International Federation of the Red Cross and Red Crescent Societies

Community Based Disaster Risk Reduction study - Latin America and the Caribbean

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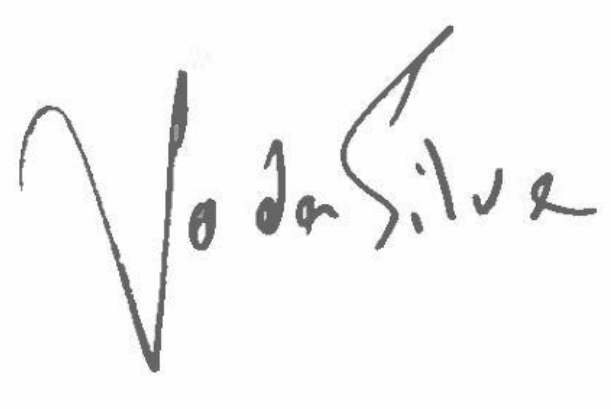

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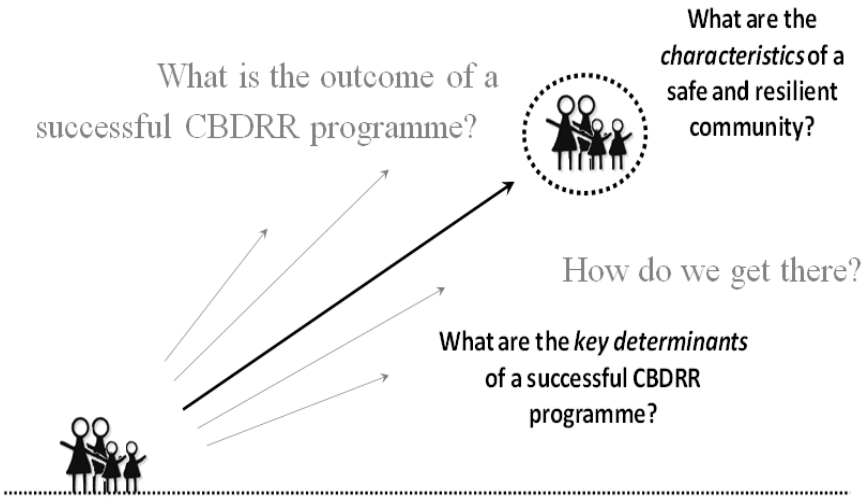
Executive summary

In a world witnessing unprecedented shocks and stresses, strengthening community resilience is recognised as an essential component of sustainable development. Having undertaken numerous community-based disaster risk reduction (CBDRR) programmes designed to strengthen community resilience, the Red Cross Red Crescent movement (RCRC) recognises that further evidence is needed in order to define resilience at a community level. This evidence will help demonstrate the desired outcome of a CBDRR programme – a safe and resilient community – and will also help to identify the factors that contribute to successful CBDRR programmes (see Figure 1 below).

Figure 1: Outcomes and pathways of CBDRR programmes



Following on from Arup International Development's (ArupID) study of RCRC CBDRR programmes implemented across South/Southeast Asia, as part of the IFRC's Tsunami Operation (TO) following the 2004 Indian Ocean tsunami, the IFRC commissioned ArupID to replicate the CBDRR study in a second region – Latin America and the Caribbean (LAC). The purpose of this LAC study was:

- To identify the *characteristics of a safe and resilient community* as well as the *key determinants of a successful CBDRR programme*, based on an analysis of programmes run in three countries in the region; and
- To determine to what extent the findings of the TO study could be considered globally applicable, and hence useful for scaling-up programming efforts.

This report details the findings of the research undertaken in 2012 in Latin America and the Caribbean, examining the ***characteristics of a safe and resilient community***.

These findings are based on a methodology which combines desk-based research (in the form of a literature review) and fieldwork (community workshops, focus group discussions and community tours). These data collection methods allowed analysis of multiple CBDRR programmes run in three countries in the LAC region: Colombia, Guatemala and Saint Lucia. (These particular countries were selected by the IFRC to represent the variation in national society characteristics and also their operational contexts.)

The literature review for the LAC region - based on the examination of six key documents and one website on the subject of community resilience - indicates that the concept of resilience is being applied in the LAC region, but is not commonly established or widely understood. However, where resilience has been interpreted in the LAC context the documents reviewed suggest that there is a strong social emphasis, and the influence of culture is seen as key elements of resilience.

In the workshops run in 23 communities across all three study countries, community representatives were asked 'What makes your community safe and resilient?'. In their responses communities selected activities or assets which were of significance before, during or after a particular shock or stress; the three most significant activities or assets (or 'factors of resilience') were then selected, prioritised by the communities themselves. Communities also selected their top five coping mechanisms or factors to respond to their prioritised shocks and stresses. The change over time in the quality of these coping mechanisms was also discussed.

The findings from the literature review are supported by the findings of the community-based fieldwork, as communities themselves frequently cited social factors of resilience as critical to their ability to cope with the shocks and stresses they faced. Communities also cited access to and quality of infrastructure and services as key factors of their resilience.

Inductive analysis of over 1000 individual factors of resilience – activities or assets that communities credited with maintaining their safety and resilience – allowed development of a set of six *characteristics of a safe and resilient community:*

A safe and resilient community in Latin America and the Caribbean…

… is knowledgeable, healthy and can meet its basic needs. It has the ability to assess, manage and monitor its problems, needs and opportunities. It can learn new skills, build on past experiences, and share and apply this knowledge in practice.

… is socially cohesive. It has the capacity to draw on informal and formal community networks of support to identify problems, needs and opportunities, establish priorities and act for the good and inclusion of all in the community.

… has well-maintained and accessible infrastructure and services. It has strong housing, transport, power, water and sanitation systems. It has the ability to access, use, maintain, repair and renovate these systems.

…has economic opportunities. It has a diverse range of employment opportunities and access to systems for developing skills and enhancing trade opportunities. It is flexible, resourceful and has the capacity to accept uncertainty and respond (proactively) to change.

…can manage its natural assets. It recognises their value and has the ability to protect, enhance and maintain them.

… is connected. It has the capacity and capabilities to develop and sustain positive relationships with a range of external actors, which can provide a wider enabling environment and it can request forms of tangible and intangible support from outside the community when needed.

Following preliminary comparison of the findings of both the Tsunami Operation CBDRR study and this second LAC CBDRR study it appears that while the characteristics of community resilience may be the same in multiple regions around the world, the factors which contribute to this resilience are specific to each community. Findings also suggest that CBDRR programmes do have a positive impact upon community resilience as perceived by the communities themselves – particularly in the areas of knowledge, health and basic needs, and social cohesion. However there are challenges associated with sustaining activity and knowledge following the end of CBDRR programmes. Arup ID therefore recommends taking several steps to ensure sustainability of programme impact to further build community resilience.

Recommendations for next steps

- To improve community resilience via CBDRR programmes in the long-term, ensure that there are systems in place for knowledge to be dispersed and sustained in communities.
- Training to improve community knowledge can be better sustained if it is linked not only to short-term disaster response, but also longer term community needs (e.g. building resilience through livelihoods opportunities).
- Formal organisations (i.e. CBOs) can increase their sustainability where they tap into and bring together informal networks within communities. Formal recognition by state actors (e.g. the COCODE and COLRED in Guatemala) can add further legitimacy to organisations and increase their sustainability.
- To build resilience through improving infrastructure and services, focus should not only be on building assets within communities, but also ensure that access is improved to external services (directly or indirectly; e.g. through improved transport networks). For example, communities can also increase their resilience by gaining access to larger-scale services (e.g. hospitals) outside their communities, rather than by gaining or improving a smaller health clinic within their community.
- Similarly, ensuring access to a diverse range of livelihood opportunities should be addressed both locally and through access to external opportunities (e.g. trade with other communities or links to higher education facilities).
- When establishing connections between communities and other actors involved in supporting CBDRR programmes, ensure that these relationships do not only provide support to the community, but that they support communities in building their skills and access to assets in the long-term.

At present there are also ongoing discussions between various RCRC movement partners around how best to develop a set of indicators of community resilience. The findings of this second phase of the CBDRR study suggest that general characteristics of community resilience may be applicable worldwide, but that the factors which contribute to these characteristics are likely to be different within each region, country and community. We propose therefore that the final characteristics of a safe and resilient community developed from this study could be used to develop CBDRR programme objectives. The numerous factors which have contributed to the development of these general characteristics could then be reviewed and refined to developed a 'toolbox' of community resilience indicators. In the design of a new CBDRR programme, the most appropriate indicators would then be selected from this toolbox, to ensure that the programme's aims and activities target the specific needs of communities; making a sustainable and relevant contribution to building community resilience.

Acronyms

(CB)DRR	(community-based) disaster risk reduction
CBO	community-based organisation
CDRT	community disaster response team
COCODE	*consejo comunitario de desarrollo*
COLRED	*coordinador local para reducción de desastres*
CONRED	*coordinadora nacional para la reducción de desastres*
DIPECHO	Disaster Preparedness European Community Humanitarian Office
DRCB	Disaster Response Capacity Building (programme name)
EWS	early warning system
HNS	host national society
IFRC	International Federation of Red Cross and Red Crescent Societies
KII	key informant interview
LAC	Latin America and the Caribbean
M&E	monitoring and evaluation
NGO	non-governmental organisation
(N)HQ	(national) headquarters
PNS	partner national society
RC	Red Cross
RCRC	Red Cross Red Crescent
SLRC	Saint Lucia Red Cross
SOSEP	*Secretaria de Obras Sociales del esposa de presidente*
SDPAE	Bogota System for Prevention and Response
TO	Tsunami Operation
VCA	vulnerability and capacity assessment

1 Introduction

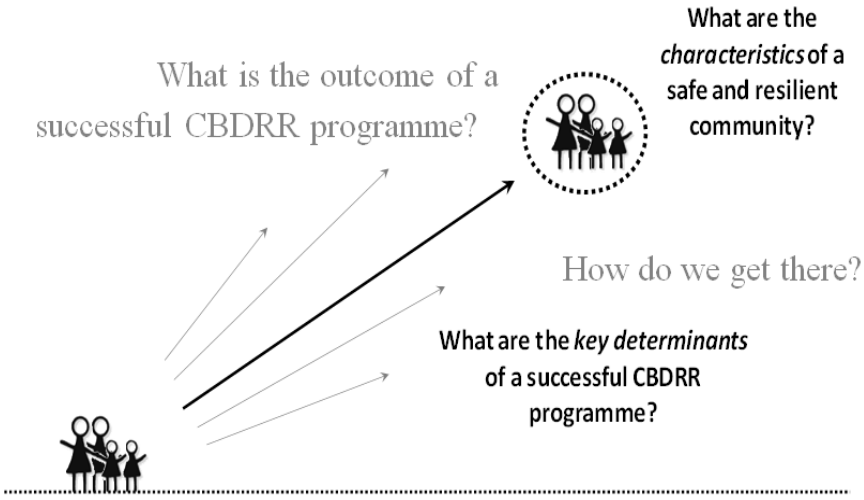
In a world witnessing unprecedented shocks and stresses, strengthening community resilience is recognised as an essential component of sustainable development. The International Federation of Red Cross and Red Crescent Societies (IFRC) thus regards building community resilience as central to enabling healthy and safe living (see Box 1).

Box 1: Strategic Aim 2 – Enable healthy and safe living[1]

"Our specific contribution to sustainable development is through strengthening community resilience. This is the ability to adapt and cope with recurrent or prolonged disasters and crises, as well as with wider socio-economic changes, which enables people to protect and build on the development gains that have already been made."

Having undertaken numerous community-based disaster risk reduction (CBDRR) programmes designed to strengthen community resilience, the Red Cross Red Crescent movement (RCRC) recognises that further evidence is needed in order to define resilience at a community level. This evidence will help demonstrate the desired outcome of a CBDRR programme – a safe and resilient community – and will also help to identify the factors that contribute to successful CBDRR programmes.

Figure 2: Outcomes and pathways of CBDRR programmes



[1] IFRC (2010) Strategy 2020: Saving Lives, Changing Minds. IFRC: Geneva. p. 15

In November 2010, the IFRC appointed Arup International Development (Arup ID) to undertake a study of RCRC CBDRR programmes implemented across South/Southeast Asia, as part of the organisation's Tsunami Operation (TO) following the 2004 Indian Ocean tsunami. The purpose of this TO study was to identify the *characteristics of a safe and resilient community* as well as the *key determinants of a successful CBDRR programme*, based on analysis of programmes run in four countries in the region.[2]

The findings from this regional study generated considerable interest within the RCRC. However, a key question which has been raised in response to the study is to what extent its findings have global relevance. To determine an answer to this question, the IFRC commissioned Arup ID to undertake a second study of CBDRR programmes run in three countries in Latin America and the Caribbean (LAC). Historically, Latin America and the Caribbean is one of the most disaster-prone regions in the world, affected by tropical storms and hurricanes, floods, volcanoes, earthquakes, and drought. Many countries in the region have also witnessed prolonged civil conflicts and social unrest. Over the past decade, the region has also seen some of the largest emergency and recovery efforts launched by the IFRC.

The findings of this second study – identifying again the *characteristics of a safe and resilient community* and the *key determinants of a successful CBDRR programme* – would then be used to ascertain to what extent the factors that determine community resilience vary from region to region. This report details the findings of the research undertaken in 2012 in Latin America and the Caribbean, examining the *characteristics of a safe and resilient community*.

It should be noted that there is also potential for a third phase of work to be carried out in the Africa region. Findings from three regional studies would generate an improved understanding of community resilience globally, and inform the development of tools and processes that enable national societies to scale-up successful CBDRR approaches (See Figure 2 below).

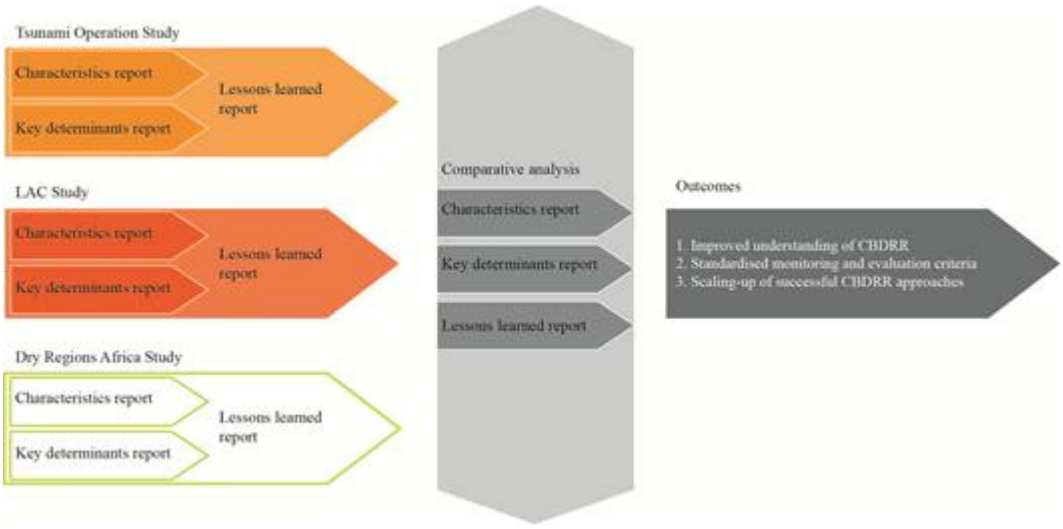
1.1 Scope

This report has been prepared by Arup ID on behalf of the IFRC. It provides a summary of research undertaken to understand the *characteristics of a safe and resilient community* that are relevant to the LAC zone.

The findings of this LAC study are based on a combination of desk-based research, fieldwork and analysis of CBDRR programmes run in three countries: Colombia, Guatemala and Saint Lucia. These particular countries were selected by the IFRC to represent the variation in national society characteristics and also their operational contexts. The LAC study also includes research to determine the *key determinants of a successful CBDRR programmes* in the LAC zone, the findings of which are summarised in a separate report which should be read in conjunction with this one.[3]

[2] IFRC / Arup (2012a) Characteristics of a safe and resilient community. IFRC: Geneva.
IFRC / Arup (2012b) Key determinants of a successful CBDRR programme. IFRC: Geneva.
[3] Arup (2013) *Community-based disaster risk reduction study - Latin America and the Caribbean: Key Determinants of a Successful CBDRR Programme in the LAC region*. Draft 21st March 2013

Figure 2: Intended outputs of the CBDRR study



1.2 Structure of the report

The rest of the report is structured as follows:

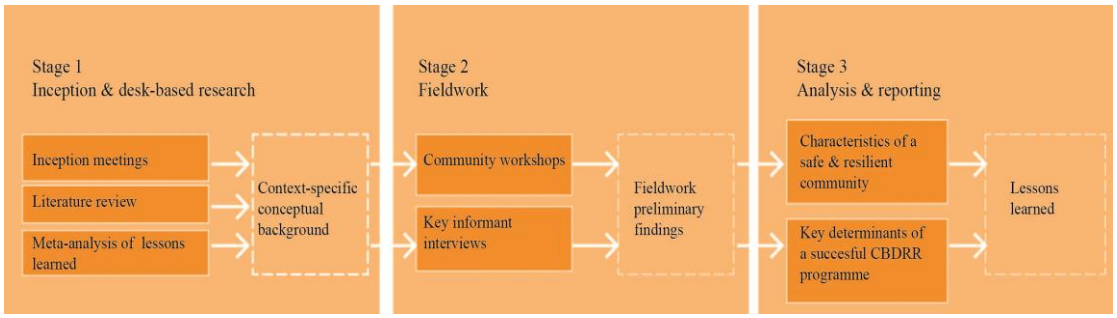
- Chapter 2: A detailed description of the **methodology** used for the research;
- Chapter 3: Key **findings** from the literature review identifying the current understanding of community resilience in Latin America and the Caribbean from both theoretical and practice perspectives;
- Chapter 4: Key **findings** from fieldwork carried out in 23 communities in three LAC countries;
- Chapter 5: A summary of the **analysis** resulting in six *characteristics of a safe and resilient community* in the LAC zone;
- Chapter 6: Preliminary identification of **regional trends and differences**, between the TO study in South/Southeast Asia and the LAC study;
- Chapter 7: **Conclusions and recommendations** for how these characteristics could be used by the Red Cross Red Crescent (RCRC) movement.

Further detailed information is provided in the attached appendices.

2 Methodology

This study employs the same methodology developed for the TO study, in order to independently identify *key determinants of a successful CBDRR programme* that are contextually-specific for the LAC study countries, rather than test the findings from the previous study. Preliminary differences and similarities with the findings of the TO study are discussed in Chapter 6. A more detailed comparative analysis could be carried out in the future should a third phase of work be completed in the Africa region.

Figure 3: Overview of methodology for LAC study



2.1 Overview

The LAC study was carried out in three stages (see Figure 3 above):

Stage 1: Inception and desk-based research

Inception meetings were held in Geneva with the Reference Group comprising representatives from the IFRC and partner national societies; also in Panama with the Implementation Group comprising representatives from the IFRC Zone office and national societies participating in the study. These meetings were used to finalise the scope of the study; to identify input documentation and determine the communities where fieldwork would take place.

Desk-based research was completed in order to understand how building community resilience is conceptualised and put into practice in the LAC study countries. Six documents and one website were chosen from theory and practical guidance to give an indication of LAC-specific influences on the interpretation of community resilience. See Chapter 3 for further details.

Stage 2: Fieldwork

Fieldwork was undertaken in 23 communities across Colombia, Guatemala and Saint Lucia. These communities were purposively selected to be representative of the diversity across the LAC study countries, in terms of context, and type of community and CBDRR programme. The inception meetings, a review of RCRC CBDRR programme documentation in the LAC region, and findings from the

literature review were used to inform a stratified sampling strategy and to review and update the methodology for the LAC study.[4]

Stage 3: Analysis and reporting

An inductive approach to data analysis was taken where themes were allowed to emerge independently from the community workshop data. These were then cross-referenced with other data sources (literature review, key informant interviews and community tour) to develop a set of *characteristics of a safe and resilient community* in the LAC study countries. These were then compared with the TO study fieldwork findings. The analysis and reporting also sought to answer specific research questions identified by the research team (see Box 2).

Box 2: Research questions

a) Is resilience addressed by academic work in LAC? If so, how is it understood in the region?

b) How the concept of resilience has been introduced in this context and how the history of CBDRR may influence its interpretation;

c) Who are the key actors considering 'resilience', and what might be the opportunities and barriers for incorporation and application in a Latin American and Caribbean context.

d) What do communities perceive as the most important characteristics needed to be safe and resilient?

e) How do communities rank changes in these characteristics?

f) How can / do the determined indicators and their changes over time reflect shifts in community attitudes and behaviours towards risk?

The findings on the research into the *characteristics of a safe and resilient community* are drawn from both primary and secondary data, collected across stages 1 and 2 of the LAC study. Data was gathered from two principal input sources:

1. Literature review
2. Community workshops

[4] See Appendix B for more details of the research methods used and the community sampling strategy.

2.2 Literature review

A comprehensive and general literature review on the theme of community resilience and CBDRR was carried out for the TO Study. The purpose of the LAC region literature review was to expand this previous analysis of academic and practice publications on community resilience, focussing on the LAC context. Six documents and one website were chosen to give an indication of trends in the LAC region, rather than an extensive review of the regional literature. An initial search for relevant documents on resilience in the LAC region established that most work directly linked to resilience already referenced much of the literature identified in the TO study.[5]

Documents were selected that could give an indication of how engagement with 'resilience' might be influenced by concepts, practices and approaches within the LAC region. Equal weight was given to academic/theoretical documents and practical guidelines; and documents were chosen that covered historical approaches to community resilience, as well as current practice of CBDRR. The literature review also explored concepts of resilience at various scales, from community up to national and international levels.

2.3 Fieldwork

Primary data was collected during fieldwork visits to all three study countries. Field-based research was completed in 23 communities in total: 10 in Colombia, 9 in Guatemala and 4 in Saint Lucia. This research was undertaken by Arup ID in partnership with the host national societies (HNS) from September through November 2012.

Selection of communities was undertaken using a stratified sampling process, the full details of which can be found in Appendix B. Once the total number of communities had been determined to ensure a representative sample, the final participating communities were selected at random by the project team's statistician.

The study sample only considered communities where CBDRR programmes were carried out by RCRC movement partners between 2005 and 2012. The communities visited were selected through a stratified sampling model.[6] This method establishes a representative sample where the observations made across several factors or variables are representative of the wider context. The communities selected thus constituted a representative sample in terms of size; urban or rural geography; diversity of risks and hazards; and diversity of capacity and support from a range of RCRC movement actors. (See Table 2 for a complete list of communities included in the fieldwork.)

The fieldwork methodology was designed to be flexible to accommodate changes due to adverse weather conditions, urgent community activities and travel delays.

[5] Most references to the characteristics of a disaster resilient community (or community resilience) were linked to the work of John Twigg (in particular the translated version of his 2007 guidance note 'Characteristics of a Disaster-resilient Community'), the Hyogo framework, and the DfID's livelihoods framework.

[6] More details of this sampling strategy can be found in Appendix B.

Due to some of these factors, the full range of workshop exercises was not carried out in every community. In Guatemala an earthquake and subsequent limited RC branch capacity meant that only 9 out of the 10 selected communities were visited. Limitations to data collection and quality are identified in Table 2.

The participatory research methodology designed in the TO study was reviewed to incorporate lessons learned from its previous use in South/Southeast Asia. Arup ID reviewed its appropriateness for the LAC context and adapted the research questions for this second phase of the study. The refined fieldwork methodology included three main activities:

1. **Community workshops** were used as the key data source for investigating factors of community resilience (See Table 1)
2. **Community tours** allowed community members to contextualise and explain the qualities and limitations of the approaches to building resilience described in the community workshops. They also provided supporting information to enable cross checking or 'triangulation' of data.
3. **Key informant interviews (KIIs)** were conducted with representatives of a range of stakeholders including government and RCRC staff and volunteers. The main focus of these KIIs was to provide information on the *key determinants of a successful CBDRR programme*.[7] However, they also provided information to cross-check the characteristics of a *safe and resilience community* identified during the workshops.

Most of the data relating to the *characteristics of a safe and resilient community* came from the community workshops. The exercises were designed to enable the project team:

- to define the characteristics of a safe and resilient community; and
- to explore the changes to the factors of resilience of these characteristics.

The same approach taken in the TO study was used to identify workshop participants within communities. The aim was to involve about 30 participants in each meeting, who were representative of the diversity of gender, age and level of participation in the community. These criteria were communicated from a national level to branch level, then local leaders or branches were responsible for identifying participants. However, the types of people invited to meetings therefore depended on those staff/volunteers who have this particular relationship with each community. The selection therefore tended to focus on those with an interest in attending the event, those with a role in CBDRR programmes, or those with time available. Consequently, the participants may not always have been fully representative of the whole community.

More detailed information of the fieldwork methodology can be found in Appendix B.

