions, priorities, etc.
2. Information management and sharing (more formal)	2.1. Information on risk, vulnerability, disaster management practices, etc., shared among those at risk. 2.2. Community disaster plans publicly available and widely understood. 2.3. All sections of community know about facilities/services/skills available pre-, during and post-emergency, and how to access these. 2.4. Content and methods of communicating information developed with communities (i.e. 'communication' not 'information dissemination'). 2.5. Maximum deployment of indigenous, traditional, informal communications channels. 2.6. Impact of information materials and communication strategies evaluated.
3. Education and training	3.1. Local schools provide education in DRR for children through curriculum and where appropriate extra-curricular activities. 3.2. DRR/DRM and other training addresses priorities identified by community and based on community assessment of risks, vulnerabilities and associated problems. 3.3. Community members and organisations trained in relevant skills for DRR and DP (e.g. hazard-risk vulnerability assessment, community DRM planning, search and rescue, first aid, management of emergency shelters, needs assessment, relief distribution, and fire-fighting).

Component of Resilience	Characteristic of a disaster resilient community
	<p>3.4. Householders and builders trained in safe construction and retrofitting techniques, and other practical steps to protect houses and property.</p> <p>3.5. (rural) Community members skilled or trained in appropriate agricultural, land use, water management and environmental management practices.</p> <p>3.6. Community experience of coping in previous events/crises, or knowledge of how this was done, used in education and training.</p>
4. Cultures, attitudes, motivation	<p>4.1. Shared community values, aspirations and goals (and positive sense of the future, commitment to community as a whole, agreement of community goals).</p> <p>4.2. Cultural attitudes and values (e.g. expectations of help/self-sufficiency, religious/ideological views) enable communities to adapt to and recover from shocks and stresses.</p> <p>4.3. Informed, realistic attitudes towards risk and risk management.</p> <p>4.4. Justifiable confidence about safety and capacities of self-reliance.</p> <p>4.5. Possession of (or access to) the information, resources and support desired/needed to ensure safety.</p> <p>4.6. Feelings of personal responsibility for preparing for disasters and reducing disaster risk.</p> <p>4.7. Safer behaviour as result of awareness raising.</p>
5. Learning and research	<p>5.1. Documentation, use and adaptation of indigenous technical knowledge and coping strategies.</p> <p>5.2. Participatory M&amp;E systems to assess resilience and progress in DRR.</p>

## 9.4 Thematic Area 4: Risk Management and Vulnerability Reduction

Component of Resilience	Characteristic of a disaster resilient community
1. Environmental and natural resource management	<p>1.1. Community understanding of characteristics and functioning of local natural environment and ecosystems (e.g. drainage, watersheds, slope and soil characteristics) and the potential risks associated with these natural features and human interventions that affect them.</p> <p>1.2. Adoption of sustainable environmental management practices that reduce hazard risk.</p> <p>1.3. Preservation of biodiversity (e.g. through community-managed seed banks, with equitable distribution system).</p> <p>1.4. Preservation and application of indigenous knowledge and appropriate technologies relevant to environmental management.</p> <p>1.5. Access to community-managed common property resources that can support coping and livelihood strategies in normal times and during crises.</p>
2. Health and well being (including human capital)	<p>2.1. Physical ability to labour and good health maintained in normal times through adequate food and nutrition, hygiene and health care.</p> <p>2.2. High levels of personal security and freedom from physical and psychological threats.</p>

Component of Resilience	Characteristic of a disaster resilient community
	<p>2.3. Food supplies and nutritional status secure (e.g. through reserve stocks of grain and other staple foods managed by communities, with equitable distribution system during food crises).</p> <p>2.4. Access to sufficient quantity and quality of water for domestic needs during crises.</p> <p>2.5. Awareness of means of staying healthy (e.g. hygiene, sanitation, nutrition, water treatment) and of life-protecting/saving measures, and possession of appropriate skills.</p> <p>2.6. Community structures and culture support self-confidence and can assist management of psychological consequences of disasters (trauma, PTSD).</p> <p>2.7. Community health care facilities and health workers, equipped and trained to respond to physical and mental health consequences of disasters and lesser hazard events, and supported by access to emergency health services, medicines, etc.</p>
3. Sustainable livelihoods	<p>3.1. High level of local economic activity and employment (including among vulnerable groups); stability in economic activity and employment levels.</p> <p>3.2. Equitable distribution of wealth and livelihood assets in community.</p> <p>3.3. Livelihood diversification (household and community level), including on-farm and off-farm activities in rural areas.</p> <p>3.4. Fewer people engaged in unsafe livelihood activities (e.g. small-scale mining) or hazard-vulnerable activities (e.g. rainfed agriculture in drought prone locations).</p> <p>3.5. Adoption of hazard-resistant agricultural practices (e.g. soil and water conservation methods, cropping patterns geared to low or variable rainfall, hazard-tolerant crops) for food security.</p> <p>3.6. Small enterprises have business protection and continuity/recovery plans.</p> <p>3.7. Local trade and transport links with markets for products, labour and services protected against hazards and other external shocks.</p>
4. Social protection (including social capital)	<p>4.1. Mutual assistance systems, social networks and support mechanisms that support risk reduction directly through targeted DRR activities, indirectly through other socioeconomic development activities that reduce vulnerability, or by being capable of extending their activities to manage emergencies when these occur.</p> <p>4.2. Mutual assistance systems that cooperate with community and other formal structures dedicated to disaster management.</p> <p>4.3. Community access to basic social services (including registration for social protection and safety net services).</p> <p>4.4. Established social information and communication channels; vulnerable people not isolated.</p> <p>4.5. Collective knowledge and experience of management of previous events (hazards, crises).</p>