[7] Arup (2013) *Community-based disaster risk reduction study - Latin America and the Caribbean: Key Determinants of a Successful CBDRR Programme in the LAC region*. Draft 21st March 2013

Table 1: Workshop exercises and the research questions which they address

	Informs	Research questions addressed	Activities
Exercise 1: Organogram / Shocks and stresses table / Timeline	- Community Profile - Perceptions of community resilience	n/a	Community participants compile three key documents which help build a profile of the community, and the shocks and stresses it faces. a. *Organogram*: community participants create a diagram of actors inside and outside the community who are involved in everyday life and emergencies in the community. b. *Shocks and stresses table*: community participants list all the shocks and stresses (including natural hazards, health and social issues, economic shocks etc.) that have an impact on their community. They also list the effects or impacts of these shocks and stresses. The community participants then vote to select the top 3 priority shocks +/or stresses. c. *Timeline*: community participants build a timeline detailing the occurrence of significant shocks and stresses upon their community over the past 10 years.
Exercise 2: What makes your community safe and resilient?	- Characteristics of a safe and resilient community	What do communities perceive as the most important characteristics needed to be safe and resilient?	Using the shocks and stresses table developed in the first exercise community participants examine the identified top 3 shocks +/or stresses, and compile a list of the things the community does to cope with them. These things or 'factors of resilience' are categorised as being within the community itself or outside. Participants also select the most important 5 factors, i.e. those which are most significant for building resilience.
Exercise 3: How have things changed?	- Characteristics of a safe and resilient community	How do communities rank changes in these characteristics?	Taking the 5 most important factors of resilience from the previous exercise, participants rate the quality of these factors over time; ranking them from 1 to 10 (with 1 being the worst something can be and 10 being the best). Rankings are provided for three time periods: before the CBDRR programme began, just after the CBDRR programme ended and now, i.e. at the time of the workshop.
Exercise 4: What have you learnt from the CBDRR programme? What are your recommendations for the RC?	- Characteristics of a safe and resilient community - (Key determinants of a successful CBDRR programme)	How can/do the determined indicators and their changes over time reflect shifts in community attitudes and behaviours towards risk? (What are the most/least effective activities in CBDRR programmes? Why?)	Community participants finally share their thoughts on the CBDRR programme run in their community, writing thoughts about: 1. What they have learnt from being involved in the programme 2. What they would recommend to the Red Cross / other communities involved in similar programmes Thoughts are written on Post-It notes and grouped into themes by participants before a final discussion on these recommendations closes the workshop.

Table 2: Communities included in LAC study fieldwork

	Community	Province/Region	Restrictions to data collection[8]
Colombia	Las Americas	Nariño	-
	Mapachico	Nariño	-
	Maria Auxiliadora	Nariño	-
	Mirador	Tolima	No data gathered in Exercise 4 due to space restrictions
	Pajaro	La Guajira	No data gathered in Exercise 4 due to language restrictions
	Pasquilla	Bogota	No data gathered in Exercise 4 due to organisation problems
	Pelechua	La Guajira	-
	Rafael Uribe Uribe	Bogota	No data gathered in Exercise 4 due to organisation problems
	Villa del Rio	La Guajira	-
	Vindi	Tolima	No data gathered in Exercise 4 due to time restrictions
Guatemala	C-12	Retalhuleu	-
	Centro 1	Mazatenango	Unable to visit community due to RC staff being busy responding to an earthquake that occurred during the field visit.
	Granada	Retalhuleu	-
	Linea B-4	Mazatenango	-
	Lomas Arriba	Chiquimula	-
	Punta de Palma	Santo Tomas	No data gathered in Exercise 4 due to language restrictions
	Sabana Grande	Chiquimula	-
	San Francisco	Santo Tomas	-
	Santa Maria	Santo Tomas	-
	Santa Rosa	Chiquimula	-
Saint Lucia	Bexon	Castries South	-
	Dennery	Dennery	-
	Entrepot	Castries East	-
	Plateau	Castries North	-

[8] Language restrictions refer to the difficulties associated with the translation from indigenous languages to Spanish during the workshop.

3 Findings: Literature review

The literature review for the LAC region is based on the examination of six key documents and one website on the subject of community resilience; four documents produced by academia, two practical NGO guidelines for programme implementation and an NGO website (see Box 3 below for details). It should be noted that the findings of this literature review are based on the examination of this limited number of resources only. For this reason, footnotes have been added where reviewers of an earlier draft felt that this limited review did not reflect current regional realities.

Box 3: Bibliography for the LAC literature review[9]

Aguirre, B. E. (2004). 'Los desastres en Latinoamérica: vulnerabilidad y resistencia'. *Revista Mexicana de Sociología* 66(3), pp. 485 - 510.

Climate and Development Knowledge Network (2012) *Managing Climate Extremes and Disasters in Latin America and the Caribbean: Lessons from the IPCC SREX Report*. London: CDKN.

Lavell, A. (1993) '*Ciencias sociales y desastres naturales en América Latina: un encuentro inconcluso*' In: Maskrey (ed.) (1993) *Los desastres no son naturales.* Panama City: La Red, pp. 111-127.

Lavell, A. (2007) *Risk, Disaster and Management in Central America, South America and Mexico: concepts, approaches, activities and institutional and organizational actors*. San José: FLASCO.

Maskrey, A. (1993) 'Vulnerabilidad y mitigación de desastres' In: Maskrey (ed.) (1993) *Los desastres no son naturales.* Panama City: La Red, pp. 93-110.

Rivero, R. (2010) *Más seguros ante inundaciones. Manual comunitario para la reducción de riesgo y preparación ante situaciones de desastre*. Lima: Soluciones Prácticas.

Visión Mundial (2012) *'Proyecto de resiliencia comunitaria'*. Accessed on 14.08.2012, http://www.resilienciacomunitaria.org/

[9] See Appendix A for an annotated bibliography of these documents

The four academic texts were selected to help provide:

- A theoretical understanding of CBDRR in the LAC region;
- Example(s) of how the concept of 'resilience' has been introduced in this context and how the history of CBDRR may influence its interpretation;
- Evidence of the key actors engaging with 'resilience', and the challenges and opportunities they have encountered applying this concept in practice in the LAC region.

Two further 'grey literature' documents and one website were chosen to illustrate typical guidance for practitioners in the LAC region. These documents covered multiple aspects of resilience: building community resilience, NGO programming strategy, practical guidance for governments etc. Many current commonly-used guidance documents on community resilience (such as John Twigg's translated guidance)[10] reference global thinking on resilience referred to in the previous study.[11] However, the documents selected for this review were chosen as they had instead developed their own interpretation of concepts of resilience for the implementation of CBDRR programmes.

3.1 The concept of 'resilience' in the LAC region

Aguirre claims that '*resiliencia'* is a relatively new word in the Spanish language,[12] derived from the English word 'resilience'. Most references to community resilience in Spanish-language documents are developed from existing English-language conceptual work; including the UNISDR's Hyogo Framework for Action,[13] the work of John Twigg,[14] and the DfID Livelihoods Framework.[15] The concept of developing disaster 'resistance' is also widespread, for example in the work of the IFRC in Latin America. The term '*comunidades resistentes*' in particular is used to refer to communities which exhibit resilience (Aguirre, 2004). This term is commonly recognised within the RCRC movement.

Addressing the vulnerability of communities ('*la reducción de vulnerabilidad'*) and adopting a long-term focus for CBDRR interventions has been promoted in Latin American literature since the 1980s however. Wilches-Chaux (1988), cited by Lavell (1993), describes 10 components of societal vulnerability. These show

[10] Twigg, J. (2007) '*Características de una Comunidad Resiliente ante los Desastre: Primera versión (a probar en campo:*', London: Disaster Risk Reduction Interagency Coordination Group, Department for International Development.
[11] IFRC (2012) *Characteristics of a safe and resilient community*. Geneva: IFRC.
[12] Aguirre, B. E. (2004). 'Los desastres en Latinoamérica: vulnerabilidad y resistencia'. *Revista Mexicana de Sociología* 66(3), pp. 485 - 510.
[13] UNISDR (2005) *Hyogo Framework for Action 2005 – 2015*. Geneva: UNISDR.
[14] Twigg, J. (2007) *Características de una Comunidad Resiliente ante los Desastre: Primera versión (a probar en campo)*, London: Disaster Risk Reduction Interagency Coordination Group, Department for International Development.
[15] DFID (2011) *Defining Disaster Resilience: A DFID Approach Paper*, London: Department for International Development.

many similarities to the distilled list of factors contributing to a safe and resilient community identified in the TO study[16] (see Table 3). This suggests that theoretical concepts of community resilience in the LAC zone may have similar foundations to more broadly applied interpretations of resilience. However, the concepts of vulnerability identified by Wilches-Chaux also suggest two aspects of resilience – ideological and cultural vulnerability – that cannot be directly linked to the international literature reviewed in the previous study.[17]

Both ideological and cultural vulnerability relate to individual perception of risk and the influence of society on that perception:[18]

- Ideological vulnerability: "How humans see the world and the environment they inhabit and with which they interact. Passivity, fatalism, the prevalence of myths, etc.., all increase the vulnerability of populations, limiting their ability to act appropriately against risks arising from nature."
- Cultural vulnerability: "Expressed in the way individuals see themselves in society and as a nation as a whole. Furthermore, the role of the media in strengthening stereotyped or deviant information transmission about the environment and disasters (potential or actual)."

Table 3: Comparison of TO literature review characteristics and components of vulnerability identified by Wilches-Chaux

Components of vulnerability[19]	***Characteristics of resilience***[20]
Physical location	Physical (asset)
Economic (poverty)	Economic (asset)
Social (coordination and cohesion)	Social (asset)
Political (decentralised decision-making)	Political (asset)
Technical (adequate houses / infrastructure)	Physical (asset) Access to external services
Ideological	
Cultural	
Educational (knowledge / awareness)	Human (asset)
Ecological (adaptable systems)	Systems / Qualities
Institutional (flexible institutions)	

[16] IFRC / Arup (2012a) *Characteristics of a safe and resilient community.* IFRC: Geneva.
[17] Mention was made – by one reviewer of an early draft of this report – however that Gustavo and Allen have been working within La RED "promoting the logical challenges of vulnerability and risk, incorporating beliefs and values and culture as key elements to describe how to understand vulnerability." The reviewer also cites a similar approach adopted by the IFRC in the early 1990s, within a document entitled 'Community Mobilization'; this was produced in Costa Rica by regional representation in 1993.
[18] Wilches-Chaux cited by Lavell (1993:122); translated by Arup ID.
[19] Cited in Lavell (1993:121-122)
[20] IFRC / Arup (2012a) *Characteristics of a safe and resilient community.* IFRC: Geneva.

Lavell suggests that these ten aspects should be understood as interrelated aspects of a society's vulnerability (and of those of the individuals within that society). He proposes that (similar to current concepts of resilience) vulnerability should be "at the centre of debate on appropriate methods of prevention, mitigation and disaster response".[21] Aguirre (2004) also identifies social vulnerability as being significant in the Latin American context, citing many studies on its construction and reduction.[22] To better engage with social vulnerability caused by disasters, Aguirre proposes that a new concept should be developed, combining both the vulnerabilities of a society with the ability of a community to resist disaster situations.

3.2 Resilience in practice in the LAC region

Since the early 1990s, academics in the Latin America and the Caribbean region have called for better integration between social science and the study of disasters. Maskrey (1993) emphasises the social vulnerability of society as a cause of increased risk of disaster, as he proposes that community-based disaster risk reduction (CBDRR) approaches should be contextually relevant to the specific circumstances of each community. As vulnerability itself is multi-faceted, so too should the approaches be that try to reduce it. Maskrey suggests that short-term solutions are not sufficient to reduce vulnerability. If local needs and priorities are not addressed and external solutions are imposed, the sustainability of CBDRR programmes will be limited.

Maskrey argues there is no need for a new field of 'disasterology'. Instead he proposes that disaster risk reduction should become integral to all development programmes; and that humanitarian action should integrate concepts relating to long-term development. Maskrey's proposal for a more context-specific and long-term approach to CBDRR in the LAC region is reflective of wider concepts of community resilience. These concepts also suggest that the first step in reducing disaster risk is meeting a community's basic needs. Other measures to build a community's resilience should then be designed in relation to the existing assets and capacities that the community possess.

While engagement with the approach of CBDRR is well-established in the academic community in Latin America, Lavell (2007) asserts that engagement with CBDRR in practice is less developed. In 1993, Maskrey predicted that the shift towards a community driven approach to disaster risk reduction in Latin America would be largely dependent on the international community's integration of a longer-term focus into programmes of international NGOs and their donors. He suggested that change from within the region would be more problematic because governments prefer to see disasters as short-term political problems. This sentiment is echoed almost 15 years later by Lavell (2007) who suggests that the main motivation (and dependence) for change from traditional approaches of

[21] IFRC / Arup (2012a) *Characteristics of a safe and resilient community.* IFRC: Geneva.
[22] For example, studies by Lavell, Maskrey, and approaches used by governments in Panama, Mexico and Guatemala

predict and prevent in the region comes from international NGOs and financial institutions.[23]

Lavell (2007) cites a number of programmes[24] which are beginning to focus on the 'social construction' of hazards (or how human interventions can increase the risk of disaster). He also notes a growing consideration of resilience in CBDRR programmes (though he terms this the adoption of a livelihoods focus), and trends towards longer-term risk management and planning.

He highlights a number of innovative approaches that are emerging out of lessons learned from recent large-scale disasters (such as Hurricanes Mitch, Andrew, and Katrina in the Americas, and the Indian Ocean Tsunami in Asia); in particular the use of risk transfer and financial protection mechanisms. Lavell suggests that most of these approaches come from the 'onerous' post-disaster reconstruction interventions of international financial institutions. He also notes that progress is mainly occurring in larger countries such as Colombia and Mexico. However, Lavell also highlights a number of experiments at the local level with encouraging results; for example, the financial protection of poor communities as a municipal risk reduction mechanism in the city of Manizales in Colombia. Lavell's recent review of approaches to CBDRR therefore suggests that, at the time of writing, longer-term resilience considerations are still slow to be incorporated into disaster management approaches in the LAC region.

[23] The findings of this literature review however were felt to be in contrast to realities in some areas of the LAC region, as expressed by an IFRC reviewer of an earlier draft of this document. The reviewer states "the IFRC created in 2004 the Reference Centre on Community Education that in 2011 was transformed into Centre of Reference on Community resilience. In 2005 was created in El Salvador [the] centre of reference of institutional preparedness for disasters; demonstrating the logic that community mobilization for disaster preparedness, mitigation or prevention have different dynamics for disaster response. The policies of the three intergovernmental institutions most well accepted for disaster matters CEDEMA, CAPRADE, CEPREDENAC changed their vision and adopted a more comprehensive approach towards DRR. Governments [of countries] such as Bolivia, Ecuador, [and] Colombia have created Ministries of DRR. In other countries they have directions within the Ministers. Several municipalities have developed DRR divisions since [the] early 90's in some cases, as for example in Mexico City; Quito, Ecuador; Bogota, Colombia; and Lima Peru."

[24] For example, Lavell (2007:19) suggests there are a number of projects aiming to reduce the environmental degradation of river beds, such as "the World Union for Nature, the CATIE and the Project for the Reduction of Vulnerability and Environmental Degradation in Central America (PREVDA) promoted by CEPREDENAC, the Central American Committee for the Environment and Development –CCAD – and the Regional Committee for Water Resources –CRRH – three regional institutions making up the Central American Integration System, with the support of the European Union."

Table 4: Definitions of 'resilience'

	Original definition	Translation (where necessary)
Aguirre (2004)	*"La palabra 'resiliencia' no es reconocida por la Real Academia Española…, por lo que usamos la palabra "resistencia" en su significación de capacidad de resistir, añadiéndole la idea de capacidad de rehacer y reconstruir. Entendemos por Resistencia entonces la capacidad de la organización social para reaccionar apropiadamente, con eficacia rapidez, a los efectos de siniestros que frecuentemente ocasionan desastres sociales; no implica necesariamente la recreación de las pautas sociales que existían con anterioridad a los siniestros ni limitamos el término a sus profundas connotaciones políticas, que son las más comunes. Contrariamente a lo que algunos peritos presuponen, el control de la vulnerabilidad no es solamente la capacidad de la sociedad para resistir el impacto de fenómenos de origen natural o antrópico, ya que implica un proceso de interacción de la organización social y su contexto entorno del cual a veces proviene el riesgo."*	"The word 'resilience' is not recognised by the Royal Spanish Academy ... so we use the word 'resistance', meaning the capacity to resist, adding the concept of the capacity to rebuild and reconstruct. We understand by resistance the ability of social organisations to react appropriately, effectively with speed to the effects of disasters which frequently cause social disasters; this does not necessarily imply the recreation of social patterns that existed prior to the disaster nor should we limit the term to its deeper political connotations, which are the most common. Contrary to what some experts assume, control of the vulnerability is not only the ability of society to resist the impact of natural phenomena or man, as it involves a process of interaction of social organisation and its context or environment which at times creates risk."
CDKN (2012), citing UNISDR	"The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions."	
Soluciones Prácticas (2010)	*"La resiliencia es la capacidad humana individual o colectiva para superar las adversidades y salir adelante. No solo consiste en soportar crisis y adversidades, sino en poder recobrarse y salir fortalecido de ellas. La resiliencia comunitaria se refiere a la capacidad de las comunidades para superar las crisis y catástrofes (inundaciones, terremotos, ciclones, etcétera). Entre los pilares de la resiliencia comunitaria se encuentran la autoestima colectiva, la identidad cultural, la honestidad, la solidaridad, la organización y el liderazgo idóneos."*	"Resilience is the individual or collective human capacity to overcome adversity and progress forwards. Not only coping with crises and adversity, but to recover and emerge stronger from them. Community resilience refers to the ability of communities to overcome crises and disasters (floods, earthquakes, cyclones, etc.). Among the pillars of community resilience are the collective self-esteem, cultural identity, honesty, solidarity, organisation and appropriate leadership."
Visión Mundial (2012)	*"Resiliencia comunitaria es la capacidad que tiene una comunidad para:* • *Amortiguar el estrés o las fuerzas destructivas a través de la resistencia o adaptación.* • *Manejar o mantener las funciones y las estructuras básicas durante el impacto o el desastre.* • *Recuperarse después de un impacto o desastre."*	"Community resilience is the capacity of a community to: • Absorb stress or destructive forces through resistance or adaptation • Manage or maintain basic functions and structures during shocks or disasters • Recover after a shock or disaster."

3.3 Summary

The documents chosen for this literature review indicate that the concept of resilience is being applied in the LAC region (see Table 4). However, they also suggest that it is a term which is not yet well established or understood. Other established terms and institutionalised approaches, such as 'resistance', 'vulnerability' and disaster management, appear to be more common in current practice.

The concept of resilience and its incorporation in community programmes is influenced by international NGOs and agencies, rather than originating within the region itself.[25] Where resilience has been interpreted in the LAC context the documents reviewed suggest that there is a strong social emphasis, and the influence of culture and 'self-esteem' are seen as key elements of resilience. Feedback received on an earlier draft of this literature review suggested that whilst the term 'resilience' and its theoretical conceptions are relatively new, in practice there has been engagement with building resilience at community scales for far longer.

This literature review suggests a difference between the findings of the Tsunami Operation and LAC studies, in terms of the way in which DRR concepts and approaches are established. The Tsunami Operation, following a major catastrophic event, may have provided a stimulus for practical change in the affected South/Southeast Asian region. Lavell notes that where major events have taken place in the LAC region they have been a stimulus for new innovations in DRR practice. Without pressure from international NGOs and agencies new concepts such as resilience may be slower to be adopted. Therefore within disaster management practice in the LAC region it is possible that there is still a greater focus on prediction, prevention and response rather than on building longer-term resilience.

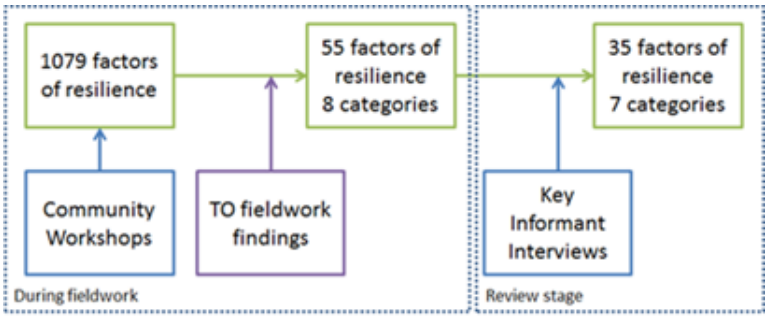
[25] Maskrey (1993); Lavell (2007)

4 Findings: Fieldwork

In the workshops run in 23 communities across all three study countries, community representatives were asked 'What makes your community safe and resilient?'. In their responses communities selected activities or assets which were of significance before, during or after a particular shock or stress; the three most significant activities or assets (or 'factors of resilience') were then selected, prioritised by the communities themselves. Communities also selected their top five coping mechanisms or factors to respond to their prioritised shocks and stresses. The change over time in the quality of these coping mechanisms was also discussed.

There were several stages to the analysis of fieldwork data collected during these workshops (see Figure 4). A preliminary 'free' analysis was done first to ensure there was no bias.[26] At the end of this stage 1079 'factors of resilience' were identified in total. Of these, the factors that the communities had prioritised were categorised with reference to the TO study fieldwork findings. This resulted in 55 factors, grouped under eight themes.

Figure 4: Fieldwork data analysis methodology



The initial findings of the data were triangulated with data from the key informant interview and community tours. At the end of an inductive analysis process 35 'factors of resilience' emerged, under seven proposed final themes:

- **Services and infrastructure**: The services which communities use to safeguard and build assets and the infrastructure used to access services or resources.
- **Connectedness**: Connections between communities and external supporting actors or institutions
- **Community cohesion**: Informal and formal forms of community social organisation and support networks
- **Disaster response**: Equipment, structures, or systems in place to respond to disasters
- **Knowledge**: Training or awareness raising mechanisms
- **Livelihoods**: Approaches to diversifying employment or trade opportunities

[26] 'Free' analysis means the analysis of data without reference to any preconceived framework

- **Preparedness**: Mitigation activities and approaches for short or long-term shocks and stresses

These themes are proposed to facilitate analysis and presentation of the fieldwork findings rather than to indicate final characteristics.

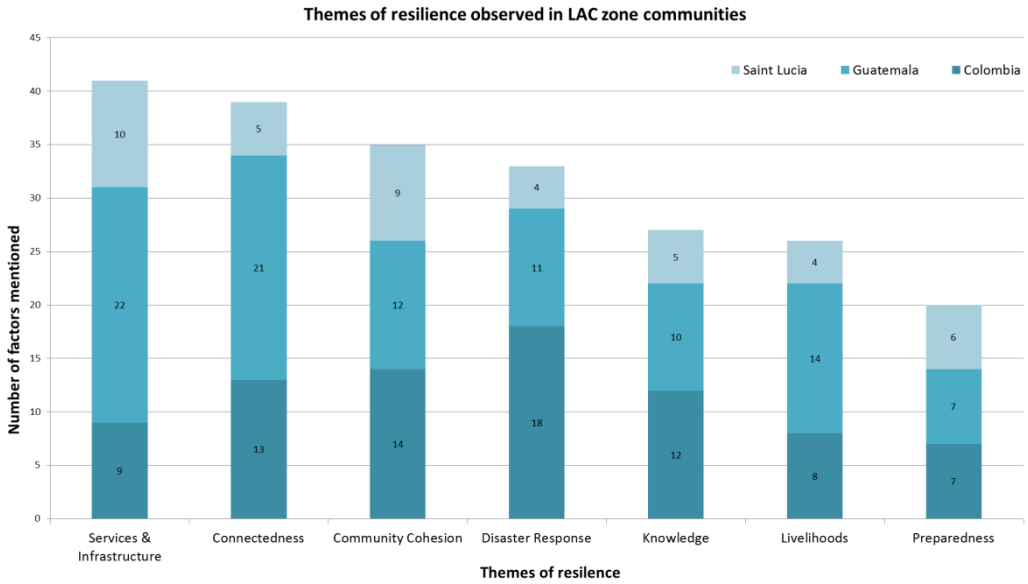
4.1 Factors contributing to safe and resilient communities

When prioritised factors were compared and collated across all 23 communities, the largest group of factors related to services and infrastructure. This theme encompassed factors such as access to and quality of water supply, transport infrastructure such as road networks, and education and healthcare facilities.

Both the second and third largest groups of factors considered social factors of resilience; internally within the community (community cohesion) and externally (connectedness). The theme of connectedness covers factors relating to relationships between the community and actors outside the community. Typically these relationships were with actors such as the emergency services, healthcare professionals, employers, NGOs and local and national government officials. The theme of community cohesion highlights the importance of internal community relationships, reflected in the abilities of community members to support one another in times of shocks or stress. This theme covers factors such as the existence of community-based organisations, and a collective spirit of volunteerism and caring for one's neighbours.

The smallest group of factors was arguably the one most directly related to disaster risk reduction, as it considered the theme of preparedness. Preparedness factors identified by communities included the existence and maintenance of shelters, stockpiling food, water and medical supplies for use in disaster response, and also the completion of mitigation activities for a variety of shocks and stresses; in Saint Lucia, for example, households in communities affected by water shortage installed rainwater collection tanks to ensure they still had access to water during droughts.

Figure 5: Themes of community resilience identified in the LAC study



Some of the approaches to building resilience could be considered applicable to more than one theme. For example, a community member having the knowledge of what to do during a flood event could be considered as contributing to community resilience under the themes of both knowledge and disaster response, and was therefore categorised under both themes. Other overlaps are discussed in the findings below. While some factors were mentioned by a higher or lower proportion of communities, the number of times they were mentioned could also vary due to this overlap and this is also discussed.

Services and infrastructure

The presence and quality of services and infrastructure within a community facilitates resilience by ensuring that members of the community have access to services which help them meet their basic needs, support economic activities and livelihoods, and also protect these assets and activities during a shock or stress event.

Services and infrastructure factors were mentioned by 20 different communities as contributing to their resilience; making this the most widely mentioned theme. Factors of resilience relating to infrastructure and services were associated with community cohesion or connectedness; frequently this was in relation to accessing or maintaining services. The quality of relationships with external actors also appears to affect support for, access to and maintenance of infrastructure. Where there was no external support, communities often relied on internal economic or physical collaboration instead.

The importance of well-maintained transport infrastructure (mentioned by seven communities) was often linked to access to other services, through individual or pooled resources; ten communities mentioned pooling resources for use of transport infrastructure.

Box 4: Access to infrastructure (Plateau, Saint Lucia)

In Plateau, Saint Lucia, some roads had been upgraded by local companies to improve access to satellites located near the community. However, other roads that should have been maintained by the local authority had fallen into disrepair. The community noted that they had contacted the local authority numerous times but had been unable to get the local authority to come out to the community to see the damaged roads, and then make repairs. The only positive change in the factors of resilience associated with this problem was that community members had been forced to drive more carefully as a result of the poor road quality, resulting in fewer accidents.

Access to health and water sources contributed to resilience by allowing community members to meet their basic needs and maintain their health; access to health facilities was mentioned by seven different communities and the same number of communities mentioned access to water sources. Access to health facilities was often linked to the quality of transport infrastructure where facilities were not available within the community. For example, two communities in the same area of the Santa Tomas region of Guatemala identified access to medical facilities a key issue in their area, whilst also noting issues with transport infrastructure. One community took people by canoe and the other by hammock

as alternative means of transporting sick or injured individuals where access was difficult.

Education facilities (mentioned by seven communities) were often linked to issues with unemployment and the need to diversify livelihoods opportunities for future generations. For example, Santa Maria, Guatemala identified education of children as a way for future generations to diversify their livelihood opportunities, as fish stocks which the community had relied on for years were now depleting.

Box 5: Services and infrastructure as a factor of resilience

The community displays resilience because it:

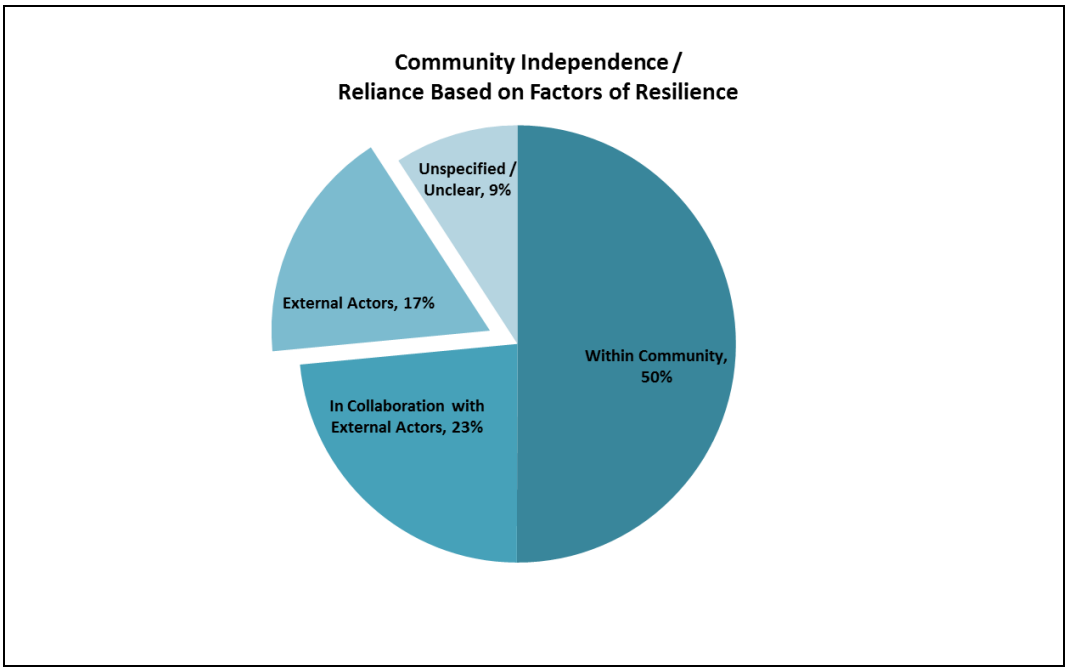
- has access to medical facilities and transport, and counselling services
- has access to education and vocational training
- has access to reliable and trustworthy police and law enforcement agencies
- uses its own resources and savings to access goods and services
- has access to infrastructure to a variety of reliable water sources (e.g. canals, wells, reservoirs and rainwater collection) which are maintained to a good standard
- has access to and the means to use transport infrastructure (e.g. roads, footpaths) which are maintained to a good standard

Connectedness

Positive relationships between the community and external actors facilitate resilience by allowing community members access to technical expertise, specialist services and support, and also external resources including funds.

Factors of resilience which related to a community's connectedness were the second most mentioned group of factors across the 23 communities. Factors of connectedness were mentioned by 19 communities and there were 40 different factors linked to this theme. In particular, the ability of communities to be able to request assistance from beyond the community in times of shock or stress was commonly mentioned. Connectedness is therefore not just about the ability of external actors to provide assistance to communities when they need it, but also about the ability of these communities to identify their needs and request help to build their assets and capacities from outside the community.

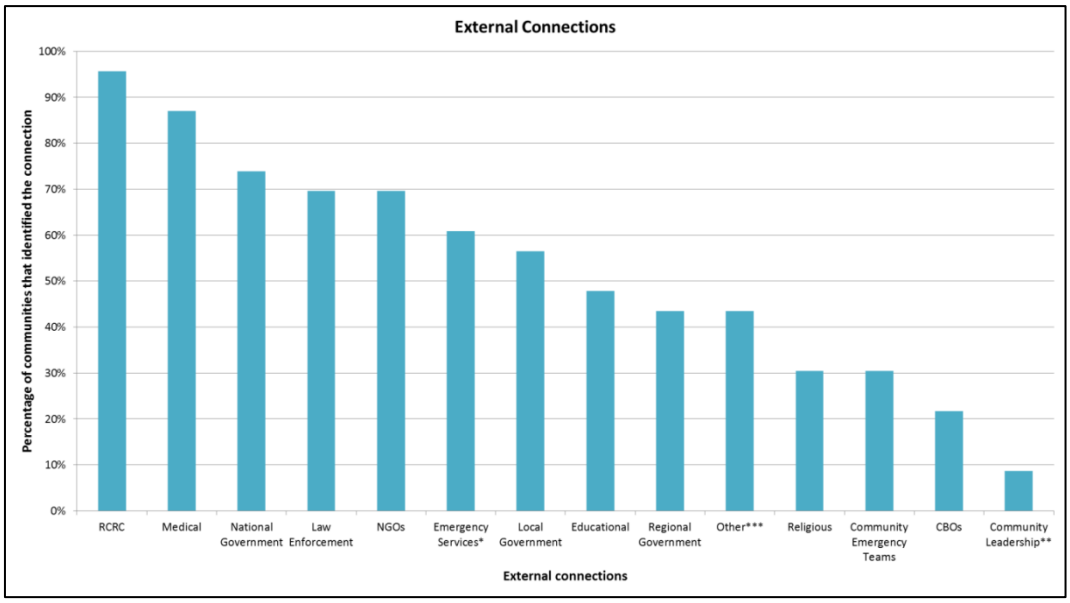
Figure 6: Community control over factors contributing to community safety and resilience



40% of factors which identified as contributing to community resilience relied on collaboration between the community and external actors, or by external actors alone.

Communities identified connections to a range of external actors (see Figure 7). The importance given by communities to various forms of external support indicates that, while the RC remain an important external connection, other actors are also equally important. This may be linked to the limitations of RC capacity to help address day-to-day, longer-term stresses of communities, and its focus upon shorter-term shocks or disaster response.

Figure 7: External community connections



* Includes Firemen and Civil Defence

** Includes Community Leaders and Influential Individuals

*** Includes Politicians, Businesses, Shops, and Economic/Financial Organisations

Only about a quarter of communities mentioned connections to government officials within the community, while over 70% mentioned external connections to wider government structures.

- Only 26% of communities mentioned an internal local government representative, indicating that a local government presence within communities in the LAC study countries is not common.[27]
- 57% of communities however mentioned connection to a local government agency, and 43% mentioned a connection to regional government.
- 74% of communities mentioned a connection to national government structures and actors. These relationships were normally between communities and specific government agencies, such as the Ministry of Health.
- Many connections to local government were felt by communities to be weak. For example, Plateau community stated that it had a relationship with the local government actor responsible for road maintenance. However the community also reported that whenever they requested him to visit the community to review the deteriorating roads he would never

[27] The definition of 'local government' was left open so that communities selected a range of local government actors, including department representatives, council members etc. The common characteristic of these actors were that they were associated with the state in some way, rather than civil society or the private sector. For this reason, local leaders – who could be seen as 'local governance' actors but were not associated with the state – were thus not considered in this grouping.

oblige. This relationship therefore was not considered to have resulted in any actions which contributed to the community's resilience.

External relationships were identified as important for securing community access to a range of services and infrastructure:

- 91% of communities identified access to and presence of health services – either within or outside the community itself – as a factor contributing to their resilience. However, healthcare facilities outside the community were identified by 20 communities while only eight communities identified medical facilities within their community.
- 48% of communities identified access to learning institutions, such as schools or training centres, outside the community as contributing to their resilience.
- Law enforcement agencies were a key external organisation identified by communities as contributing to their resilience (see Box 6); identified by 16 communities as important external actors.
- Connections to neighbouring communities for social, economic or logistical support were also seen as a factor of resilience. These links were seen as enhancing trade or livelihoods opportunities, or used for accessing medical or educational facilities.

Box 6: Diverse connections to meet different needs (Rafael Uribe Uribe, Bogota, Colombia)

The community of Rafael Uribe Uribe in Bogota, Colombia, identified a strong relationship with local law enforcement as being an important contributor to their resilience. The community identified high crime levels as a key issue in their area. Local law enforcement had provided them with training on personal security. Working with youths to increase their awareness of crime and insecurity, local law enforcement actors hhad provided personal alarms linked to the police for use in emergencies.

Box 7: Connectedness as a factor of resilience

The community displays resilience because it:

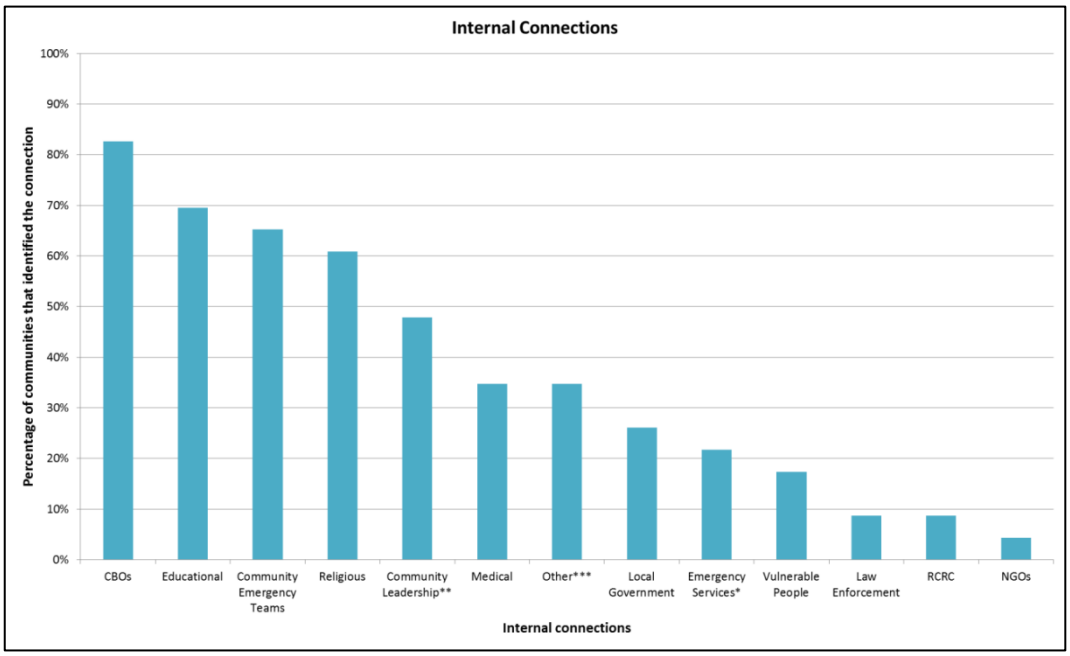
- can request assistance from a number of different external actors when required
- has access to specialist expertise and advice
- has a relationships with external supporting actors (e.g. the Red Cross, government agencies and other non-government organisations)
- benefits from social and/or logistical connections to other communities

Community cohesion

Relationships within the community, i.e. between community members, were seen to contribute to resilience by facilitating collective action in response to shocks or stresses, organising activities and sharing assets.

Factors of community cohesion were mentioned by 19 out of the 23 communities. In particular, factors relating to informal mechanisms of organisation were mentioned by 14 of the communities, making this particular factor the most often mentioned by the most number of communities, after external support. Community cohesion was seen as being built not only by formal social networks such as community-based groups or organisations, but also through informal social practices. An example of this second form of social network might be the relationship between neighbours who live in the same part of a community. (Further examples of these different types of social network or organisation are provided below).

Figure 8: Internal community connections



* Includes Firemen and Civil Defence

** Includes Community Leaders and Influential Individuals

*** Includes Politicians, Businesses, Shops, and Economic/Financial Organisations

A number of different factors were seen by communities to be associated with community cohesion:

- A 'culture of communication', relating to practices of sharing information and knowledge between community members, and awareness-raising activities implemented by community groups were identified by six communities. For example, health groups had been established with the role of increasing community awareness of sanitation measures, within several communities in Guatemala.
- Five communities identified factors of 'social inclusion' related to feelings of community spirit, supporting and helping each other, and measures for resolving conflicts within communities.
- Mechanisms of organisation were also cited as contributing to resilience, particularly formalised community-based groups, such as the COCODE community organisations in Guatemala. However, informal mechanisms of organisation were cited by 14 communities while only nine identified formal mechanisms of organisation. Many of these were informal forms of community collaboration used to strengthen other factors of resilience. For example, elderly members of the community looked after children in Las America, Colombia, which provided another source of income for the elderly, and also allowed parents to increase their livelihood opportunities.

The importance of informal networks for building community resilience was reinforced by the proportion of factors that the community identified as being undertaken by communities themselves rather than by external actors (see Figure

8). More than 80% of the factors identified were controlled or facilitated by the communities, either alone or in collaboration with external actors. Less than 20% of the factors that contributed to the safety and resilience of the community were addressed without any community involvement.

Box 8: Informal community networks building cohesion (Villa del Rio, Colombia)

In Villa del Rio, Colombia, crime was a key issue raised by the community during the workshop. While the CBDRR programme did not address this problem directly, community members noted that they now felt better able to alert each other when there was a crime due to increased feelings of community support. They also suggested that there was greater support shown by community members for the victims of crime because they now felt more cohesive as a community; i.e. united against threats affecting individuals.

It was sometimes unclear which CBOs had been formed by the RC and which were organisations which existed before the CBDRR programme began. There was evidence of a mixture of different community organisations formed by the RC and organisations that existed already in the community.[28]

- Only 9% of communities identified RC organisations as key actors within the community. 65% identified community emergency teams, 80% identified CBOs, and 48% identified local leadership.

Box 9: Community cohesion as a factor of resilience

The community displays resilience because it:

- has a culture of communication and actively shares information
- is socially inclusive and does not discriminate against social groups
- displays formal mechanisms of organisation
- displays informal mechanisms of organisation

[28] One reviewer noted the need to clarify that in many countries in the LAC region, the Red Cross forms CBOs which are distinct from the organisation, i.e. not associated with the RC. The reason given for this is that the RC does not want to assume responsibilities which should be those of civil protection services / local government structures.

Disaster response

Factors which contributed to the ability of communities to respond in the event of a disaster included the training and existence of community disaster response teams (CDRTs), early warning systems, and the ability to assess damage within the community following a disaster.

While natural disasters were highlighted as the most common type of shock affecting the 23 communities in which fieldwork was completed (see Appendix E), few communities mentioned factors of resilience relating to disaster response. Though disaster response factors were mentioned by 17 communities, no individual factor was mentioned by more than 8 communities. This may be because building resilience to disasters requires a range of contextually-relevant approaches, some of which may not be directly categorised as disaster response. Instead they may be regarded as preventative health measures or livelihoods security activities. It may also mean that disaster response factors were less important to community members than other approaches to building resilience. (See Appendix E for several examples of other influences upon community perceptions of resilience.)

Communities identified a number of factors which related to activities and assets that supported disaster response. These included:

- Functioning and appropriate response equipment. Several communities mentioned radios as important for contacting the emergency services in emergencies, whilst others mentioned vehicles which allowed them to reach stranded members of the community. Some communities also mentioned early warning systems (EWS) as important during flood events, to warn community members of approaching risks.
- Infrastructure which facilitated response, i.e. roads and bridges which allowed responders to access affected areas or external areas where support could be found.
- Community disaster response teams (CDRTs); however, only three communities mentioned RC-formed CDRTs as priority factors which supported their resilience. This may be because the variety of CBOs through which the RC worked meant they were not necessarily dedicated to disaster response (e.g. COCODE development committees in Guatemala).
- Knowledge of response procedures; within both CDRTs and also between community members and households.

Box 10: Disaster response to tidal and river flooding (Dennery, Saint Lucia)

In Dennery, Saint Lucia, many houses are at risk from both river and sea flooding, due to settlement on a delta. During a flood event in 2010 however, residents whose houses flooded were evacuated by the RC-established CDRT to nearby designated emergency shelters in local churches. As floodwaters rose within the community, the CDRT made use of dinghies and kayaks (borrowed from the local fire service) to reach community members who were unable to leave their homes; either to help them to safety or to distribute relief items to them.

One particular factor, support for other community members during and after a shock or stress, might be regarded as a factor of disaster response, but it also relates to informal community networks (such as neighbourhood watch teams or general feelings of support for one another) which were also identified under the theme of community cohesion.

Box 11: Disaster response as a factor of resilience

The community displays resilience because it:

- has a community emergency team
- has an effective and appropriate alert system in place
- is prepared physically and emotionally for emergency response (e.g. emergency plan, response equipment, preparation of belongings, awareness of evacuation procedures and locations)
- supports each other (including the most vulnerable) during and after a shock or stress
- has access to humanitarian aid and general relief items
- can assess and repair damaged houses, infrastructure and its surrounding environment (internally or through external support)

Knowledge

The theme of knowledge encompasses factors which contribute to community resilience to a large range of shocks and stresses not only those directly attributed to natural disasters; for example knowledge on healthcare, social issues, hygiene, livelihoods and food security alongside knowledge about natural disaster risks.

Several factors of community resilience relating to knowledge were linked to prevention or preparation for disasters (as briefly mentioned above). Of these, a

particular factor of note was the use of traditional knowledge . For example, in C-12, Guatemala, where home remedies were used where access to medical facilities was limited.

Other factors related to education facilities, for example health, protection of the environment, or awareness of personal safety. Health knowledge was also seen to contribute to community resilience, and activities undertaken by the RC to develop this knowledge included first aid training and awareness-raising on hygiene and cleanliness (see Box 12).

Box 12: Ongoing support to sustain health knowledge (San Francisco la Cocona, Guatemala)

San Francisco la Cocona, Guatemala, demonstrated a high level of knowledge relating to health measures as a result of RC training in the area. However, they also noted some negative change in knowledge after the CBDRR programme had finished. The community teams formed to spread awareness no longer operated, or the leadership had changed and the knowledge had been lost. It was observed that the RC had not maintained a strong relationship with the community since the programme had finished. This may account for why the teams formed and the knowledge they had been trained with had not been well-sustained.

In terms of environmental management, at least two communities identified the need to maintain the cleanliness of their surroundings. One, Santa Maria in Guatemala, said that it had formed a community cleaning group to maintain their surroundings and remove waste.

An awareness of personal security was identified as a further key factor of community resilience; mentioned ten times by communities. This factor, as well as informal community support networks, and good connections to law enforcement agencies, all reflect a concern about crime and insecurity in the communities which participated in this study. (For further details on this topic see Appendix F).

Box 13: Knowledge as a factor of resilience

The community displays resilience because it:

- is aware of best practices leading to and maintaining good health (e.g. maintaining hygiene and immunity, the causes of diseases, and can administer first aid)
- can use traditional knowledge to overcome shocks and stresses
- is aware of the importance of protecting the environment
- has received and can apply training on shocks and stresses
- shows awareness of personal security

Livelihoods

Communities highlighted issues relating to livelihoods security as directly affecting their resilience, however few communities were able to identify factors which helped them address these issues; examples included community members being able to seek work outside communities or becoming self-employed and setting up their own businesses.

Unemployment and issues relating to livelihoods security were a key area of concern for communities; these issues were noted as the second most common stress by the 23 communities. Very few communities were able to mention factors of resilience in relation to protecting their livelihoods.

Many of the communities where unemployment was a prevalent stress cited the education of young people as a way for future generations to improve their resilience by finding alternative employment, often outside the community. Other forms of support for livelihood security were identified in training or support from the government or other actors, which allowed community members to build their skills or capacities. Schemes or social support which alleviated poverty were also proposed as factors which contributed to resilience under this theme.

Most of the factors of resilience in this theme related to the internal capabilities of the community to seek alternative forms of employment, i.e. to diversify their employment opportunities (see Box 14). Diversifying livelihoods opportunities cited more commonly as ways to build resilience in this area, rather than supporting existing livelihood options. However, importance was also given to external support for livelihoods training. One particular factor of resilience or coping mechanism to deal with unemployment was links to other communities to enhance trade opportunities; echoing the theme of connectedness discussed earlier. For example Santa Rosa, Guatemala transported crops to Chiquimula to sell them, and Santa Maria, Guatemala, expanded the market for its crops by selling produce in neighbouring communities.

Box 14: Livelihoods diversification (Santa Maria, Guatemala)

In Santa Maria, Guatemala, fishing had been a major source of livelihood for community members for many years. However, lowering levels of fish stocks meant that community members had to look for alternative means of employment. The community had adapted through a number of different measures. Local fishermen had formed an association to seek support from NGOs and women in the community had been trained in baking skills by an NGO and were now selling their products in a neighbouring community. This example also demonstrates the importance of links outside of the community to bring in new skills, meet the changing needs of the community and allow it to adapt.

Box 15: Livelihoods as a factor of resilience

The community displays resilience because it:

- can take alternative employment (on a temporary / seasonal basis when required)
- can work longer/harder hours and take greater risks in adverse conditions
- is entrepreneurial
- receives livelihoods support from district or national government, and external agencies
- uses relationships with neighbouring communities to enhance trade and prosperity

Preparedness

Factors which built resilience in relation to a community's preparedness were typically activities or assets which mitigated the risks of shocks or stresses; for example, the stockpiling of relief items and the existence and maintenance of emergency shelters.

Factors of resilience which related to preparedness were mentioned by the second smallest proportion of communities. This suggests that either mitigation activities are not seen as important by the communities or that mitigation of shocks and stresses was taken through an indirect approach. For example, improvements to road drainage may be seen as a way to improve transport infrastructure, but may also act as a mitigation approach against flooding. Whilst drought could be categorised as a slow-onset disaster, many of the mitigation measures identified to address it may relate more to diversifying livelihoods, or environmental protection, for example. Perceptions of risk and vulnerability may also be influenced by the perceived long-term nature of stresses within the communities;

and a feeling that these are harder or impossible to prepare for. One example is the stress of unemployment.

Preparation for shocks included:

- Establishment and maintenance of shelters, such as the network of churches and nightclubs officially designated as hurricane shelters across Saint Lucia.
- The completion of disaster plans. Several communities in Guatemala had a community disaster plan in an easily accessible location. For example in C-12 (see Box 16) the disaster plan was located outside the house of a local leader in a central location near the school.
- Awareness-raising activities within communities to inform people what to do during disasters, health outbreaks, water shortages etc.
- The stockpiling of relief items in case of disaster events. However it was also noted that such stockpiles need to be replenished following disaster events. In Dennery, Saint Lucia, following a large flood event in 2010, much of the CDRT's kit, including rubber boots and waterproof clothing, had not been returned to the kit store. Should a similar event occur now, the store would not have the necessary equipment to mount a well-prepared relief effort. This example suggests that disaster preparation should be an ongoing activity within communities for it to contribute to their resilience.

Box 16: Preparation for flooding (C, Guatemala)

C-12 community in Guatemala was a well-organised community at risk of flooding. The community had a variety of measures in place to prepare. The community received support from the RC and the municipality for food when there was a flood. They had received training on procedures. They had designated meeting areas, a disaster plan, and a community kitchen. They had an officially recognised community emergency team (CONRED). They had radios to communicate with the authorities. They had prepared their possessions. They were also prepared to support each other to clean and repair damage afterwards.

Box 17: Preparedness as a factor of resilience

The community displays resilience because it:

- stockpiles food and medical supplies, stores water, and uses it efficiently
- has a fit-for-purpose emergency shelter (where appropriate)
- undertakes mitigation activities to address long-term shocks and stresses (e.g. water/electricity shortage, social problems, crime, unemployment)
- undertakes mitigation activities to address natural disasters
- undertakes mitigation activities to address diseases (e.g. water-borne or vector-borne diseases)

4.2 Changes to factors of resilience

To attempt to examine how the CBDRR programmes have affected community resilience, communities commented on change in the factors which affect their resilience over time. Communities were asked to rank the state of each identified factor of resilience (i.e. from the worst something could be, 1, to the best, 10) before the CBDRR programme began, after it finished, and currently.

This allowed identification of the nature of change over two time periods:

1. From before the CBDRR programme to the period when the programme formally ended; and
2. From the formal end of the CBDRR programme to now (i.e. when the workshop was conducted).