Component of Resilience	Characteristic of a disaster resilient community
5. Financial instruments (including financial capital)	<p>5.1. Household and community asset bases (income, savings, convertible property) sufficiently large and diverse to support crisis coping strategies.</p> <p>5.2. Costs and risks of disasters shared through collective ownership of group/ community assets.</p> <p>5.3. Existence of community/group savings and credit schemes, and/or access to micro-finance services.</p> <p>5.4. Community access to affordable insurance (covering lives, homes and other property) through insurance market or micro-finance institutions.</p> <p>5.5. Community disaster fund to implement DRR, response and recovery activities.</p> <p>5.6. Access to money transfers and remittances from household and community members working in other regions or countries.</p>
6. Physical protection; structural and technical measures (including physical capital)	<p>6.1. Community decisions and planning regarding built environment take potential natural hazard risks into account (including potential for increasing risks through interference with ecological, hydrological, geological systems) and vulnerabilities of different groups.</p> <p>6.2. Security of land ownership/tenancy rights. Low/minimal level of homelessness and landlessness.</p> <p>6.3. Safe locations: community members and facilities (homes, workplaces, public and social facilities) not exposed to hazards in high-risk areas within locality and/or relocated away from unsafe sites.</p> <p>6.4. Structural mitigation measures (embankments, flood diversion channels, water harvesting tanks, etc.) in place to protect against major hazard threats, built using local labour, skills, materials and appropriate technologies as far as possible.</p> <p>6.5. Knowledge and take-up of building codes/regulations throughout community.</p> <p>6.6. Adoption of hazard-resilient construction and maintenance practices for homes and community facilities using local labour, skills, materials and appropriate technologies as far as possible.</p> <p>6.7. Community capacities and skills to build, retrofit and maintain structures (technical and organisational).</p> <p>6.8. Adoption of physical measures to protect items of domestic property (e.g. raised internal platforms and storage as flood mitigation measure, portable stoves) and productive assets (e.g. livestock shelters).</p> <p>6.9. Adoption of short-term protective measures against impending events (e.g. emergency protection of doors and windows from cyclone winds).</p> <p>6.10. Infrastructure and public facilities to support emergency management needs (e.g. shelters, secure evacuation and emergency supply routes).</p> <p>6.11. Resilient and accessible critical facilities (e.g. health centres, hospitals, police and fire stations – in terms of structural resilience, back-up systems, etc.).</p>

Component of Resilience	Characteristic of a disaster resilient community
	<p>6.12. Resilient transport/service infrastructure and connections (roads, paths, bridges, water supplies, sanitation, power lines, communications, etc.).</p> <p>6.13. Locally owned or available transport sufficient for emergency needs (e.g. evacuation, supplies), at least in the event of seasonal hazards; transport repair capacity within community.</p>
7. Planning régimes	<p>7.1. Community decision making regarding land use and management, taking hazard risks and vulnerabilities into account. (Includes micro-zonation applied to permit/restrict land uses).</p> <p>7.2. Local (community) disaster plans feed into local government development and land use planning.</p>

## 9.5 Thematic Area 5: Disaster Preparedness and Response:

Component of resilience	Characteristic of a disaster resilient community
1. Organisational capacities and coordination	<p>1.1. Local and community DP/response capacities assessed by communities (themselves or in partnership with external agencies).</p> <p>1.2. Local organisational structures for DP/ emergency response (e.g. disaster preparedness/evacuation committees).</p> <p>1.3. Local DP/response organisations are community managed and representative.</p> <p>1.4. Roles and responsibilities of local DP/response organisations and their members clearly defined, agreed and understood.</p> <p>1.5. Emergency facilities (communications equipment, shelters, control centres, etc.) available and managed by community or its organisations on behalf of all community members.</p> <p>1.6. Sufficient number of trained organisational personnel and community members to carry out relevant tasks (e.g. communication, search and rescue, first aid, relief distribution).</p> <p>1.7. Regular training (refresher courses and new skills) provided by/for local organisations; regular practice drills, scenario exercises, etc.</p> <p>1.8. Defined and agreed co-ordination and decision-making mechanisms between community organisations and external technical experts, local authorities, NGOs, etc.</p> <p>1.9. Defined and agreed co-ordination and decision-making mechanisms with neighbouring communities/localities and their organisations.</p>
2. Early warning systems	<p>2.1. Community-based and people-centred EWS at local level.</p> <p>2.2. EWS capable of reaching whole community (via radio, TV, telephone and other communications technologies, and via community EW mechanisms such as volunteer networks).</p> <p>2.3. EW messages presented appropriately so that they are understood by all sectors of community.</p> <p>2.4. EWS provides local detail of events and takes local conditions into account.</p> <p>2.5. EWS based on community knowledge of relevant hazards and risks, warning signals and their meanings, and actions to be taken when warnings are issued.</p>