Communities generally identified improvements to the factors of resilience during implementation of CBDRR programmes. However, there were also some factors which did not exhibit any change, and in some cases factors were seen to have worsened, i.e. exhibited negative change. It should be stressed that whilst analysis of change over time in these coping mechanisms can suggest that the CBDRR programmes and the actions of the Red Cross may succeed in building community resilience, the sustainability of these programmes cannot be determined by this analysis.[29]

Particular changes noted were:

- Significant positive change, i.e. improvement, was seen in factors directly related to the implementation and knowledge of disaster response, water and health interventions. Mostly these improvements were linked to RC training and interventions. For example, 11 communities identified training from the RC has a key factor of resilience and all mentions of training noted a positive change from before to after the CBDRR

[29] A reviewer of an earlier draft of this report expressed concerns that, in order to achieve sustainability and to avoid creating dependency on the RC, CBDRR programmes should be undertaken using a developmental approach, and that they should be used to establish new RC branches. Interventions should create pathways to transformation within communities.

programme. However, improvement to these factors decreased after the CBDRR programme finished, indicating that communities find it hard to maintain these factors without support from the RC.

- Significant positive change was seen in informal networks of support, suggesting that interventions by the RC may had the effect of strengthening community social networks.
- Significant change was also seen in links to external actors, both positive and negative. After some of the CBDRR programmes finished however communities often found it difficult to maintain or form new external connections, with connections to local government deteriorating significantly.[30] This reinforces the importance of building community capacity to maintain and develop not only the physical interventions implemented by the RC, but also the social networks and relationships established and supported.

Services and infrastructure

Nearly all factors relating to services and infrastructure showed positive change over both time periods (during and after the CBDRR programme), apart from access to transport infrastructure. Transport infrastructure is a factor over which the community typically has minimal influence; this is reflected in the reasons given for negative change over the course of the programme and since its end in San Francisco la Cocona, Guatemala.

Positive change was noted in some communities in relation to access to health and medical facilities (from before the programme to the current time of the workshop). However in many communities there was no change to this factor and in a few there was negative change. Positive change was mostly related to improved access to medical facilities locally. This reduced the need to travel or find alternative means to access health facilities. Occasionally this was due to RC-delivered first aid training. Negative or no change was noted where access to facilities had not improved, or local closures had reduced accessibility.

The most frequent improvements noted immediately after the CBDRR programme ended was in water infrastructure. Reasons given for increases in access to water infrastructure came from interventions and assistance from a range of actors including the RC, NGOs, health services, the government and the private sector. For example in Maria Auxiliadora, Colombia, contamination of drinking water had been reduced through a number of RC interventions, including donation of water filters. Community members had been trained on how to protect water containers and how to treat and boil water too.

Considerable positive change was seen in the use of community resources. Often this referred to community members using their own individual, or shared

[30] For example, the deterioration of government flood defences in Via del Rio, Colombia; changes in local authority leadership in San Francisco la Cocona, Guatemala had meant a discontinuation of support for the maintenance of roads.

resources to pay for transport to access medical facilities. Positive change in access to education was linked to changing attitudes towards children's education, with parents encouraging children to study more and for longer in order to have better livelihoods options in the future.

Positive change in access to law enforcement agencies was related by communities to improved levels of connectedness, and improved relationships with police systems.

The most significant negative change during and after the CBDRR programmes was in access to transport infrastructure. Communities felt that this negative change was due to road deterioration over time due to lack of maintenance by government actors.

Many of the positive changes in this theme link to improved external community connections. For example, improved education, links to law enforcement agencies and pooling resources to access external services. In contrast, most negative change was seen where these connections had been limited, often through the deterioration of transport infrastructure. This highlights again the importance of connectedness for communities to build their resilience.

Figure 9: Change to services and infrastructure before-after the CBDRR programme

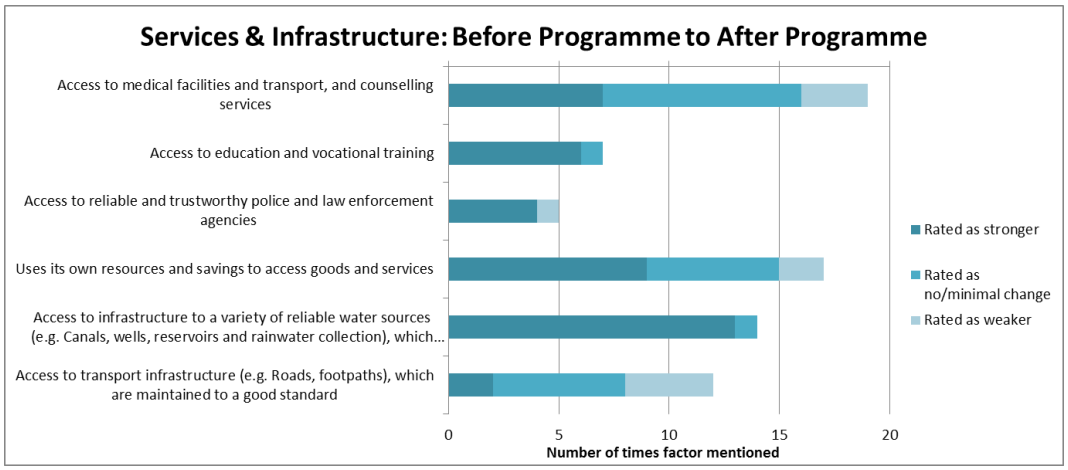
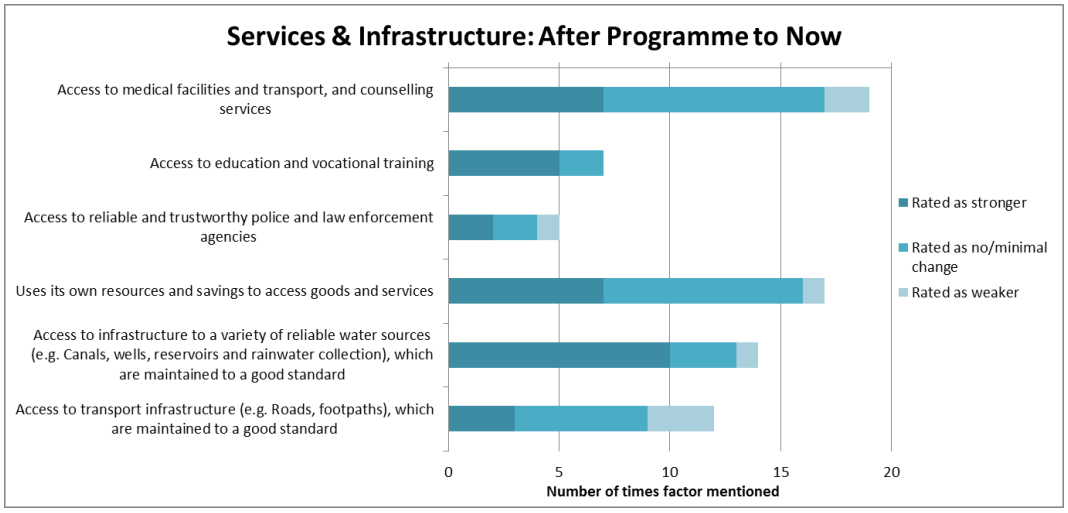


Figure 10: Change to services and infrastructure after CBDRR programme – now



Connectedness

The connectedness of communities generally improved over both time periods, with most positive change seen in the relationship between the community and a range of external organisations (see Figures 11 and 12). This positive change was largely due to improved connections with the RC. However some of the change was also due to stronger connections with a local authority or other NGOs. This suggests that the communities value the support they receive from external actors in building their resilience. However, some of the neutral or negative change was due to a poor relationship with the local authority (often linked to poor maintenance of transport infrastructure, as in Plateau, Saint Lucia). This suggests that the quality of external connections can both positively and negatively influence community resilience.

The ability of a community to request assistance in times of shock or stress did not show much positive change between the end of the programme and the time of the workshop. This lack of positive change was mainly because, while the community may have increased their connections through the programme, they had not made any new connections since it ended. This indicates that, after the CBDRR programme had finished, communities found it difficult to maintain or build new relationships to external actors. The findings therefore suggest that while the CBDRR programme has had a positive effect on the connectedness of communities, this is mostly through direct connections with the RC, rather than through improved connections to other organisations.

Several communities noted a positive change over both time periods in connections to other communities. Often this was due to increased access to services, or increased diversification of options for trade to build community livelihoods opportunities.

Figure 11: Change to connectedness before-after the CBDRR programme

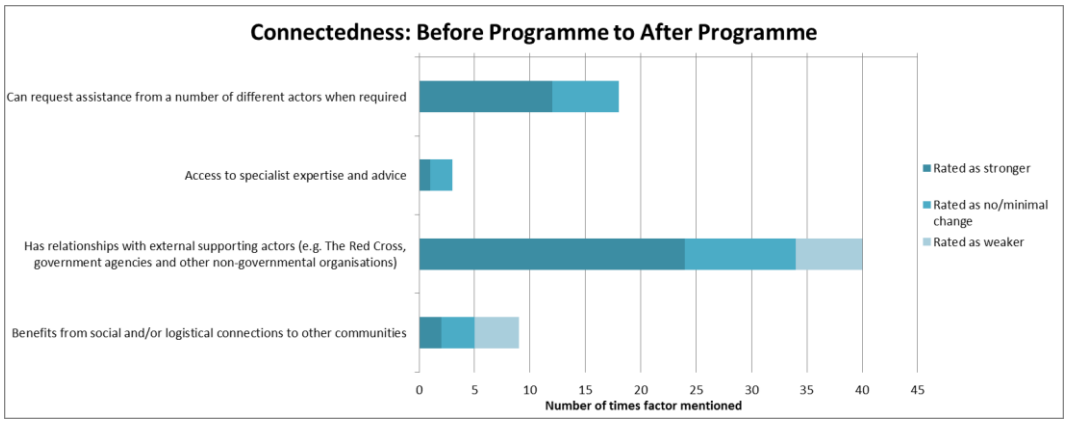
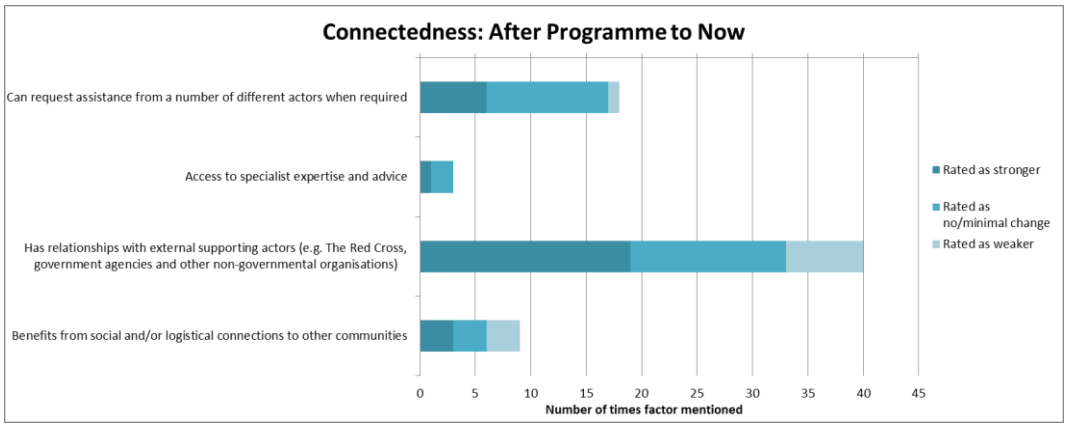


Figure 12: Change to connectedness after CBDRR programme - now



Community cohesion

Improvement was shown in all factors relating to community cohesion over both time periods (see Figures 13 and 14). The most frequently mentioned factor which demonstrated the greatest improvement was informal mechanisms of organisation. In a number of communities informal support networks within the community had been strengthened by members being brought together through the CBDRR programme (as discussed in Box 8).

Less frequently mentioned were factors relating to formal mechanisms of organisation and less positive change was noted in these mechanisms after the CBDRR programme had finished. This may indicate that the formal organisations built during CBDRR programmes were less sustainable than the informal networks they created, supported and enhanced. For example, in San Francisco la Cocona, Guatemala, the community noted that the leadership of the water committee formed five years ago had changed and the committee was no longer so active; in contrast the community does now collect money to help pay people pay for transport as the community feels more united.

Figure 13: Change to community cohesion before - after the CBDRR programme

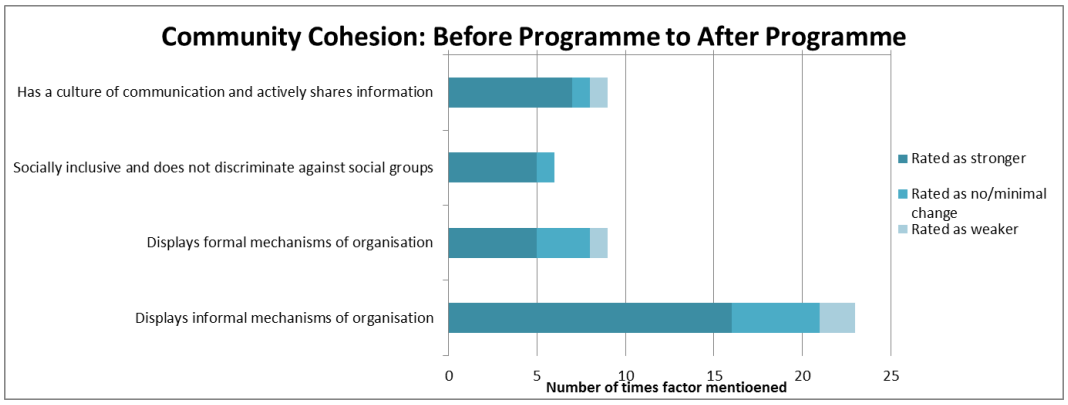
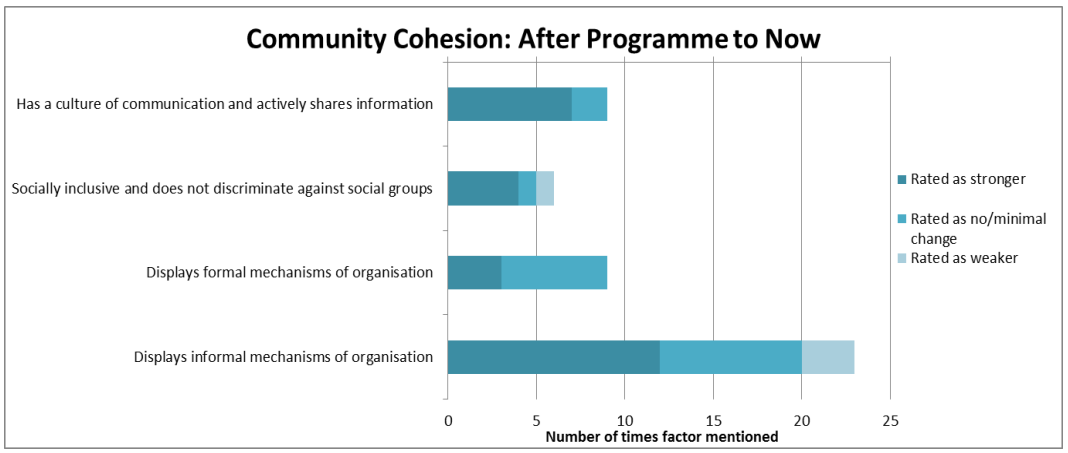


Figure 14: Change to community cohesion after CBDRR programme - now



Disaster response

Nearly all factors relating to disaster response showed significant positive change between the start of the programme and the time of the workshop. The most positive change was noted to occur over the course of the programme, affecting a community's physical and emotional preparedness; i.e. a community felt most prepared for a disaster immediately after the CBDRR programme ended. This was thought to be due to the RC training on disaster response provided for community members. RC support in the form of construction of community shelters and the provision of equipment was also noted as influencing this improvement.

Several factors showed only limited positive change in the period of time since the CBDRR programme finished and when the workshop took place. The factor that showed the least positive change was internal support for other community members. Negative change in this factor in some communities was due to rising crime rates and the community becoming less unified and supportive than it used to be; as noted in Rafael Uribe Uribe, Colombia.

The only factor that showed a mixture of positive and negative change in the second time period was community support for the most vulnerable. This was correlated with changing levels of community cohesion. This suggests that while

RC interventions are successful in raising community awareness of disaster response approaches, they have been less successful in building and maintaining community cohesion, although this is identified as an important aspect of resilience.

Figure 15: Change to disaster response before - after the CBDRR programme

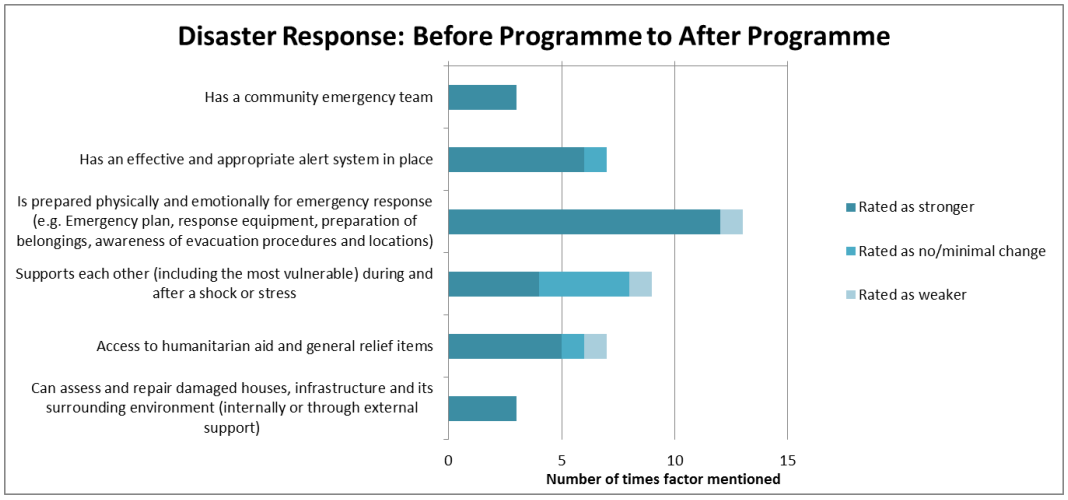
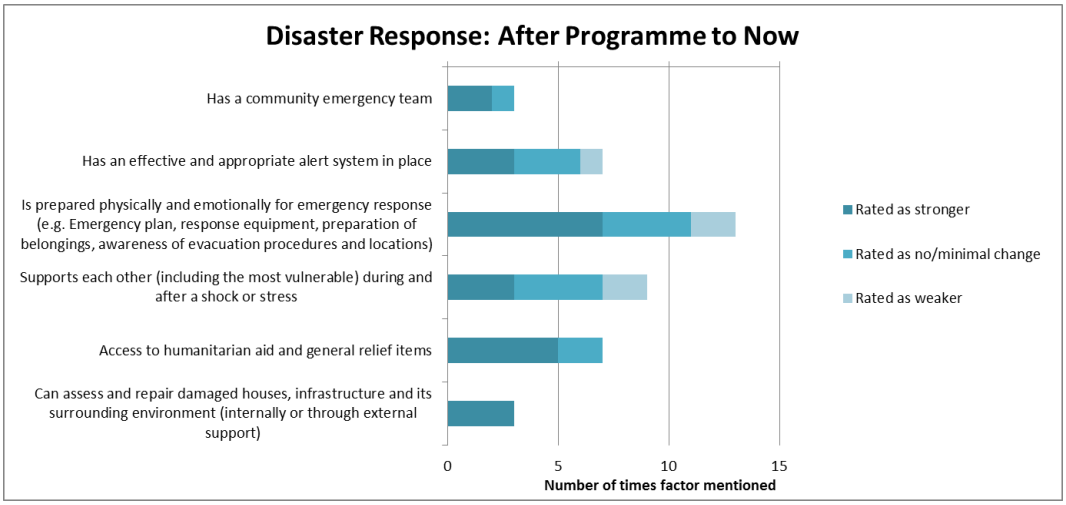


Figure 16: Change to disaster response after CBDRR programme - now



Knowledge

Most positive change in knowledge related to community members receiving training on shocks and stresses. Significantly however there was more positive change in this factor perceived immediately after the CBDRR programme finished. This indicates that communities struggle to retain or improve this knowledge without an ongoing relationship with the RC following the programme's end. When asked to provide their recommendations for the RC, many community members said that they would like to receive more training.

Community members discussed how, without continued training, knowledge is forgotten, or lost through changes in leadership and group members leaving communities or CDRTs.

Another important factor was awareness of personal security. However, both negative and positive change in this factor were noted over both time periods, which indicates that this factor may be largely unaffected by CBDRR programmes. Where there was positive change in correlation with the CBDRR programme it was seen as being due to increased support between community members. Some communities identified CBDRR programmes as indirectly affecting this support through increased community cohesion.

Figure 17: Change to knowledge before - after the CBDRR programme

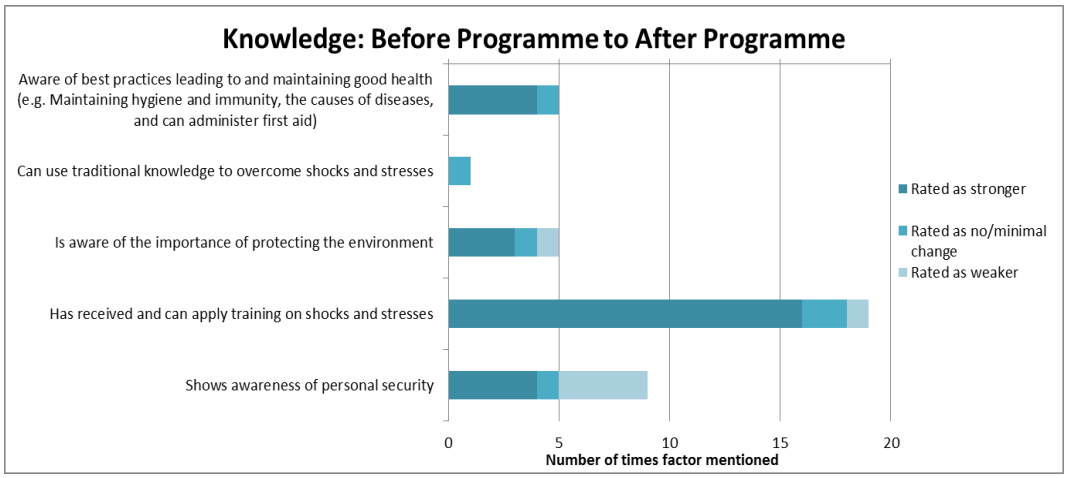
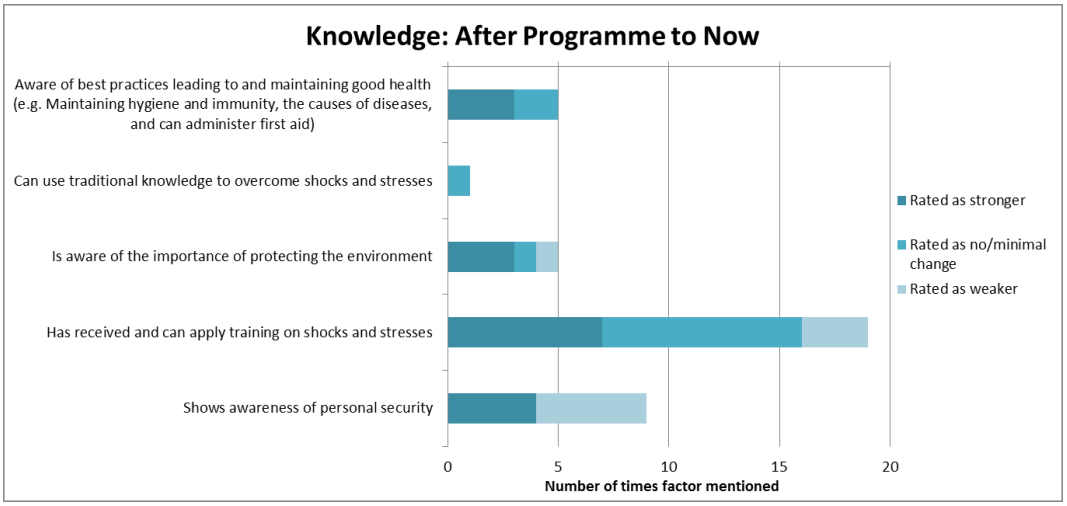


Figure 18: Change to knowledge after CBDRR programme - now



Livelihoods

Significant negative change was seen in livelihood factors relating to alternative employment opportunities. However other factors showed marginally more positive change than negative, between the CBDRR programme and current time. For example, the negative change in a community member's ability to find alternative livelihood options was mostly due to changes in local employment opportunities; either through local industry (such as the closure of a large manufacturing plant in Dennery, Saint Lucia) or changes in demand for certain forms of employment. Las Americas in Colombia identified several previous forms of employment that no longer existed; for example, clothes washing used to be a form of employment, but now many people had washing machines.

In other livelihoods factors mentioned there seemed to be marginal improvement, but no strong change either positively or negatively. This lack of significant positive change suggests that the CBDRR programmes have had minimal impact on factors of resilience relating to livelihoods opportunities in the LAC study communities.

Figure 19: Change to livelihoods before - after the CBDRR programme

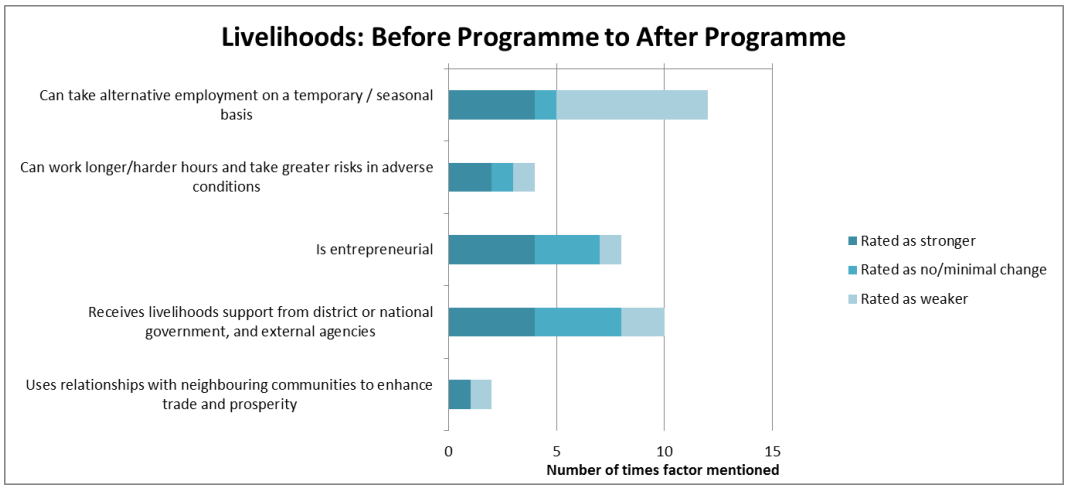
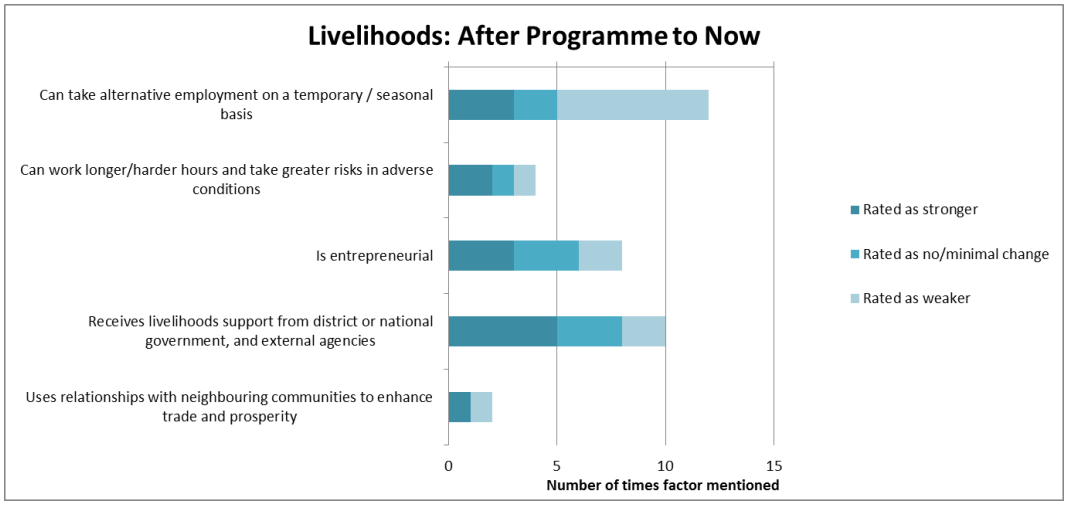


Figure 20: Change to livelihoods after CBDRR programme - now



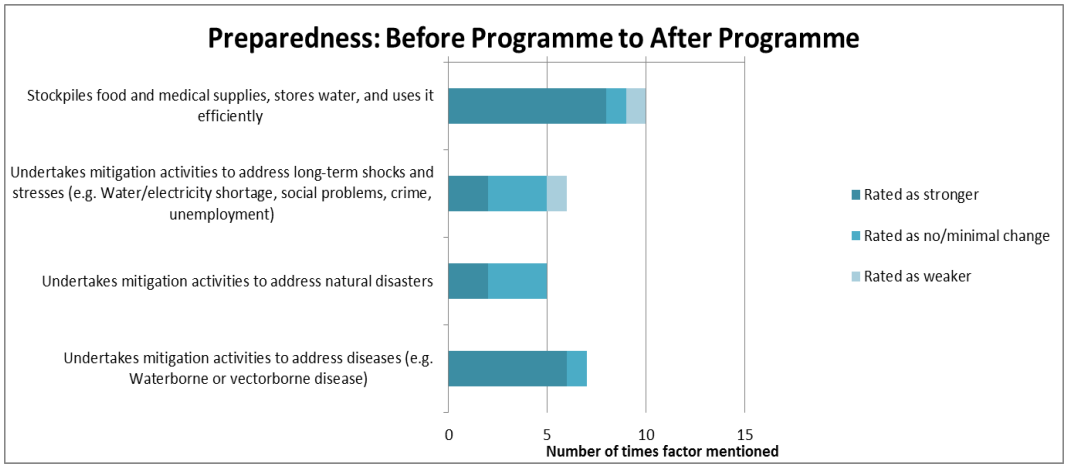
Preparedness

Communities noted little variation to preparedness factors since the CBDRR programme was implemented. However, substantial positive change was suggested in relation to some mitigation activities. Practices of stockpiling food and water and controlling water-borne diseases showed the most improvement over both periods of time. Positive change in stockpiling was largely due to RC education and support in water collection and storage (for example Maria, Auxiliadora, Colombia, and Granada and San Francisco la Cocona, Guatemala, all identified support from the RC on water usage). Improvement in controlling water-borne diseases was also credited to RC interventions, but also through support from the Ministry of Health in Entrepot, Saint Lucia.

Less positive change was seen in specific mitigation activities undertaken to address natural disasters, and also activities undertaken to address long-term stresses, such as drought. Several communities in Guatemala stated that finding alternative water sources was increasingly difficult due to population pressures and increased occurrence of drought.

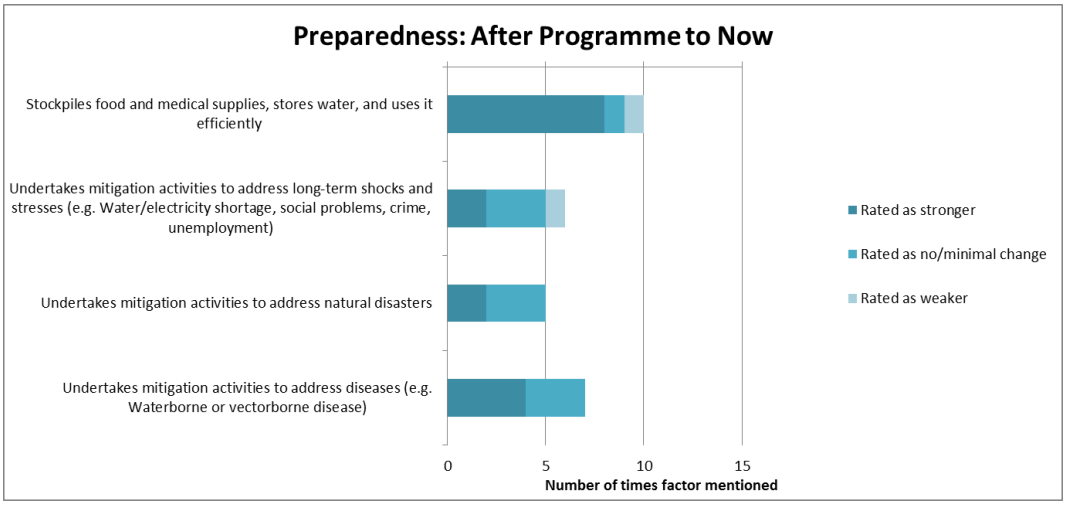
As stated, the most frequently mentioned factors which contributed to disaster preparedness were stockpiling food, medical supplies and the efficient use of water. This could be because other factors relating to disaster response mechanisms were not coded as preparation factors even though they measures which mitigate disaster risk. However, it also reflects the importance given to long-term stresses over shocks identified by the communities (see Appendix E for more details). This suggests that CBDRR interventions that addressed longer-term stresses had a greater impact on community resilience than disaster mitigation interventions. This finding reinforces the need for more integrated programming.[31]

Figure 21: Change to preparedness before - after the CBDRR programme



[31] Arup (2013) *Community-based disaster risk reduction study - Latin America and the Caribbean: Key Determinants of a Successful CBDRR Programme*. Draft 21st March 2013

Figure 22: Change to preparedness after CBDRR programme - now



5 Analysis

This section brings together the findings from fieldwork and literature research to determine the *characteristics of a safe and resilient community* in the LAC zone, based on evidence from three study countries: Colombia, Guatemala and Saint Lucia. These characteristics (in Box 18 below) have been developed from an in-depth analysis of both primary and secondary data from the LAC study countries. The characteristics build on the findings of the TO study, whilst demonstrating the distinctiveness of the second phase study communities, their perceptions of resilience and their approaches to building it.

The LAC phase of the CBDRR study used a similar but refined methodological approach to gathering and collecting data for analysis to the methodology used in the TO study. Care was taken to ensure the comparability of the findings, and measures were taken to reduce bias in its analysis.

The literature review highlighted the social and societal influences on community resilience. The analysis of fieldwork data then reflected these findings in the importance given by communities on the ties and connections that provide social systems of support, and an emphasis on the quality and endurance of these relationships. The use of primary, secondary and tertiary coding of the data allowed the importance of these connecting social aspects of resilience to emerge strongly in the LAC zone. The findings from both sources have been used to develop the *characteristics of a safe and resilient community* contextualised for the LAC study countries.

A key theme emerging from the literature review and the fieldwork undertaken in Latin America and the Caribbean is an emphasis on the social factors which contribute to community resilience. Most of the practical guidance documents within the literature review conceptualised resilience based on international literature. However, where new regional LAC interpretations were found - particularly in the theoretical documents analysed - they indicated a greater emphasis on the culture and forms of social organisation.

Emphasis on the social aspects of resilience was also found in the fieldwork data. Many of the shocks and stresses identified by communities (see Appendix E for details of these particular shocks and stresses) and the factors which contributed to community resilience suggest a significance of social effects upon community risk, and their own responses to these risks. For example the effects of increased social cohesion on community resilience to crime in Villa del Rio (see Box 6).

The emphases on social approaches to building resilience emerging from this LAC study suggest that a development of the *characteristics of a safe and resilient community* should take into account individual and communal perceptions of, and approaches to, building resilience. A more social interpretation of resilience, as well as the integration of several other key factors observed, led to the proposal of the *characteristics of a safe and resilient community* in the LAC region (see Box 18).

Box 18: A safe and resilient community in Latin America and the Caribbean…

… is knowledgeable, healthy and can meet its basic needs. It has the ability to assess, manage and monitor its problems, needs and opportunities. It can learn new skills, build on past experiences, and share and apply this knowledge in practice.

… is socially cohesive. It has the capacity to draw on informal and formal community networks of support to identify problems, needs and opportunities, establish priorities and act for the good and inclusion of all in the community.

… has well-maintained and accessible infrastructure and services. It has strong housing, transport, power, water and sanitation systems. It has the ability to access, use, maintain, repair and renovate these systems.

…has economic opportunities. It has a diverse range of employment opportunities and access to systems for developing skills and enhancing trade opportunities. It is flexible, resourceful and has the capacity to accept uncertainty and respond (proactively) to change.

…can manage its natural assets. It recognises their value and has the ability to protect, enhance and maintain them.

… is connected. It has the capacity and capabilities to develop and sustain positive relationships with a range of external actors, which can provide a wider enabling environment and it can request forms of tangible and intangible support from outside the community when needed.

Where tangible resources are identified as factors contributing to community resilience, the qualities of these resources has also been noted as significant. For example, rather than suggesting a resilient community has infrastructure and services, we suggest that a safe and resilient community has *well-maintained and accessible* infrastructure and services. As illustrated by the fieldwork findings, while communities often had access to resources, they could not effectively use them due to poor levels of maintenance or difficulty of access (e.g. access to medical facilities in the Santa Tomas region of Guatemala; and maintenance of transport infrastructure in communities in all three countries).

Themes of disaster response and preparedness whilst discussed in the fieldwork findings are not included as characteristics. All of the factors which supported resilience under these themes could also be assigned to other themes; for example, awareness of disaster response and preparedness activities could also be considered under the theme of knowledge.

The above characteristics demonstrate the emerging interpretation of the six characteristics of community resilience in Latin America and the Caribbean. Each characteristic of a safe and resilient community in the LAC region is discussed in Table 5 below, examining how the characteristics have emerged from the interpretation of the LAC region findings; and what this suggests for the *characteristics of a safe and resilient community* in Latin America and the Caribbean.

Table 5: The development of the LAC region characteristics

A safe and resilient community…	
… is knowledgeable, healthy and can meet its basic needs. It has the ability to assess, manage and monitor its problems, needs and opportunities. It can learn new skills, build on past experiences, and share and apply this knowledge in practice.	The importance of awareness about how to prepare and respond to risks was a key factor of resilience in the LAC study. Maintaining health was also of key significance. • The LAC study findings emphasised the importance of sharing knowledge and experience within the community, not only about responding to risks, but also about opportunities that may arise to support the community and address its various needs (e.g. livelihoods training opportunities, external funding sources etc.). • The LAC study findings emphasised the importance not only of increasing knowledge, but being able to apply it in practice. • While good health was a key factor contributing to resilience identified by the findings, other factors relating to meeting basic needs also emerged as important (e.g. storing food and treating water). Basic needs were therefore identified as an additional aspect of this characteristic. • Where a community was not healthy or meeting its basic needs then shocks or stresses identified by communities were related to these themes (e.g. drought leading to a lack of water, or failed crops; lack of medical facilities, or transport infrastructure to access medical facilities). This suggests that meeting the health and basic needs of a community are priority actions to be taken in building community resilience.
… is socially cohesive. It has the capacity to draw on informal and formal community networks of support to identify problems, needs and opportunities, establish priorities and act for the good and inclusion of all in the community.	As noted above, social cohesion was a theme of resilience that emerged as particularly important across the LAC study communities. This characteristic builds on the concept of organisation, through either formal or informal mechanisms, as a characteristic. Social cohesion emphasises the importance of organisation not only as a system through which communities act to resolve problems, but also as an ongoing system to maintain day-to-day stability. Social cohesion also implies the development of social networks that are inclusive and supportive of vulnerable members of the community.
… has well-maintained and accessible infrastructure and services. It has strong transport, water and sanitation systems. It has the ability, or support, to use, maintain, repair and renovate them. It has access to sufficiently resourced medical and educational facilities.	This characteristic posits that a community's services and infrastructure need to be maintained and accessible for use, if they are to contribute to resilience; it is not enough for them to merely be present within a community. One commonly noted aspect of this characteristic in the LAC study communities was access to education and medical facilities with sufficient resources to help communities address their needs. For example, in some communities while medical facilities were present they were under-resourced, without sufficient staff or medicine, forcing people to travel elsewhere to address their needs. In other cases, where communities had to travel outside the community to access medical facilities, transport infrastructure was poorly maintained or costly, limiting their access to this service.

…has economic opportunities. It has a diverse range of employment opportunities and support systems for developing skills and enhancing trade opportunities. It is flexible, resourceful and has the capacity to accept uncertainty and respond (proactively) to change.	Fieldwork findings suggest that a diverse range of employment opportunities for communities is important in LAC. Of particular importance in the region was the diversity of external actors and relationships drawn upon to increase livelihood opportunities, to develop skills and enhance trade. For example, several communities discussed the importance of connections to other communities for trade, and training delivered by NGOs on skills to diversify livelihoods was also seen as important. Many of the communities also identified the ability of the community and its individuals to adapt to take advantage of changing employment opportunities.
…can manage its natural assets. It recognises their value and has the ability to protect, enhance and maintain them.	Many of the shocks and stresses discussed by communities during the fieldwork, and the associated factors of resilience identified, were linked to a community's ability to access and use natural assets. For example drought and the subsequent failure of crops were often linked to coping mechanisms such as diversification of livelihood opportunities or practices such as rainwater harvesting.
… is connected. It has the capacity and capabilities to sustain and build on good relationships with a range of external actors, who can provide a wider supportive environment, and it can request to supply tangible and intangible forms of support to the community.	The significance of connectedness for the LAC study communities can be understood not only as connections to actors who can provide resources, but also in terms of actors who provide opportunities for community capacity building, such as training. This significance emphasises the importance of maintaining positive relationships with such actors. It also highlights the importance of community ability to understand how existing connections and skills can be used in negotiating with external actors to meet its changing needs and cultivate new relationships which may be of benefit in the future.

A safe and resilient community is made up of healthy individuals who have their basic needs fulfilled, and who are knowledgeable about how to use the resources they possess to build their resilience. A safe and resilient community is socially cohesive and displays formal and informal social mechanisms which support individuals to increase resilience. A safe and resilient community has access to well-maintained infrastructure and services, has access to a diverse range of economic opportunities, and has access to sustainable natural resources that it can use to build resilience; it has a range of positive and sustainable external connections, and has the capacity and capabilities to use external networks to access, maintain, diversify and support its changing needs.

Figure 23: Scales of community safety and resilience

6 Regional trends and variations

This study outlines the findings from the second phase of the IFRC's CBDRR study. Whilst we cannot yet suggest globally applicable concepts of community safety and resilience, we can identify some of the emerging trends and variations that can be seen between the first two phases of the study; between the Tsunami Operation study completed in South/Southeast Asia and the Latin America and the Caribbean study.

6.1 Themes and factors of resilience

The methodological approach to the LAC study was developed with close reference to the TO study, to enable collected data from the LAC study countries to be compared with data from the South/Southeast Asia region countries of the TO study. However, the analysis and grouping of the data was undertaken inductively, without reference to the TO study to reduce the potential for bias (see Appendix B for more details).

An overview of similarities and differences between the factors of resilience developed from the fieldwork data highlights some of the emerging trends and difference between these two regional studies (see Table 6).

Table 6: Comparison of themes of resilience identified in both the LAC and TO studies

Themes of resilience from LAC study fieldwork	**Themes of resilience from TO study fieldwork**
Knowledge	Knowledgeable
Community cohesion*[32]	Basic needs
Preparedness*	Mitigation
Disaster response*	Evacuation
Livelihoods	Recovery
Services and infrastructure	Livelihoods
Connectedness*	Services and Infrastructure
	Coordination

[32] New or renamed themes (which were not identified in the TO study) are marked with an asterisk.

Between the two studies there were many similarities in the factors which contributed to community **knowledge**. The most significant difference however was the identification of knowledge factors related to personal security as a new factor in the LAC study communities. An improvement in awareness of health and sanitation measures following CBDRR programmes was observed in both studies.

Strong reference was made to community support networks in the LAC study, resulting in **community cohesion** being identified as a theme. In particular, differentiation was made between formal and informal mechanisms of organisation and support and inclusion within the community. While there were only two factors relating directly to community cohesion identified by the TO study, more positive change was indicated in the formal mechanisms of organisation in South/Southeast Asia than in the LAC study. Communities which participated in the LAC study also displayed a greater diversity in the range of organisations and individuals working with the RC than communities in the TO study. This may indicate that informal networks have greater significance for building community resilience in the LAC study countries, than for those countries involved in the TO study.

Measures to address long-term stresses were a new factor of **preparedness** identified in the LAC study communities, though social problems such as drug abuse and unemployment were also identified by communities which participated in the TO study, and measures to address social problems was cited by them as a mitigation factor of resilience.

The factors relating to **disaster response** identified appear to be similar in the TO and LAC study countries. The only significant difference was that communities which participated in the TO study discussed emergency shelter from disasters as being in the form of shelter in private residences;[33] in LAC study communities, emergency shelters typically referred to public spaces or buildings. Support for the most vulnerable members of the community during disaster response was identified as a new factor by communities which participated in the LAC study; it was identified within secondary research in the TO study but not explicitly discussed in the fieldwork.[34] Positive change in factors of disaster response was noted in both studies due to increased knowledge from training. The effects of community cohesion were noted in both studies as either positively or negatively influencing the community's ability to respond to disasters.

There were also many similarities between the **livelihoods** factors identified in the LAC and TO studies. For example entrepreneurialism and looking for alternative sources of employment were the two most frequently cited factors of resilience in both studies, suggesting adaptability to changing opportunities is a key factor of resilience across both regions. The main difference however was in the importance of links to neighbouring communities for trade identified as a new factor of resilience in the LAC study.

[33] IFRC / Arup (2012a) *Characteristics of a safe and resilient community*. Geneva: IFRC, p45
[34] IFRC / Arup (2012a) *Characteristics of a safe and resilient community*. Geneva: IFRC, p42

There were many similarities between the factors of resilience relating to **services and infrastructure** discussed by communities in the LAC and TO study countries. There was a similar level of significance placed on access to medical and educational facilities for example. Access to water and transport infrastructure and the means to use them were also important in both regions.

In the LAC study countries, factors of resilience relating to **connectedness** did appear to reflect similar findings to the TO study's theme of coordination. In the TO study communities however, positive change in relation to coordination was generally seen to be due to improved connection with the government, whilst in the LAC study communities negative change was generally associated with a deteriorating relationship with local government actors outside the community. In the LAC study communities, greater emphasis was given instead to relationships with non-government actors and organisations outside the communities. For example, similar importance in both studies was attributed to external health and education institutions. Relationships with financial institutions were not frequently mentioned in either study. Relationships with law enforcement agencies were noted by LAC study communities only. A number of communities in LAC study countries also benefitted from social links with neighbouring communities, which was not cited as a factor of resilience by TO study communities.

The proportion of reliance by communities on external actors compared to their own internal resources was very similar in both LAC and TO study communities. The correspondence in the findings reinforces that, while external support is important, building the capacity of communities is still the highest priority in strengthening community resilience.

6.2 Characteristics of a safe and resilient community

While the characteristics of resilience may be the same in multiple regions around the world (based on a preliminary comparison of the LAC and TO study findings), the factors which contribute to resilience are specific to each community. Refinements were therefore made to the characteristics identified by the TO study, in the finalisation of the *characteristics of a safe and resilient community* in the LAC region.

For example, the themes of **disaster response** and **preparedness** were not identified as distinct themes in the LAC study findings. All factors identified under these themes could also be assigned to other factors of resilience (e.g. a community emergency team is evidence of formal support networks; awareness of disaster response and preparedness approaches demonstrate increased levels of knowledge and connectedness). This is because disasters were one of many issues that the communities sought to address by implementing these measures. It would therefore be inappropriate to suggest that they are a characteristic of resilience.

Community cohesion was identified in place of community organisation in the LAC characteristics. This new term represents both a community's ability to organise, as well as its ability to support all members within the community.

7 Conclusions

The LAC CBDRR study sought to answer a number of research questions in relation to defining the *characteristics of a safe and resilient community* in the LAC region (see Box 19).

Box 19: Research questions

a) Is resilience addressed by academic work in LAC? If so, how is it understood in the region?

b) How has the concept of resilience been introduced in this context and how has the history of CBDRR influenced its interpretation?

c) Who are the key actors considering 'resilience', and what might be the opportunities and barriers for incorporation and application in a Latin American and Caribbean context?

d) What do communities perceive as the most important characteristics needed to be safe and resilient?

e) How do communities rank changes in these characteristics?

f) How can / do the determined indicators and their changes over time reflect shifts in community attitudes and behaviours towards risk?

The findings of the study – drawn from both the literature review and fieldwork undertaken in Colombia, Guatemala and Saint Lucia – indicate a number of conclusions, and responses to these research questions.

The literature reviewed within this study suggests that the concept of resilience has been examined and applied within the LAC region. However, the chosen sources also suggest that it is a term which is not yet well established or understood. Terms such as 'resistance', 'vulnerability' and 'disaster management' appear to be better understood and used in development practice.

The concept of resilience and its incorporation in community programmes is influenced by international NGOs and agencies, rather than originating within the region itself. Where resilience has been interpreted in the LAC context the documents reviewed suggest that there is a strong social emphasis, and the influence of culture and 'self-esteem' are seen as key elements of resilience. Feedback received on an earlier draft of this literature review suggested that whilst the term 'resilience' and its theoretical conceptions are relatively new, in practice there has been engagement with building resilience at community scales for far longer.

Given the relative novelty of the Spanish word '*resiliencia*', there is some concern that there is little uptake of the concept by local development partners. Lavell (2007) notes that where major events have taken place in the LAC region they have been a stimulus for new innovations in DRR practice; including the adoption of new terms or concepts. Without pressure from international NGOs and agencies new concepts such as resilience may be slower to be adopted. Therefore within disaster management practice in the LAC region it is possible that there is

still a greater focus on prediction, prevention and response rather than on building longer-term resilience.

Through a series of community workshops, communities in the study countries cited a total of 1079 factors which contributed to their resilience. These community-identified factors were analysed, grouped and developed into a set of six *characteristics of a safe and resilient community* (see Box 20 below).

Box 20: A safe and resilient community in Latin America and the Caribbean…

… is knowledgeable, healthy and can meet its basic needs. It has the ability to assess, manage and monitor its problems, needs and opportunities. It can learn new skills, build on past experiences, and share and apply this knowledge in practice.

… is socially cohesive. It has the capacity to draw on informal and formal community networks of support to identify problems, needs and opportunities, establish priorities and act for the good and inclusion of all in the community.

… has well-maintained and accessible infrastructure and services. It has strong housing, transport, power, water and sanitation systems. It has the ability to access, use, maintain, repair and renovate these systems.

…has economic opportunities. It has a diverse range of employment opportunities and access to systems for developing skills and enhancing trade opportunities. It is flexible, resourceful and has the capacity to accept uncertainty and respond (proactively) to change.

…can manage its natural assets. It recognises their value and has the ability to protect, enhance and maintain them.

… is connected. It has the capacity and capabilities to develop and sustain positive relationships with a range of external actors, which can provide a wider enabling environment and it can request forms of tangible and intangible support from outside the community when needed.

Communities which participated in the LAC study fieldwork noted several incidences of positive change in a number of factors of resilience which were directly influenced by CBDRR programmes. Positive change was also noted in several characteristics that appeared to be indirectly linked to CBDRR programme interventions.