Component of resilience	Characteristic of a disaster resilient community
	<p>2.6. Community DP/response organisations capable of acting on EW messages and mobilising communities for action.</p> <p>2.7. Community trust in EWS and organisations providing EW.</p> <p>2.8. Technical resources (monitoring and communications equipment) in place, with systems and trained personnel for maintenance and operation.</p>
<p>3. Preparedness and contingency planning</p>	<p>3.1. A community DP or contingency plan exists for all major risks.</p> <p>3.2. DP/contingency plans developed through participatory methods, and understood and supported by all members of community.</p> <p>3.3. Plans co-ordinated with official emergency plans and compatible with those of other agencies.</p> <p>3.4. Roles and responsibilities of different local and external actors defined, understood and agreed – and appropriate.</p> <p>3.5. Planning process builds consensus and strengthens relationships and coordination mechanism between various stakeholders.</p> <p>3.6. Linkages (formal/informal) to technical experts, local authorities, NGOs, etc., to assist with community planning and training.</p> <p>3.7. Plans tested regularly through e.g. community drills or simulation exercises.</p> <p>3.8. Plans reviewed and updated regularly by all relevant stakeholders.</p> <p>3.9. Households and families develop their own DP plans within context of community plan.</p> <p>3.10. Local businesses develop their own continuity and recovery plans within context of community plan.</p> <p>3.11. Contingency planning informed by understanding of broader local planning provisions and facilities.</p>
<p>4. Emergency resources and infrastructure</p>	<p>4.1. Community organisations capable of managing crises and disasters, alone and/ or in partnership with other organisations.</p> <p>4.2. Safe evacuation routes identified and maintained, known to community members.</p> <p>4.3. Emergency shelters (purpose built or modified): accessible to community (distance, secure evacuation routes, no restrictions on entry) and with adequate facilities for all affected population.</p> <p>4.4. Emergency shelters for livestock.</p> <p>4.5. Secure communications infrastructure and access routes for emergency services and relief workers.</p> <p>4.6. Two-way communications systems designed to function during crises.</p> <p>4.7. Emergency supplies (buffer stocks) in place, managed by community alone or in partnership with other local organisations (incl. grain/seed banks).</p> <p>4.8. Community-managed emergency/contingency funds.</p>
<p>5. Emergency response and recovery</p>	<p>5.1. Community capacity to provide effective and timely emergency response services: e.g. search and rescue, first aid/ medical</p>

Component of resilience	Characteristic of a disaster resilient community
	<p>assistance, needs and damage assessment, relief distribution, emergency shelter, psychosocial support, road clearance.</p> <p>5.2. Community and other local agencies take lead role in co-ordinating response and recovery.</p> <p>5.3. Response and recovery actions reach all affected members of community and prioritised according to needs.</p> <p>5.4. Community psychosocial support and counselling mechanisms.</p> <p>5.5. Community knowledge of how to obtain aid and other support for relief and recovery.</p> <p>5.6. Community trust in effectiveness, equity and impartiality of relief and recovery agencies and actions.</p> <p>5.7. Community/locally led recovery planning and implementation of plans linking social, physical, economic and environmental aspects and based on maximum utilisation of local capacities and resources.</p> <p>5.8. Agreed roles, responsibilities and coordination of recovery activities (involving local and external stakeholders).</p> <p>5.9. Incorporation of DRR into community and local recovery plans.</p>
<p>6. Participation, voluntarism, accountability</p>	<p>6.1. Local leadership of development and delivery of contingency, response, recovery plans.</p> <p>6.2. Whole-community participation in development and delivery of contingency, response, recovery plans; community 'ownership' of plans and implementation structures.</p> <p>6.3. Justifiable community confidence in EW and emergency systems and its own ability to take effective action in a disaster.</p> <p>6.4. High level of community volunteerism in all aspects of preparedness, response and recovery; representative of all sections of community.</p> <p>6.5. Organised volunteer groups integrated into community, local and supra-local planning structures.</p> <p>6.6. Formal community DP/response structures capable of adapting to arrival of spontaneous/emergent groups of volunteers (from within and outside community) and integrating these into response and recovery.</p> <p>6.7. Self-help and support groups for most vulnerable (e.g. elderly, disabled).</p> <p>6.8. Mechanisms for disaster-affected people to express their views, for learning and sharing lessons from events.</p>