- **Knowledge, health, basic needs:** Many communities demonstrated an increased awareness of disaster response actions, which they were confident to use thanks to training and simulation exercises. Where programmes had focused on other aspects of resilience, such as health and hygiene awareness, communities also noted positive change. However, less positive change was noted in the period of time after the CBDRR programmes had finished; suggesting that knowledge retention may be a challenge.
- **Social cohesion**: Communities in the LAC study noted significant positive change in informal forms of social cohesion since the beginning of CBDRR programmes. This suggests that a significant impact of CBDRR programmes may be the indirect impact on informal networks, as well as the formal

structures, such as CBOs, that are built or supported by the programmes. However, less positive change was noted in formal forms of organisation after the CBDRR programme had finished, with a number of communities indicating that they had not been able to sustain the organisations that had been put in place.

- **Infrastructure and services**: Infrastructure and services directly linked to CBDRR programmes (such as water infrastructure or first aid knowledge) showed positive change in the LAC study communities. However, transport infrastructure, and its importance for accessing other factors of resilience (e.g. access to medical facilities) was highlighted by a number of LAC study communities as an area of negative change. Communities linked a lack of positive change in these areas to poor relationships between communities and the local authority. This highlights that, while some factors of resilience can be addressed by the RC, other factors may be dependent on building good relationships with a range of other actors, i.e. apart from the RC.[35]
- **Economic opportunities**: Most positive change in the diversity of livelihoods opportunities was noted as coming from the communities themselves, or from support from other non-community actors rather than being developed through RC programmes. Very few CBDRR programmes in the LAC study communities addressed livelihood concerns, even though this was often one of the top priorities cited by the communities visited.
- **Natural assets**: LAC study communities did not directly cite management of natural resources as a key characteristic of community resilience. However, this set of factors did appear to be an underlying aspect of resilience linked to many other concerns of the community (e.g. economic opportunities linked to a changing climate and its effect on crops). This may also be because the management of natural resources is an ongoing process for many communities.[36] However, factors of resilience that can be linked to the management of natural resources, used and maintained in a changing climate, were not addressed in most CBDRR programmes. This suggests that, while sudden onset disasters are addressed well in CBDRR programmes, less focus is given to persistent, but slowly worsening stresses that undermine community resilience.
- **Connectedness**: The LAC study highlighted that, not only support from the RC had a positive impact on community resilience, but relationships with other actors could also both support and undermine community resilience. Some of the most significant areas of positive change were linked to the quality of these relationships, and the skills of communities in working and negotiating with external actors.

The positive change noted in factors of resilience relating to knowledge reflects the critical nature of education and awareness-raising in reducing community

[35] One reviewer of an earlier draft of this report noted that he did not see this type of negative relationship between communities and local government actors in many of the other countries in the LAC region.

[36] A comment from a reviewer of an earlier draft suggested that many communities (now and throughout history) in the LAC region do in fact view the protection of their natural assets as a key feature of their everyday lives; such groups include Mayans, Aztecs, Incas, Aymarans, Quechuans. Guarani etc. The reviewer felt that there was a challenge in aligning these LAC-specific cultural views with Western ideas about resource/asset management.

risks. Increasing awareness of risks, and measures which can be taken to reduce these risks, was cited by all communities as a key coping mechanism for dealing with shocks and stresses. Most communities expressed greater confidence in managing their risks following the CBDRR programmes. However, many of the risks which they prioritised were not those typically addressed by CBDRR programmes. Examples included domestic abuse, drug-related crime and unemployment. This may suggest a shift in broader concepts of risks and vulnerability within the communities, since the CBDRR programmes were implemented.

7.1 Recommendations

The CBDRR programmes implemented in the LAC study countries have undoubtedly had an impact on community resilience in a number of key areas. The discussions within the findings and analysis chapters above however highlight some areas where the RC has had a limited impact on community resilience; and where there is scope for improvement.

Box 21: Recommendations for next steps

- To improve community resilience via CBDRR programmes in the long-term, ensure that there are systems in place for knowledge to be dispersed and sustained in communities.
- Training to improve community knowledge can be better sustained if it is linked not only to short-term disaster response, but also longer term community needs (e.g. building resilience through livelihoods opportunities).
- Formal organisations (i.e. CBOs) can increase their sustainability where they tap into and bring together informal networks within communities. Formal recognition by state actors (e.g. the COCODE and COLRED in Guatemala) can add further legitimacy to organisations and increase their sustainability.
- To build resilience through improving infrastructure and services, focus should not only be on building assets within communities, but also ensure that access is improved to external services (directly or indirectly; e.g. through improved transport networks). For example, communities can also increase their resilience by gaining access to larger-scale services (e.g. hospitals) outside their communities, rather than by gaining or improving a smaller health clinic within their community.
- Similarly, ensuring access to a diverse range of livelihood opportunities should be addressed both locally and through access to external opportunities (e.g. trade with other communities or links to higher education facilities).

- When establishing connections between communities and other actors involved in supporting CBDRR programmes, ensure that these relationships do not only provide support to the community, but that they support communities in building their skills and access to assets in the long-term.

At present there are also ongoing discussions between various RCRC movement partners around how best to develop a set of indicators of community resilience. The findings of this second phase of the CBDRR study suggest that general characteristics of community resilience may be applicable worldwide, but that the factors which contribute to these characteristics are likely to be different within each region, country and community. We propose therefore that the final characteristics of a safe and resilient community developed from this study could be used to develop CBDRR programme objectives. The numerous factors which have contributed to the development of these general characteristics could then be reviewed and refined to developed a 'toolbox' of community resilience indicators. In the design of a new CBDRR programme, the most appropriate indicators would then be selected from this toolbox, to ensure that the programme's aims and activities target the specific needs of communities; making a sustainable and relevant contribution to building community resilience.

Appendix A

Literature review (Annotated bibliography)

A1 Annotated bibliography of documents reviewed

Aguirre, B. E. (2004). 'Los desastres en Latinoamérica: vulnerabilidad y resistencia'. *Revista Mexicana de Sociologia* 66(3),pp. 485 - 510.

This journal article was chosen as it discusses directly the concept of resilience in Latin America, as well as other concepts (social vulnerability and resistance), their use, and how they fail to address the complexity of the social and societal influences over disasters. Aguirre maps the origins of the social focus on disasters to the work of key scholars in the USA. He highlights that resilience is a new word in Spanish and links it to the concept of resistance in the Latin American culture. However, he later describes how the capacity of resistance should be incorporated into the analysis of vulnerability, but does not link this to emerging concepts of resilience.

Climate and Development Knowledge Network (2012) *Managing Climate Extremes and Disasters in Latin America and the Caribbean: Lessons from the IPCC SREX Report.* London: CDKN.

The report was chosen as it provides advice that links community level processes with Disaster Management and long-term climate change adaptation concepts. This report was also chosen as a high level document produced to advise governments on the effects of climate change on extreme events, disasters, and disaster risk management (DRM). It was in response to a recognised need to provide specific advice on climate change, extreme weather and climate events ('climate extremes'). The report was commissioned by the Intergovernmental Panel on Climate Change (IPCC) and written over two and a half years, compiled by 220 expert authors, 19 review editors with extensive review processes for its completion.

Lavell, A. (1993) Ciencias sociales y desastres naturales en América Latina: un encuentro inconcluso In: Maskrey (ed.) (1993) *Los desastres no son naturales*. Panama City: La Red, pp. 111-127.

Los desastres no son naturales brings together work from renowned academic scholars from south and central America to investigate a social perspective on disasters in Latin America. The book explores the complex relationship between society and disasters, suggests reasons for community vulnerability and limitations in approaches to CBDRR, and proposes changes to approaches to CBDRR that incorporate a more social long-term focus. Two academic texts are referred to in this book and three key influential authors in the region are referred to (Lavell, Maskrey and Wilches-Chaux). Lavell discusses the contribution that a social science perspective could add to disaster response. Wilches-Chaux, referred to in Lavell's essay, highlights societal, cultural and ideological influences on individual and collective vulnerabilities.

Lavell, A. (2007) *Risk, Disaster and Management in Central America, South America and Mexico: concepts, approaches, activities and institutional and organizational actors*. San Jose: FLASCO.

This document was produced for the RCRC to summarise how concepts and approaches relating to risk and disaster have evolved in the Latin American region over the previous twenty five years. Lavell suggests that a more social long-term focus is evident in Latin American theory, but highlights a discontinuity between theory and practice, and a tendency towards reactive rather than preventative measures, particularly by state actors.

Maskrey, A. (1993) 'Vulnerabilidad y mitigación de desastres' In: Maskrey (ed.) (1993) *Los desastres no son naturales.* Panama City: La Red, pp. 93-110.

Los desastres no son naturales brings together work from renowned academic scholars from south and central America to investigate a social perspective on disasters in Latin America. The book explores the complex relationship between society and disasters, suggests reasons for community vulnerability and limitations in approaches to CBDRR, and proposes changes to approaches to CBDRR that incorporate a more social long-term focus. Two academic texts are referred to in this book and three key influential authors in the region are referred to (Lavell, Maskrey and Wilches-Chaux). Maskrey in his essay for the book discusses mitigation for disasters from a community perspective, proposes how a more social approach to CBDRR could be implemented in the future and discusses the limitations for this to take place.

Rivero, R (2010) ***Más seguros ante inundaciones - Manual comunitario para la reducción de riesgo y preparación ante situaciones de desastre*****. Lima: Soluciones Prácticas.**

This document was chosen as a simplified guidance note aimed at communities, explaining the process and concepts linked to building community resilience to disasters. It explains the importance of their involvement in CBDRR interventions implemented in their community and their role in the process. The document also attempts to define resilience and its importance from a community perspective.

Visión Mundial (2012) ***'Proyecto de resiliencia comunitaria'*****, http://www.resilienciacomunitaria.org/, accessed on 14.08.2012**

This website was chosen as example of an NGO interpretation of resilience and their approach to CBDRR in the LAC context. It was also chosen to illustrate the influence of western concepts of resilience and how these may be interpreted in a Latin American context.

Appendix B

Fieldwork methodology

B1 Fieldwork methodology

The purpose of this appendix is to outline the fieldwork methodology for Arup International Development's (Arup ID) study of the International Federation of Red Cross and Red Crescent Societies' (IFRC) Community-Based Disaster Risk Reduction (CBDRR) programmes implemented in the Latin American and Caribbean (LAC) regions.

This note further develops information already provided in Arup ID's earlier report Arup (2012) *CBDRR Study in LAC: Inception Report*.[37]

This report is structured into 4 main sections:

- Section B1.1 provides general information on Arup ID's approach to the study in all three countries – including the sampling strategy and country programmes.
- Section B1.2 outlines the activities for the 2 briefing days at the NHQ at the beginning of the project; day one focusing on a briefing day with NHS staff and day two a team orientation training the core team who will be facilitating the community fieldwork.
- Section B1.3 describes the community workshop, which will form the first part of the fieldwork in each community; outlining the requirements for preparation from the RC, and the tools and associated key questions that will be used.
- Section B1.4 describes the two activities which will form the second part of the fieldwork in each community. Key informant interviews are proposed with actors inside and outside the community. In addition a community tour (walkthrough) is proposed to visit some of the sites of things that are described in the morning workshop.

[37] Issued in draft via email from Braulio Eduardo Morera, 10.08.2012

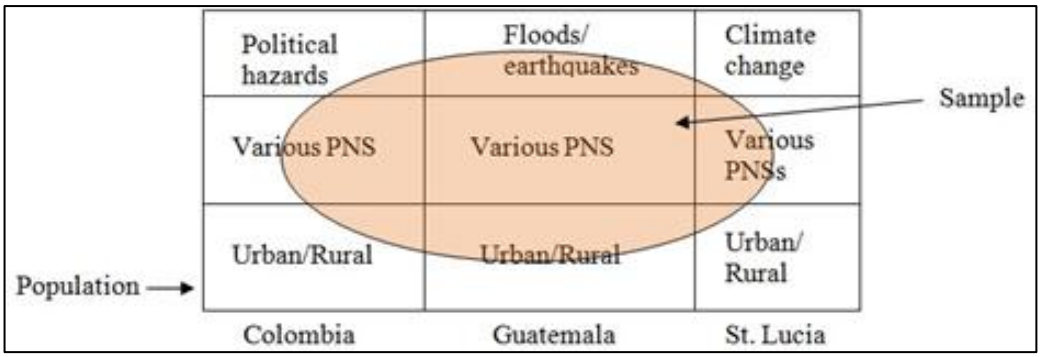
B1.1 Fieldwork approach

Sampling strategy

To accurately capture the impact of all CBDRR programmes implemented in the three LAC study countries, Arup ID selected and evaluated a sample of communities where CBDRR programmes have been carried out. These samples must be randomly selected, so that they are representative of the population. Sampling allows us to infer the impact of CBDRR programmes on the typical disaster-affected community in LAC.

There are two ways to use sampling - random sampling and stratified sampling – and Arup ID chose to use stratified sampling. Stratified sampling was used as it allowed communities to be selected to demonstrate a range of contexts and approaches, while ensuring the generalizability of the findings. Stratified sampling involves the random selection of samples from subpopulations, so that observations are made across several factors or variables and any resulting generalisations are therefore comprehensive. In this case, stratified sampling involved purposively selecting a set of communities, where communities in this set proportionally represent all three countries in LAC, exhibit urban and rural geography, are large and small, are affected by a variety of hazards, have been assisted by all the various Partner National Societies (PNSs) and donors and are located in as many regions/departments and districts/municipalities as possible[38].

Figure 24: Stratified sampling diagram



Statistical accuracy is affected by sample size and population size. A large population can be accurately represented by a proportionally smaller sample than would be necessary for a smaller population. The accuracy of a sample in representing a population is stated as a confidence interval with a margin of error. A margin of error of 5% with a 95% confidence interval means that if the experiment was repeated 100 times, the results of the experiment would be 95% accurate, 95 times out of 100.

[38] Whilst care was taken to ensure a representative sample in each country, in several cases the communities had to be changed in order to take into account external factors that were out of the control of the study. For example, some areas of Colombia were inaccessible due to ongoing civil conflict.

In this study the estimated total population of the communities visited was 42,253 people. With a 5% margin of error and a 95% confidence interval the minimum sample size would need to be 381 participants. The total number of participants in the community workshops was 595. This means that with the total sample size for the LAC study is representative of the population, with a 95% confidence interval.

Country programme

Typically one community was visited per day, with two days at the beginning and end of fieldwork in each country to brief/de-brief staff in the National Headquarters (NHQ) and to undertake focus group discussions/key informant interviews.

National-level key informants within the RC were consulted during the first day of fieldwork in each country and national-level key informants outside the RC movement were consulted on the last day, where possible. Additional key informant interviews were included each day – consulting branch-level stakeholders (within or outside the RC movement), community-level stakeholders (outside the RC movement, with a particular focus on representatives of vulnerable groups), and local government representatives to provide a wider perspective on the CBDRR programmes. A list of all key informant interviews completed can be found in Appendix C of the report on *key determinants of a successful CBDRR programme*.[39]

B1.2 Briefing

Two days at the beginning and end of the fieldwork in each country were proposed to brief/de-brief staff in the National Headquarters and to undertake focus group discussions/key informant interviews.

National headquarters

The first day in each country was planned as a briefing session with RC staff. It was proposed that this consists of:

- A **briefing session** setting out the purpose of the study and the current stage of the project. It is recommended that the National Society staff who attended the Panama inception meeting workshop present this alongside Arup staff. This session is intended to open the study up to a wider audience to ensure that all the key staff within the National Society are well informed about the objectives of the study.
- A discussion of the fieldwork logistics. Any cultural considerations and things to be aware of.
- Key Informant Interviews with RCRC staff:
  - IFRC
  - HNS

[39] Arup (2013) *Community-based disaster risk reduction study - Latin America and the Caribbean: Key Determinants of a Successful CBDRR Programme in the LAC region*. Draft 21st March 2013

- PNS

Team Orientation

The second day in each country was usually a training workshop with the RC staff facilitating the community fieldwork. The workshop focussed on:

- A presentation outlining who Arup are, the outputs from the previous study, and an overview of the fieldwork and expected outputs from the LAC study
- Experience of facilitation techniques / interview techniques
- Practising the tools to be used in the community workshop (with adaptations made for any cultural considerations)
- Agreement on a detailed daily programme with roles and responsibilities assigned (check the community are prepared for the team's arrival, that they have the equipment necessary, travel times have been factored in etc.)

B1.3 Community workshops

The focus of the fieldwork was workshops in each community to identify:

- ***What they think are the most important characteristics needed to be safe and resilient***
- ***How they think these characteristics have changed since the programme?***
- ***How RCRC interventions have contributed to these changes (positive or negative)?***

The exercises undertaken during each community workshop are described in the following sections.

Exercise One: Understanding your community (40mins)

The aim of this exercise is to understand:

- ***the members of the community, the community structure and external networks***
- ***the history of the community***
- ***what shocks and stresses they face (and how they prioritise them)***

1. Members of the workshop were divided into three groups, each facilitate by one team member

2. Exercise templates were handed out and groups were asked to fill in the templates to answer **the key questions** for each exercise. These are quick exercises to find out a bit about each community so each group had about 10 minutes to complete the exercise.

3. a) Who is in your community

- **Who is in your community?**
- **Who is outside your community?**

(key questions)

Additional questions

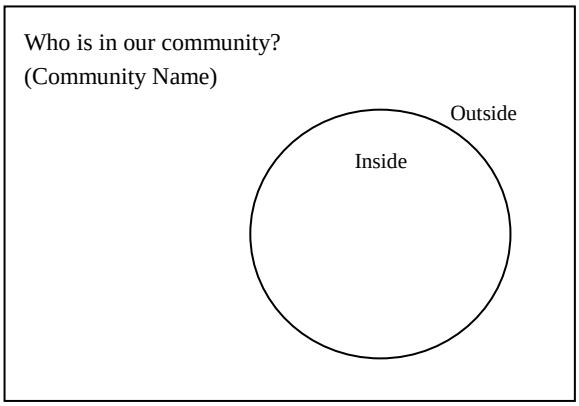
How are they connected to each other?

(after diagram complete)

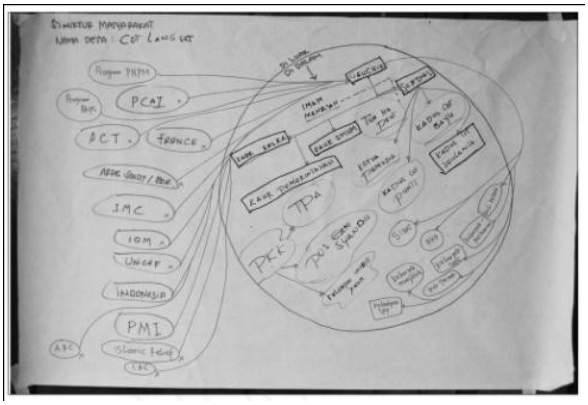
What happens when there is a disaster? (emergency)

Who is important in the community if you have a problem you need to resolve?

Template:



Completed Example:



3. b) What has happened to your community in the last 10 years?

- **What has changed?**
- **Have there been any major events?**
- **Has anything got better / worse?**

(key questions)

Additional questions

Has anything always been a problem?

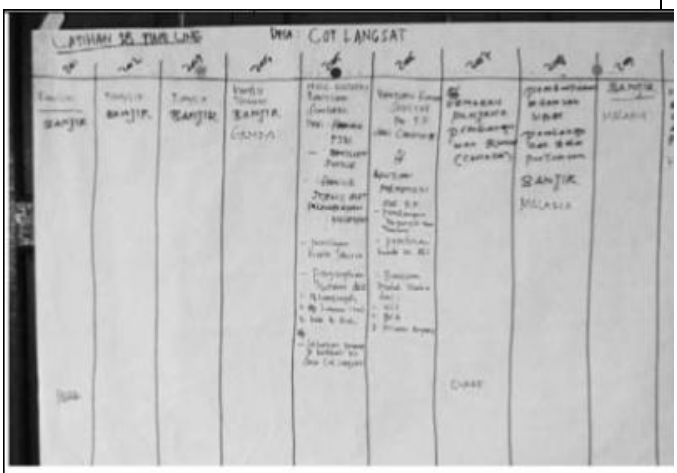
How have these things affected your community?

Template:

What has happened to our community?
(Community Name)

•	9	•	•	•	•	•	•	•	•	•

Completed Example:



3. c) What shocks and stresses do you face?

- **What shocks and stresses do your community face?**
- **What is the impact of these shocks and stresses?**
- **(on you / your community)**

(Key Questions)

Template:

What shocks and stresses does our community face?
(Community Name)

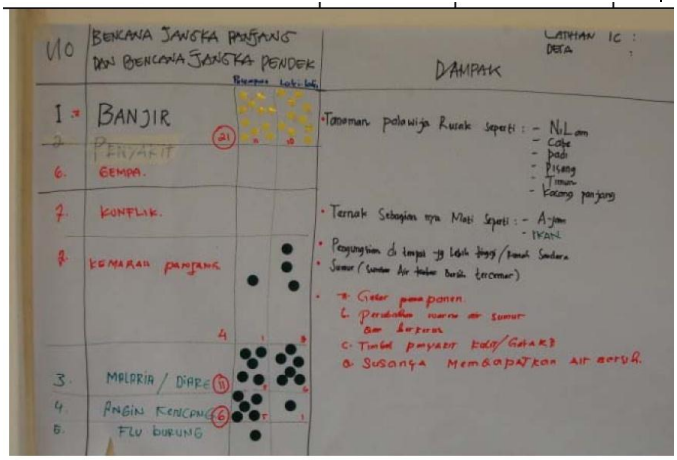
• Shock / Stress	(M)	• ( )	• Impact

Additional Questions:

What impact does this have on men / women / children

Note: Initially draw Shocks / Stresses and Impact but allow room for voting columns (M, F)

Completed Example:



4. A 'gallery walk'- where the groups rotate between the different drawings, each for approximately 5 minutes (10 minutes in total). Other groups asked to comment on each other's completed exercises.

5. 3 groups brought together around the shocks and stresses diagram and check if there are any further additions / changes they would like to make to the chart.

Men and women given three dots (with different colours) to vote on their top 3 shocks and stresses. Entire group consulted to check if there is agreement on the top 3 shocks and stresses identified.

Note: Are the top priorities different for women and men? Are there any differences that have been apparent in the views of different groups (e.g. men, women, youths, elders)? Or are some members more dominant than others? If there is a clear difference then it may be appropriate for groups to be formed for exercise two that ensure the views of these members are heard. Any group dynamics observed should also be noted. Any selection process used for exercise two should also be noted.

6. Count the total dots for each shock / stress and read out the top 3 shocks and stresses identified. *(unless there is a clear difference with the votes)*

Each shock / stress allocated to a different area in the room (with a facilitator) and community members

asked to move to the shock / stress which they would like to talk about.

Exercise Two: What makes your community safe and resilient? (60 mins)

The aim of this exercise is to understand:

- ***What things the community think help them prepare for or prevent a disaster (or stress) happening, cope with a disaster (or stress) while it is happening or recover from a disaster (or stress) after it has happened (or in the future).***

1. Templates handed out for the shocks / stresses tables (see below)

Template:

(community name) Shock or stress 1	
	Inside
	Outside

Completed example:

Shock or Stress 1			
	Before (Prepare & Prevent)	***During (Cope)***	***After(Recover)***
Inside the Community	Prepare the boats	Evacuate (4)	Clean up the house from the mud
	Prepare the furniture inside the house	Put the livestock on higher land	Work together to clean up the village (1)
	Prepare food	Clean up the trees that have fallen down during the flood	Take the livestock from higher land back to the village
	Clean the drainage	Help other people who need help – older people and sick people (3)	
	Clean the irrigation (2)		
Outside the Community		The head of district visits the village	Head of district provides support with food (5)
		Volunteers in the social department distribute food to people	

2. Each group asked to complete the grid with drawings and/or words, showing:

- What helps your community prepare for or prevent a disaster (or problem) before it happens?
- What helps your community cope while they are being affected by a disaster (or problem)?
- What helps (or could help) your community recover from a disaster (or problem) after it has happened?

- Which of these things are inside the community and which are outside?

Note: For some shocks or stresses such as hurricanes or floods the time distinctions of what happened before, during and after the event are clear. In this case the group should consider all three and complete the grid as the example above.

For others stresses such as unemployment or epidemics it may not be possible to make such clear time distinctions (e.g. if the community have not experienced a 'recovery' as it is ongoing). In these cases the facilitator can discuss what could prevent this problem getting worse and how they are coping with it now.

3. Each group marked on 5 dots the numbers 1-5. Then each group chose which are the top 5 most important things and rated them 1 – 5 (one is the most important).

Exercise Three: How have things changed? (50 mins)

The aim of this exercise is to understand:

How strong were the things:

- ***before the programme***
- ***after the programme (immediately after the programme)***
- ***now (i.e. since the programme has finished)***

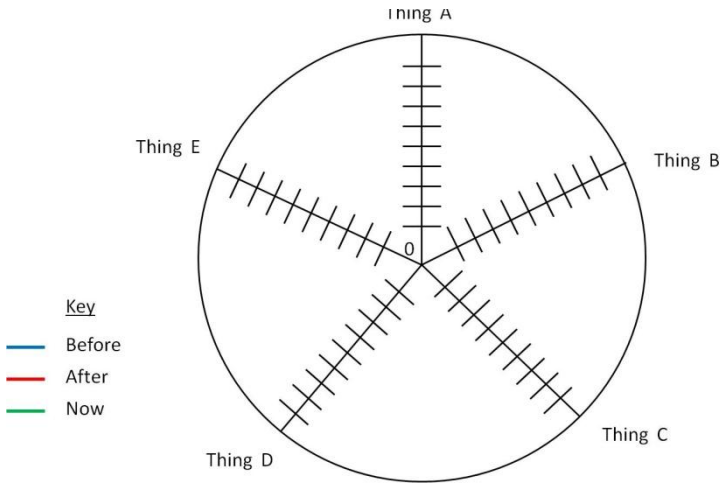
1. Each group was given an outline diagram (see appendix B).

It is helpful for the facilitators to demonstrate an example diagram to indicate how the scale should be used at the beginning of this exercise, ideally to the whole group. This does not need to assess any actual things identified by the community, more it is intended to illustrate how to rate the 'things'.

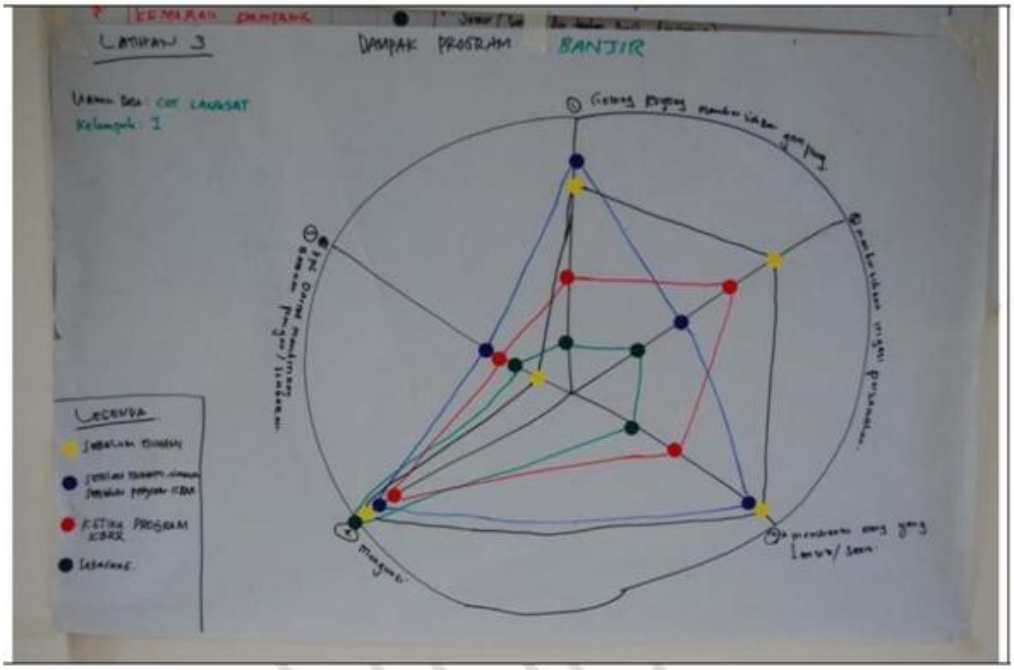
Participants asked to take the five (or less) things they identified in the previous exercise and mark them around the outside of the circle.

Template:

How have things changed?
(Community Name)



Completed Example:



It was explained that each line now represents a scale - closest to the centre is 0 (the worst case), while the outside of the circle in 10 (perfect).

Note: For each mark made on the diagram (outlined below) it is important that the facilitator asked the following questions:

- **Why is the mark in that position? What changed?**
- **Who is responsible for the change?**

2.	The strength of each thing before the programme was considered, and marked on the scale of 1-10.
3.	The strength of each thing immediately after the programme was considered, and marked on the scale of 1-10.
4.	The strength of each thing now was considered, and marked on the scale of 1-10.
5.	Each group presented back to the workshop and explained the changes over time.

Exercise Four: What have you learnt? (20 mins)

The aim of this exercise is to understand:

- **What the community have learnt about CBDRR and how they have learnt it**
- **What recommendations they have from their experience**

Two colours of post it notes were handed out. Participants were asked to write on one colour:

- the most important thing they have learnt from the CBDRR programme and how they learnt it

And on the other:

- a recommendation for the RC for implementing future CBDRR programmes.

Post it notes were placed on the wall and grouped into themes, before a final discussion session was held to talk about the recommendations and learning for future CBDRR programmes.

B1.4 Community tours

A transect walk through each community provided the opportunity to see some of the 'qualities' of the key characteristics described during the morning workshop.

Household interviews, where possible, were conducted and introduced in the same way as the community workshop:

- who Arup ID is (inc. independent from RC)
- why we are doing the research
- they do not have to take part
- they can withdraw at any time
- their details will be kept anonymous and will not be part of any publications
- an information booklet was left with them, highlighting contact details

B1.5 Key informant interviews

Throughout the fieldwork interviews were conducted with a wide range of key informants, both at different levels of implementation (i.e. national, branch, community), and from inside and outside the RC.

Where possible interviews were also conducted with representatives from each of the following groups within the community:

- Local community leaders (or influential members of the community; for example, religious leaders, the mayor, community elders)
- Leaders of the CBDRR Committees or Action Teams
- Representatives of vulnerable groups (Examples of such groups might include women, the elderly, indigenous peoples, youth groups etc.)

- Household interviews

In addition interviews were conducted with the following groups external to the community:

- RC staff / volunteers (national, branch, community)
- Local authority representative

B1.6 De-Briefing

Research team debriefing

The final day with the fieldwork team typically consisted of a workshop to discuss initial insights from the team from the fieldwork. The workshop included discussions / activities about:

- The differences between the communities / CBDRR programmes
- What this suggests about the key determinants of a successful CBDRR programme and the characteristics of a safe and resilient community
- Lessons learned on the successful design and implementation of a CBDRR programme

NHQ debriefing

The final day of the fieldwork in each country included a presentation of initial insights from the fieldwork, a workshop session with PNS, HNS and IFRC staff who were involved in the design and implementation of the LAC CBDRR programmes, and any further key informant interviews.

The workshop session provided information to supplement data collected in the key informant interviews. The purpose of the workshop session was to provide an overview of CBDRR projects in the country, the approach typically taken, current policy and guidelines.

Appendix C

Country summary reports

C1 Colombia

The Colombian Red Cross is has a head office in Bogota. At the next level down there are 'seccionales' or local branches in 32 areas of the country. All the branches visited as part of this study had a similar leadership structure to the headquarters, with a director, secretary etc.

C1.1 List of key informant interviews

- 6 interviews with RC staff / volunteers
- community leaders
- 1 local authority staff
- 5 RC community team leaders

Date	Location	Name	Position
26/9/12	El Pajaro	Samuel Duglas García	Volunteer Riohacha RC
26/9/12	El Pajaro	Torío Uriana	Community leader
27/9/12	Villa del Rio	Camillo Andres Martinez Diaz	Relief coordinator (RC volunteer)
27/9/12	Villa del Rio	Juan Francisco Contreras Ramírez	Community leader
27/9/12	Villa del Rio	Ane Arias Capera	Treasurer of the communal board
28/9/12	La Guajira	Juan de Luque	Translator and RC volunteer, Red Cross Riohacha branch
28/9/12	Pelechua	Edwin Hernandez Parra	Pastor of the Pentecostal church
28/9/12	Pelechua	Jorge Mario Deluque	President of the community action committee
28/9/12	Pelechua	Carlos Cujia	Community leader
3/10/12	Las Americas	Joba Mary Guerrero	President of the RC group
5/10/12	Mapachico	Gloria de Jesus Mendez (and other community members)	Coordinator of the RC group and other community members
5/10/12	Mapachico	Don Ricardo (and other community members)	Community leader and other community members
8/10/12	Mirador	Jose Guillermo Cualtero	Emergency team
8/10/12	Mirador	Andres Caranza	Director of Relief, Red Cross Tolima Branch
18/10/12	San Rafael Uribe Uribe	Heriberto	President of the older adults network
18/10/12	Pasquilla	Emerías García	Head of the emergency brigade
18/10/12	Written and handed in forms	Yennit Beatriz Paez Cadena	Bogota RC Staff
18/10/12	Written and handed in forms	(unclear)	Bogota RC Staff
19/10/12	Via Email	Sandra Cantor Bello	Colombian RC HQ Recovery and Community Development department

C1.2 Country programme

Dom	Lun	Mar	Mie	Jue	Vie	Sab
• Llegada a Bogotá	• Reuniones con directivos CRC • Capacitación staff • Plan de acción	• Viaje a la Guajira • Reuniones con directivos delegación • Capacitación voluntarios delegación	• Comunidad 1	• Comunidad 2	• Comunidad 3	• Discusión informal con directivos delegación • Retorno a Bogotá
Dom	**Lun**	**Mar**	**Mie**	**Jue**	**Vie**	**Sab**
• Descanso	• Viaje a Nariño • Reuniones con directivos delegación • Capacitación voluntarios delegación	• Comunidad 4	• Comunidad 5	• Comunidad 6	• Comunidad 7	• Discusión informal con directivos delegación • Retorno a Bogotá
Dom	**Lun**	**Mar**	**Mie**	**Jue**	**Vie**	**Sab**
• Descanso	• Reunión con directivos en Tolima y/o Cundinamarca • Capacitación de voluntarios delegación	• Comunidad 8	• Comunidad 9	• Comunidad 10	• Reunión de cierre con CRC	• Partida desde Bogotá

C1.3 Limitations/Challenges

- The scale of the country: There were many days spent travelling to different base locations, then further time spent travelling to each community
- Diversity between regions and communities: Local dialects required translators; adaptation of the methodology when there weren't enough participants
- Change of team members: Training of new team members each week meant that more time was spent training. Furthermore, the quality of the material produced during the workshops was affected as the new team member learnt the methodology.
- Preparation of materials: We travelled to a new region at least once every week. Each time we needed to buy refreshments, make photocopies etc. for the workshops.
- The structure / organisation of the Red Cross: Miscommunication between the local / national societies. Lack of communication in advance with some communities.

C1.4 Key lessons learned / observations in each community

Pajaro, La Guajira

- Difficulties of working with indigenous communities / importance of having a local translator
- How building a relationship with the community over a long period increases the sustainability of lessons learnt and gives them greater ownership of the project.
- Practical construction skills learnt during the relocation process have given the community valuable skills which they are now using to expand their own houses.
- Now the immediate threat of flooding has been taken away, the community is thinking more about day-to-day problems such as the cleanliness of the community, an electricity supply for refrigerating fish etc.
- Skills in negotiation and making connections with external actors have been valuable to the community as they are now considering who to approach to address the current needs they have.

Villa del Rio, Villanueva, La Guajira

- The development of community groups within the area has indirectly affected their resilience to crime. Now that they are more organised they look out for each other and support their neighbours more. However, there are still problems with insecurity in the area and some people are scared to leave their houses if there is a flood because they might be burgled.
- A government relocation programme is affecting the cohesion of the community. Some want to leave and some want to stay and this is causing conflict while they wait for the government to make a decision. At the same time, the government is constructing protective barriers to stop the river flooding which is giving a contradictory message about the longevity of the community in this location.

Pelechua, La Guajira

- Perception of risk: The community do not believe they are in a high risk area even though the community floods regularly.
- In contrast to Villa del Rio, the community feels more secure to leave their things in their homes when they evacuate. Also, because they do not intend to leave the area they are instead constructing buildings on stilts to reduce the risk of flooding, and they are taking measures to prepare their things in case of a flood by tying their valuables in the roof space.
- Another contrast between Pelechua and Villa del Rio is that the flooding in Pelechua is due to human impact (banana farms in the area), whilst in Villa del Rio the flooding is due to the river overflowing.
- Due to bad experiences with many organisations working with the community in the past, without any benefit seen by the community, there seemed to be much lower levels of trust in organisations.

Las Americas / Maria Auxiliadora, Tomaco, Nariño

- Both communities are built on the sea using stilt constructions on the outskirts of Tomaco city. The communities are spreading out into the sea, necessitating higher and higher structures putting them at greater risk. They also have very narrow walkways which are deteriorating and the communities are densely populated which makes evacuation in a disaster difficult.
- There are a lot of problems with contamination of the water from waste from the structures. Children often swim in the contaminated waters and there are a lot of skin problems due to this.
- Maria Auxiliadora has much more open space, has some concrete (rather than wooden) walkways, and has electricity pylons to connect it to the grid. While insecurity was an issue in both areas it was a top problem in Las Americas and this may be because of the layout of the community.
- The communities have been relocated but have since become much more overcrowded so the government has refused to make further relocations or further improvements.

- The community in Maria Auxiliadora has a good relationship with the local authority and this has helped them gain more improvements in their community.
- As they are located in an urban setting they demonstrated similar problems to other urban communities visited during the study, such as insecurity.
- The local leader in Maria Auxiliadora was very concerned about the youths in the area and was working hard to support them. In contrast the leadership in Las Americas did not seem as active and had changed since the programme finished.

Mapachico, Nariño

- The community live on the slopes of a volcano. While they are aware of the risk of eruptions, many false alarms have meant that they no longer evacuate if there is an alarm. In addition, as the refuge is located remotely from the community and is not maintained they do not like to go there as conditions are very uncomfortable. They also evacuate less because of divisions in the community.
- While they understand there is a risk from the volcano, at the same time the richness of the soil and the lack of a serious eruption in some time means that they see the volcano as more positive than negative.
- A government decree that allows indigenous communities to build and sell properties, whilst non-indigenous persons cannot, has divided the community. Some members of the community are trying to assert they are indigenous to be able to build and sell their properties.

Mirador, Tolima

- Another example of a community who are in a risk area but do not believe they are at risk even though landslides have injured several people in the community
- Privatisation of the main source of livelihood of the community has increased unemployment and poverty. They are now looking for new ways to diversify their livelihoods.
- There has been marginalisation of the community, or some members of the community, due to instances of AIDS.
- They lack communication with the city because of the poor state of the roads.
- There are low education levels and there are high levels of poverty.
- They are very vulnerable because of high levels of poverty.

Vindi, Tolima

- The population is ageing while youths are leaving the area due to unemployment.

- The selling price of produce in local markets, as well as droughts affecting the crops, is affecting the potential for agriculture to provide a sufficient source of income.
- They have problems with communication with the urban area because of the poor state of the roads. This makes them more vulnerable.
- There was a relocation programme in the community to move people from a flooding zone so now there is no one living in a high risk zone.
- There isn't much economic diversification so when the agriculture is affected the community does not have many other livelihood opportunities.
- There is a local authority representative in the community which gives them greater security due to support from the local authority.

Pasquilla, Ciudad Bolivar

- Pasquilla is a peri-urban community while Rafael Uribe Uribe is within the city.
- Pasquilla is affected by a local landfill site which serves the whole of Bogota. This produces health problems and environmental contamination. However, land and house prices are cheaper than living within the city.
- While they are on the outskirts of the city Pasquilla is still a long way from the emergency services of the city so if there is a problem it takes a long time for them to reach them. They also have problems with insecurity but it takes a long time for the police to reach them. Their relationship with the RC has improved their communication.
- Deforestation is causing landslides in the area.

Rafael Uribe Uribe

- Pasquilla is a peri-urban community while Rafael Uribe Uribe is within the city.
- They have problems with air and noise pollution.
- They have a big problem with insecurity and crime, particularly amongst young people.
- Informal settlements in the hillsides above the community are causing landslides by destabilising the land.
- A recent landslide had destroyed a sports ground and covered some housing.

C2 Guatemala

The Guatemalan Red Cross is structured with a headquarters in Guatemala City and 19 local delegation branches and 4 relief centres. The majority of delegation staff are volunteers with very minimal budgets. Local delegations are established by people from the local area wishing to set up a delegation, and are reliant on their continued voluntary support. Due to this approach to the structure of the organisation local delegations are unevenly distributed across the country, dependent on local support. They also varied more widely in the level of resources, capacity and continued involvement with local communities.

C2.1 List of key informant interviews

- 1 IFRC staff
- 4 RC staff / volunteers
- 5 community leaders
- 4 households / vulnerable households
- 1 RC community committee leader

Date	Location	Name	Position
22/10/12	Guatemala HQ	Alexai Castro D.	Norwegian Red Cross
24/10/12	Lomas Arriba	Teodoro Martin	Head of the disaster committee
25/10/12	Santa Rosa	Mario Mendez Gomez	Vulnerable household
26/10/12	Sabana Grande	Maria Silvia	President of the COLRED (coordinator local para reducción de los desastres / local coordinator for disaster reduction)
27/10/12	Chiquimula RC branch	Chiquimula RC staff	Red Cross branch staff
29/10/12	Guatemala HQ	Francisco	Red Cross National Staff
29/10/12	Guatemala HQ	Divan Ruano	Red Cross National Staff
30/10/12	Granada	Carlos le Paz	Community leaders
31/10/12	C12 Sis	Edit and David Mendes	Community leaders (president of COCODE and president of COLRED)
31/10/12	Retalhuleu RC branch	Eddy Asencio and Rose Maria Salazar	Retalhuleu RC staff / volunteers Director of the delegation and Health services coordinator
6/11/12	**San Francisco**	Salvador Perez Ramos	**Household**
6/11/12	San Francisco	Anna Maria Garcia	Household
8/11/12	Punta de Palma		Vulnerable group
9/11/12	Santa Tomas	Rolando Valdez and Eli Sagastume	RC Volunteers
12/11/12	Linea B4, Sector Sis, Mazatenango	Riquelmer Secundino Ramirez	President of COCODE

C2.2 Country programme

Día 1	Día 2	Día 3	Día 4	Día 5	Día 6	Día 7
Domingo 21 Octubre	Lunes 22 Octubre	Martes 23 Octubre	Miércoles 24 Octubre	Jueves 25 Octubre	Viernes 26 Octubre	Sábado 27 Octubre
• Llegada a Ciudad de Guatemala	• Reuniones con Presidencia y Dirección CRC • Capacitación facilitadores • Reunión con secretarías	• Viaje a la Chiquimula • Reuniones con directivos delegación • Capacitación delegación (¿?)	• Comunidad 1	• Comunidad 2	• Comunidad 3	• Discusión informal con delegación Chiquimula • Retorno a Ciudad de Guatemala
Día 8	Día 9	Día 10	Día 11	Día 12	Día 13	Día 14
Domingo 28 Octubre	Lunes 29 Octubre	Martes 30 Octubre	Miércoles 31 Octubre	Jueves 1 Noviembre	Viernes 2 Noviembre	Sábado 3 Noviembre
• Descanso (Ciudad de Guatemala o alternativa)	• Viaje a Retalhuleu • Reuniones con delegación • Capacitación en delegación (¿?)	• Comunidad 4 • Comunidad 5	Santos Difuntos	Santos Difuntos	Santos Difuntos	• Discusión informal con directivos delegación Retalhuleu
Día 15	Día 16	Día 17	Día 18	Día 19	Día 20	Día 21
Domingo 4 Noviembre	Lunes 5 Noviembre	Martes 6 Noviembre	Miércoles 7 Noviembre	Jueves 8 Noviembre	Viernes 9 Noviembre	Sábado 10 Noviembre
• Descanso	• Viaje a Izabal • Reunión con directivos en Izabal • Capacitación en delegación (¿?)	• Comunidad 6	• Comunidad 7	• Comunidad 8	• Discusión informal con directivos delegación Izabal	• Viaje a Suchitepéquez • Reunión con directivos en Suchitepéquez • Comunidad 9
Día 22	Día 23	Día 24	Día 25			
Domingo 11 Noviembre	Lunes 12 Noviembre	Martes 13 Noviembre	Miércoles 14 Noviembre			
• Descanso	• Comunidad 10	• Discusión informal con directivos delegación • Retorno a Ciudad de Guatemala • Reunión de cierre y agradecimiento con CRC	• Partida desde Ciudad de Guatemala			

C2.3 Limitations/Challenges

- Many of the communities weren't advised in advance. At times the team had to go and advise the communities on the day of the visit, or we arrived to find they had been advised an hour or two before our arrival.
- Some of the branches had lost contact with the communities and there were a number of communities where the community structures originally set up had changed, or the leadership had changed.
- Most of the staff are volunteers so there was much more variation on the approach of the local branches, their capacity, and level of communication between the branch and the communities which they worked with.
- An earthquake in the country meant that many of the staff were occupied in the relief effort. While the initial earthquake was not in the area where we were based, there were concerns that later travel was in a high risk zone where aftershocks were likely.

- The country programme was disrupted for public holidays / celebrations. This also meant that there was a lot more travelling from one side of the country to the other and back to fit in all the communities.
- Lack of communication of the requirements between the national HQ and the local societies. Many didn't know that they needed to contact the communities, or who they should invite to meetings and how many people. Due to this there was at times poor turn out and/or only the leadership came to the workshops.

C2.4 Key lessons learned / observations in each community

Lomas Arriba Chiquimula

- A small rural community which is heavily dependent on agriculture as a source of livelihood
- There seemed to have been a lot of interventions in the community in the 1970s and 1980s but for some time since there had been few interventions.
- The RC formed the COLRED (Local coordinator for the reduction of disasters)
- In addition to forming local organisations the RC gave fruit trees and coffee plants. Growing trees was cited as a way of supporting themselves when there is a drought though more people are chopping down trees now than growing them.

Santa Rosa, Chiquimula

- There are a number of vulnerable households living in a zone at high risk from subsidence of the land and landslides. Some had moved away when the land was slipping during heavy rains, but since it has not rained as much recently most had moved back. In the same area structures built by persons living in the USA have been abandoned due to problems with land slips and tremors. Those that are most vulnerable have returned as they have no option, whilst those who can afford to leave have abandoned the area.
- The land in this area is also owned by the railway line. Though the railway is not in use any more, this means that the persons living there are there illegally and therefore are not officially registered. This means that they are excluded from development projects and other opportunities in the area. For example they were not included in the CBDRR programme.
- They lack communication with the urban area with the road in a bad condition. This has increased levels of insecurity and they have had instances of kidnapping in the area.
- Markets and prices paid for produce, and droughts are affecting livelihoods of this and many other rural communities in Guatemala and Colombia.

Sabana Grande, Chiquimula

- The community is located near to Chiquimula so there are opportunities for better education and livelihood opportunities in the city. There are also very vulnerable families (many living in an area at high risk of flooding) that rely on agriculture as a livelihood with malnourished children.
- The location of the community surrounded by rivers or water channels means that when there is flooding they are cut off from communication.
- Whilst there were opportunities due to its location near an urban centre, similar to other rural communities, their main concerns were related to drought and the cost of cultivation and a lack of other livelihood opportunities.
- There are many churches in the area which have increased cohesion in the community. Community members said this is a reason why many people have moved to the area.

Granada, Retalhuleu

- The Red Cross had organised the community and formed key leadership structures (COCODE and COLRED). Since then this the community had worked with a number of other organisations and were very grateful for the support from the RC.
- The community had come together to put funds towards extending the refuge that was originally built by the RC.
- After hurricane Mitch many communities were supported to develop community structures and become organised.
- They have received support from the RC with filters and chickens because there are problems with malnourishment.
- When it floods the community becomes divided in two, but the refuge has been built in a location where everyone can access it (previously they used a school which also flooded).

C-12, Retalhuleu

- The leadership in this community was already formed before the RC came to work with them. They seemed to be very active in working together and also looking for support from different organisations.
- The local leader had donated land for the construction of a kitchen. She also had the emergency plans and a warning display at her house, because it was central and next to the school playing field.
- When the community floods they become disconnected. Similar to other communities that were located a long way from the urban centre they suffered from poor communication channels and the poor state of the roads.
- The community seemed very organised. They came together to meet with little advance warning.

San Francisco la Cocona, Santa Tomas

- It seemed that the Red Cross had not been in contact with the community much since the programme had finished. While there were still members of the health committee they did not seem to be very active any more.
- The people were very happy with the sanitation facilities that had been built and also the training they had been given on sanitation during the CBDRR programme.
- Again, the poor state of the roads affected their communication channels, particularly when there was an emergency.
- Similar to other agricultural communities they had very limited resources, but they had a good school with good connections.
- They had a water committee which seemed to be quite organised.
- The timing of the workshop meant that those who were working could not attend.

Santa Maria, Santa Tomas

- There was a big difference between this community and others visited in the area. This may have been partly because the workshop was held in the evening so more working people could attend. However, the community were keen to emphasise that they had much higher education levels and they had reduced their fertility rates. They said this had reduced poverty in the area. They also said that because they are close this has meant that those who had left for higher education returned to support the community.
- There were also fewer indigenous families in this community compared to other communities in the area, which may have affected the opportunities that they were able to access.
- The community seemed to be well organised and had formed a group to maintain the roads as well as a group to keep the community clean.
- While there were fewer opportunities for fishing the community had been supported with training in cooking skills and had begun to diversify their livelihoods.

Punta de Palma, Santa Tomas

- This community was located alongside Santa Maria, but was very different socially.
- There was a much higher indigenous population in this community, with low education levels and they seemed much less organised.
- The population had few employment opportunities and seemed reliant on employment in private households in the area.

- The results of this workshop may also have been affected because it was held at a time when many people in the community were working.

Linea B4, Sector Sis, Mazatenango

- The leader of the community was very young and had a lot of enthusiasm for improving the community. They seemed to be very well organised and were able to come together with very short notice.
- The location of the community is very vulnerable as they are located between two rivers so most of the community as at risk of flooding. They also suffered from lack of communication due to the state of the roads.
- Though they had a flood 15 days before the workshop, they prioritised more day-to-day problems. Similar to other rural communities they identified unemployment.
- In this area the RC has supported them with food.
- The closure of a health centre in the area was having a major impact on the community. This was the only affordable option for health care in the area, and poor transport connections to other health centres meant that they were worried about what they would do in the future.

C3 Saint Lucia

Saint Lucia is a small, island nation – covering 616km^2 – with a population of approximately 162,000 people.[40] Key economic industries are tourism and agriculture, both of which are vulnerable to natural hazards, such as storms and floods. The official national language is English, however Patois – a French Creole language – is also spoken, particularly amongst older Saint Lucians.

Settlement across the island is in predominantly rural areas. The capital of the island, Castries, forms the country's sole large urban settlement, located in the north west of the island, whilst Dennery is the second largest settlement, situated on the east coast of the island. The national road network is the primary transport infrastructure system within the island, with boats also being used to reach coastal areas.

Key shocks and stresses that Saint Lucia faces include both natural hazards and longer-term social issues. As a Caribbean island, tropical storms and hurricanes (and subsequent hazards such as floods and landslides) are an annual risk during hurricane season, between 1st June and 30th November. The most significant disaster in recent years, in 2010, was caused by the effects of Hurricane Tomas, however annual floods as a result of smaller tropical storms are reported alongside larger hurricane events. The island is also vulnerable to potential volcanic activity; the island was originally formed by volcanism and possesses small potentially active volcanoes in the south of the island itself. Saint Lucia is also located relatively near to 'Kick- 'Em-Jenny', an active submarine volcano 9km north of Grenada.

A further issue noted in many of the communities included in the fieldwork conducted in Saint Lucia was a lack of water supply. In many cases this was due to an increase in population in the area, without adequate upgrades and extensions to existing water supply infrastructure. Many social issues appear to stem predominantly from lack of economic opportunities and unemployment, and include drug abuse, domestic violence, and petty crime. A further key issue, not necessarily linked to the lack of economic opportunities however, appears to be increasing cases of chronic disease; particularly diabetes and cancer.

Primary disaster response actors in Saint Lucia are the national government and its National Emergency Management Office (NEMO)[41], which includes an advisory arm (NEMAC)[42] bringing together government ministers, the Saint Lucia Red Cross (SLRC), emergencies service chiefs, and other senior professionals such as the Chief Engineer and Chief Medical Officer. Guidance for emergency response is provided by the Saint Lucia National Emergency Management Plan (NEMP), developed under the 2006 Disaster Management Act. The NEMP is reviewed and updated annually, although due to its size annual revisions typically only focus on one element/sector plan per year.

[40] CIA World Factbook (July 2012 est.); https://www.cia.gov/library/publications/the-world-factbook/geos/st.html
[41] NEMO replaced the Office of Disaster Preparedness in 2000
[42] National Emergency Management Advisory Committee

C3.1 Saint Lucia Red Cross

Currently the Saint Lucia Red Cross (SLRC) employs three permanent members of staff: the Director General, a Disaster Coordinator and a receptionist/administrator. Current programmes being run in partnership with the American Red Cross have necessitated and financed the hiring of two further members of staff, on a contracted programme-specific basis. These additional members of staff are a programme officer and a finance officer. All members of staff are based at the SLRC headquarters in Castries, a purpose-built facility completed in the 1980s. The building comprises warehousing for relief materials, offices for staff and a large hall used for training and presentations, which is also hired out for events to raise funds for the SLRC.

SLRC branches are extremely weak and inactive, if they exist at all, although staff members of the SLRC are keen to (re)-establish and develop these in 2013. The volunteer set-up appears to be more clearly defined and managed, with clear records maintained of training sessions and alerts for refresher training.

The SLRC maintains partnerships with both the French Red Cross (FRC) and the American Red Cross (ARC). The FRC primarily supports a programme called 'Safer Communities in 72 hours', which supplies communities with emergency response equipment and establishes satellite warehouses, whilst the ARC supports the SLRC's CBDRR programmes.[43]

C3.2 CBDRR in Saint Lucia

CBDRR programmes in Saint Lucia aim to develop an organised cadre of people within different communities, helping them to understand risk and take measures to reduce that risk, ultimately enabling them to become more resilient. Typically programme activities within communities include participatory mapping and VCA exercises, and formation and training of a community disaster response team (CDRT). Once created the CDRT is encouraged to identify potential mitigation works which would be of benefit for their community, and to develop proposals to the SLRC for further funding and support to deliver these works. Examples of mitigation projects developed so far include a handrail constructed along a noted road accident spot in Bexon, and a current project in development for a reflective barrier in front of a precipice drop beside a road in Plateau.

Communities selected for involvement in the CBDRR programmes are identified both by the SLRC's targeting processes and also by the communities themselves. Many communities involved in the later programmes have approached the SLRC and requested to be involved having witnessed previous activities and capacity building in other nearby communities in which the SLRC had worked.

[43] Over the years these programmes have had several names: Readiness to Respond, Better be Ready, and Saving Lives in the Caribbean, which is the current programme name.

Table 13: Communities visited/surveyed during CBDRR LAC study fieldwork

Community	Programme	Type	Population size	Characteristics	Key shocks/stresses
Bexon	Readiness to Respond (phase 2)	Rural	2,440	Bexon is a group of 5-6 communities located either side of a river valley, with a major road running through the centre. Bexon has 2 schools, a health centre and a pharmacy.	Landslides, hurricanes, praedial larceny,[44] chronic disease, vehicle accidents.
Plateau	Saving Lives in the Caribbean	Rural	590	Plateau occupies an upland area on a ridge above Castries. The community practices small-scale agriculture, and it is also a noted location for holiday homes owned by expats. There are no schools or health centres in Plateau.	Water shortages, poor road conditions, lack of access to public transport, unemployment, chronic disease.
Dennery	Readiness to Respond (phase 1)	Peri-urban / urban	11,874	The second largest settlement in Saint Lucia, Dennery is a coastal village/town on the mouth of several rivers. Primary industries are fishing and agriculture, however agriculture is noted to be in decline in the area. The community has no health centre within it, but it does have a number of schools.	Flooding (sea and river), drug abuse, domestic abuse, unemployment, teenage pregnancy.
Entrepot	Saving Lives in the Caribbean	Peri-urban / urban	11,000	Entrepot is a middle-class suburb of Castries, situation on the side of a hill. The upper areas, such as Garden Grove, are wealthier than the lower areas like Independent City and Lower Entrepot. Different risks affect the different communities, due to their varying locations.	Landslides, flooding, lack of water, mosquito infestation, theft, poor road maintenance, lack of emergency exit from upper communities.

[44] Theft of agricultural products, i.e. crops

There appears to be no typical community targeted by the SLRC's CBDRR programmes. Target communities vary in size from a few hundred inhabitants to several thousand. Communities living in rural, peri-urban and urban areas have also been included, highlighting differences in risks faced in different geographical areas as well as the capacity of the community to respond to them. As a result of continual exposure to natural hazards, there appears to be an element of 'hurricane fatigue' amongst the communities visited during the fieldwork. Whilst communities recognise the potentially disastrous effects of hurricanes and tropical storms they feel like they have discussed these risks so often during the past few years that they would rather discuss and target social issues they are facing instead. Common social issues identified in communities visited during the fieldwork include unemployment, a lack of water, crime and chronic disease, particularly diabetes.

Vulnerability to risks and hazards was not revealed to be solely dictated by poverty in Saint Lucia, as it has been in other countries considered within the study and its earlier phases. The SLRC is currently working within a community which would be best-described as middle-class, in the hopes that this less economically vulnerable and well-organised community can help poorer communities which surround it to develop their own preparedness and response capacity.

C3.3 Key observations in Saint Lucia

National disaster response

- **The role of NEMO in national DM**: Whilst NEMO is intended to be the main body acting in response to disasters in Saint Lucia, currently there appears to be greater reliance by the government upon the SLRC to act during emergencies; this may be due to personal relationships between former members of the government and the current Disaster Coordinator at the SLRC. At present NEMO does not have its full complement of staff either, and appears to be struggling to assert itself.
- **The 'small island personality' issue**: In Saint Lucia 'everyone knows everyone', however this highly networked society often results in the bypassing of formal communication chains and simply calling the person who you know best. This has led to significant reliance on the SLRC in past emergency situations, due to the aforementioned familial relationship between the former prime minister and the Disaster Coordinator at the SLRC.

  This issue raises a second, related concern, that of the **sustainability of the SLRC**. With both the incumbent Director General and Disaster Coordinator planning to retire in the next couple of years no clear successors are in place, due to the size of the organisation.
- **Recognition of the SLRC**: Personal relationships may play a significant role in the elevated presence of the SLRC in national disaster response, however it is clear that the SLRC is an extremely well-respected organisation. Members of all communities visited spoken highly of the

SLRC and all knew the Director General and Disaster Coordinator by name and role; this indicates a clear public visibility and respect for the SLRC.

Risks

- **Community desire for social interventions**: Communities seem to feel more empowered to deal with natural disasters, and thus have identified a need for interventions which address social issues. (However the SLRC does not have the capacity to deliver such activities; both in terms of technical expertise/capacity or support from other PNS.)
- **Latent volcanic threat**: Whilst the island is at risk from volcanic activity, there appears to be far less awareness of the hazard amongst communities; this risk was highlighted by key informants rather than communities. Similarly there appears to be less knowledge about preparation and response to this hazard, or the effect which it might have on the island.

SLRC and its CBDRR programmes

- **RCRC partner relationships**: The SLRC appears to have a good relationship with the ARC (its major PNS), however a more 2-way communication exchange is required and a greater collaborative partnership, rather than the observed donor-implementer relationship which currently exists, should be encouraged.
- **Programme management**: SLRC appears to be running efficient and effective programmes, however effectiveness could be maximised with greater human resources; resource constraints were frequently mentioned in key informant interviews of SLRC staff – in terms of people, material resources (including a larger office) and time. Time spent in each community appeared to be relatively short, not even a full year in some cases. One effect of this can be a lack of sustainability of CDRT motivation and activities, as witnessed in Dennery.
- **Communities involved in CBDRR programmes**: the SLRC CBDRR programme communities exhibited some key differences from communities included in other countries surveyed by this study:
    - The average community size in Saint Lucia was significantly larger than communities in other countries; however single CDRTs were still expected to cover these entire communities.
    - Some communities in Saint Lucia had self-identified for inclusion in the CBDRR programmes, rather than having been selected by the SLRC.
    - Communities which were not economically vulnerable were included in the programmes; i.e. those communities which could (and had) already self-organised and funded their own disaster risk reduction activities without SLRC support.

  - Two of the communities visited were just beginning their CBDRR programme, whereas all other communities surveyed by the study had already completed the CBDRR programme.

- **Mitigation measures**: These are not a key feature of CBDRR programmes run in Saint Lucia, instead mitigation measures are more of an additional element, managed by the community/CDRT rather than the SLRC. This may be a positive factor in relation to the programmes however, as the community is invested in such works from their outset, and fully understands the processes and costs involved in construction. Hopefully this will also make them more aware of ongoing maintenance and repairs needed to sustain the mitigation measures in the future. In some communities visited during the fieldwork individuals - where they had the funds to do so - had paid for and constructed their own small mitigation measures, such as retaining walls and gabion boxes. This indicates an embedded awareness of disaster mitigation in these communities, at individual level in particular.

Appendix D

Example community write-ups

D1 Villa del Rio, Colombia

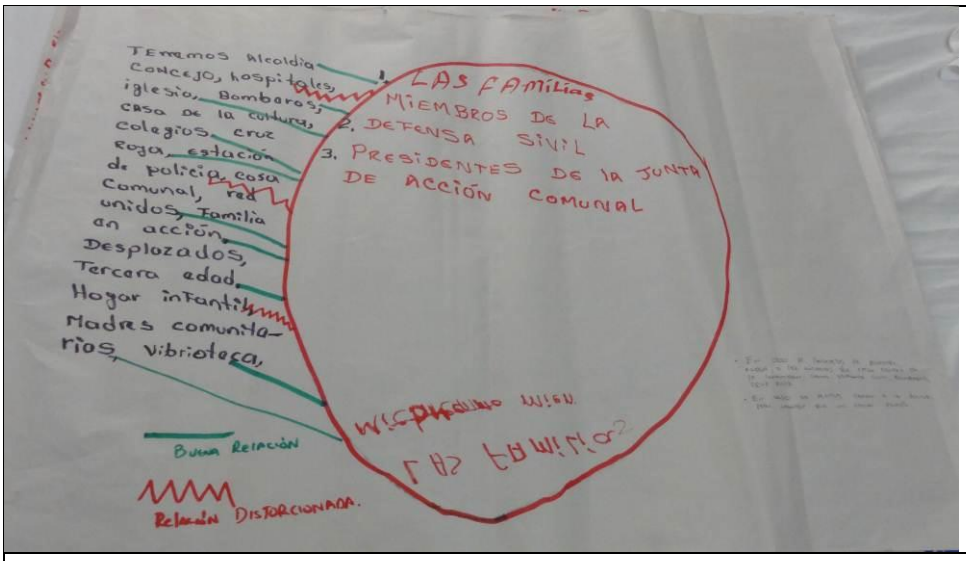
ASSESSMENT INFORMATION			
Date:	27/09/2012	**Time:**	10am – 2pm
Assessment Team Members:	Caroline Maria Sandra	**Branch Staff:**	David Fabio
Location:	Villa del Rio, Villanueva, La Guajira	**Key Informants Interviewed:**	President of the community association (Juan Francisco Contrera Ramirez) Treasurer of the community association (Ane Arias Capera) RC Volunteer – CBDRR Coordinator (Camillo Andres Martinez Diaz)
Community Size:	Large (peri-urban)	**No. of households**	480
Number of Participants- Community workshop	About 30 people Mostly women	**Number of Participants- Focus Group Discussion**	n/a

PROGRAMME INFORMATION			
Project Name:	*Proyecto "Cambio Climático y Desastres"*	**Project Costs:**	3.480 COP (Villa del Rio)
Implementing Society:	Colombian RC	**Number of Communities in District:**	5
Donor Society:	Netherlands RC	**Project Duration:**	17 months
Back donor:	National post code lottery	**Beneficiaries per community:**	16.627
Start Date of Project in Community:	July, 2006	**End Date of Project in Community:**	December,2007
Key Shocks and Stresses:	Flooding from the river	Disease/outbreaks	n/a
Brief history of the village/key characteristics: A peri-urban settlement that was established when services were put in by the government about 20 years ago. They have several major floods and the area has been designated a high risk zone by the government who have told the community they are making plans to relocate them. However, they are still waiting to hear more from the government about their relocation, and the government have now started to put in place barriers to channel the river water so they are not sure if they want to move. There is also a division in the community about whether they want to move or not.			
Key project activities in this community: Early warning system put in place			
Methods used for identifying & reaching the most vulnerable: *Not discussed*			

D1.1 Community Workshop

Exercise 1: Understanding your community / *Comprensión de su comunidad*

(a) Who is in your community? / *¿Quién está en su comunidad?*

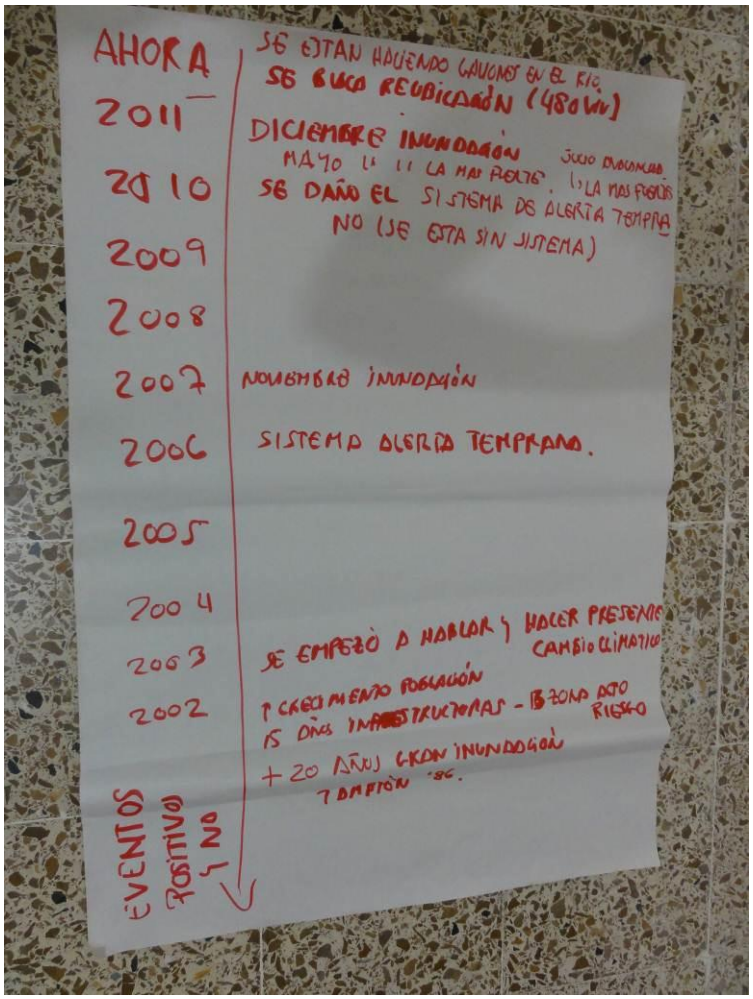


Inside the community (Dentro)	Outside the community (Fuera)
The families Members of the civil defence Presidents of the Junta de acción comunal	The local authority (strong) Concejo, hospitals (weak) Firemen (strong) The church (strong) House of culture Colleges (strong) The Red Cross (strong) Police station (weak) Community centre Red Unidos Familia en acción Desplazados Tercera Edad Nursery (weak) Madres comunitarios (community mothers) (strong) Vibrioteca (strong)

If there is a disaster they seek help from those organisations in the community, like the civil defence, firemen, or the Red Cross

If there is a fight they call the police but they try to ensure that fights don't start

b) What has happened to you community? / *¿Qué le ha pasado a su comunidad en los últimos 10 años?*



Year / *Año*	Key events / *Eventos claves*
Now	They are making barriers in the river They are being relocated (480 houses)
2011	December – flood July - Avalanche May – stonger flood
2010	The early warning system was damaged
2009	
2008	
2007	Flood – November
2006	They put in the early warning system
2005	
2004	
2003	They started to talk about and see the effects of climate change

13 years before they were designated a high risk area

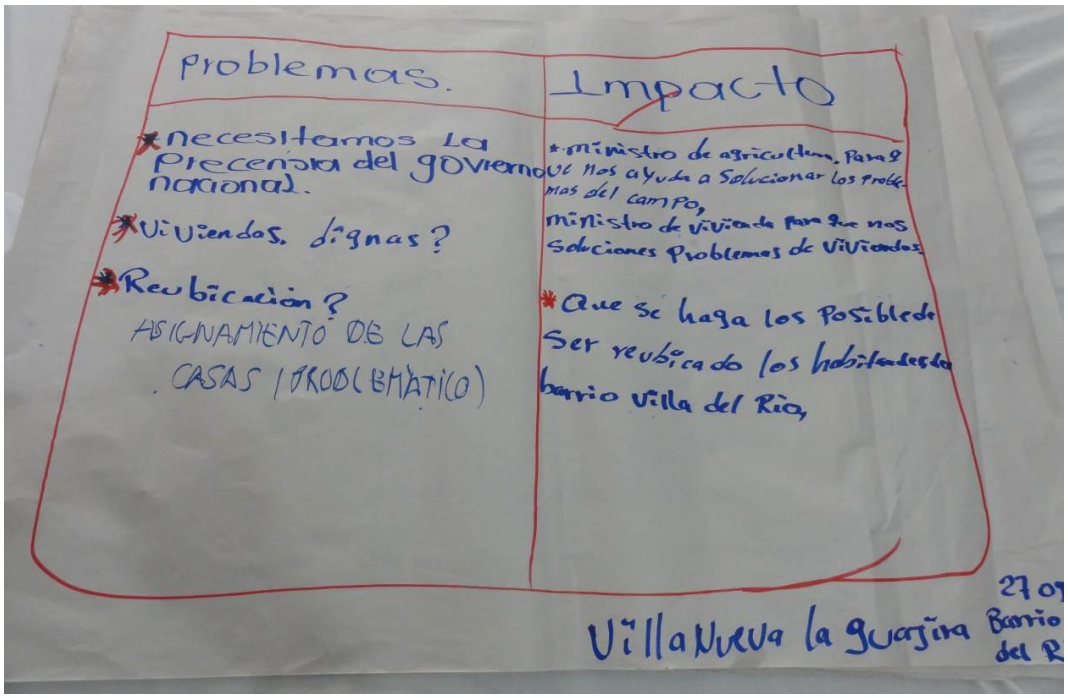
15 years before the infrastructure was put in

1986 There was a big flood

They have become more exposed due to deforestation. This also causes pollution of the water

(disasters in bold)

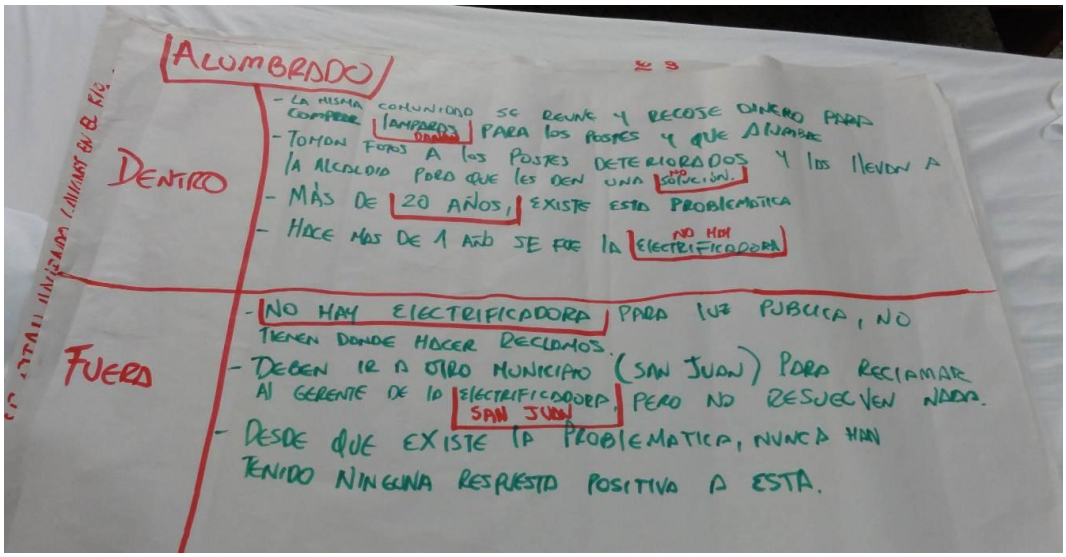
c) What shocks or stresses does your community face? / *¿A qué problemas y presiones se enfrenta?*



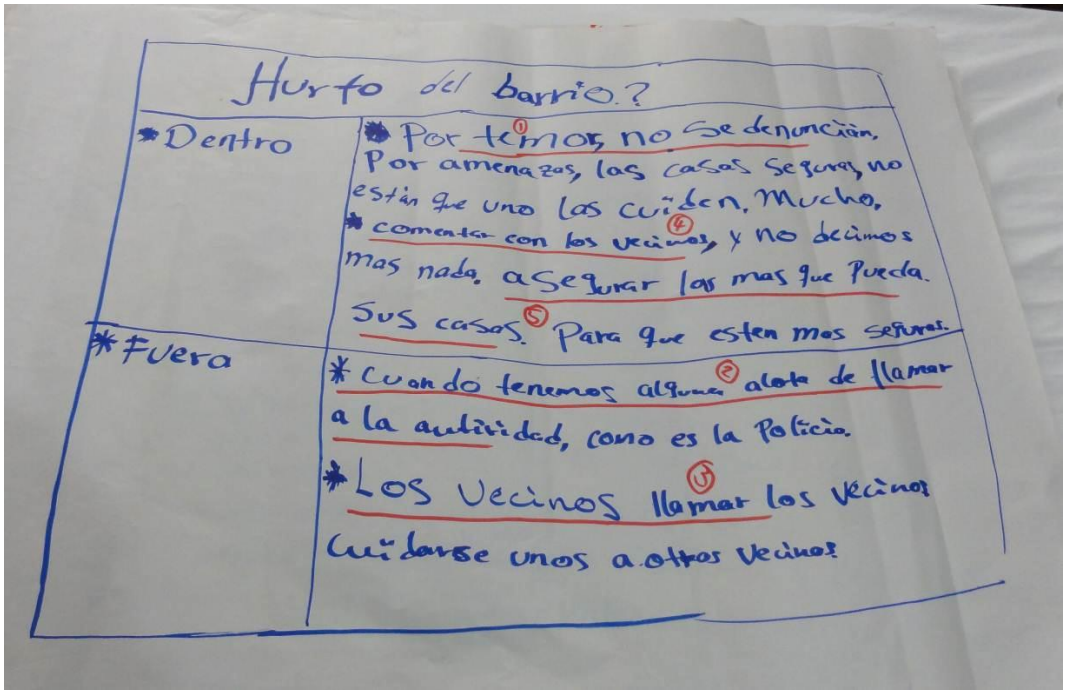
Shock or stress / *problemas repentinos o presiones*	**Impact**	**Votes – Men**	**Votes - Women**[45]	**Ranking**
Flooding	When there are floods we don't have an easy life. When the flood arrives they run and leave their things. We ask for help.			30 (1)
Avalanches	Cause landslides. This is a very high risk for the community. It destroys houses.			
Crime in the community	They are always worried that someone will take advantage of the things that others have.			15 (3)
Public lighting	The electricity poles are damaged and they are worried that they will fall. The community is unsafe			11 (2)
There isn't enough support from the national government	They don't have support for agriculture or proper housing			
They are waiting for the government to relocate them	Some people want to move and others don't. The government have said they will do it but they are still waiting. They don't feel secure.			

[45] Too many workshop participants to disaggregate male and female votes.

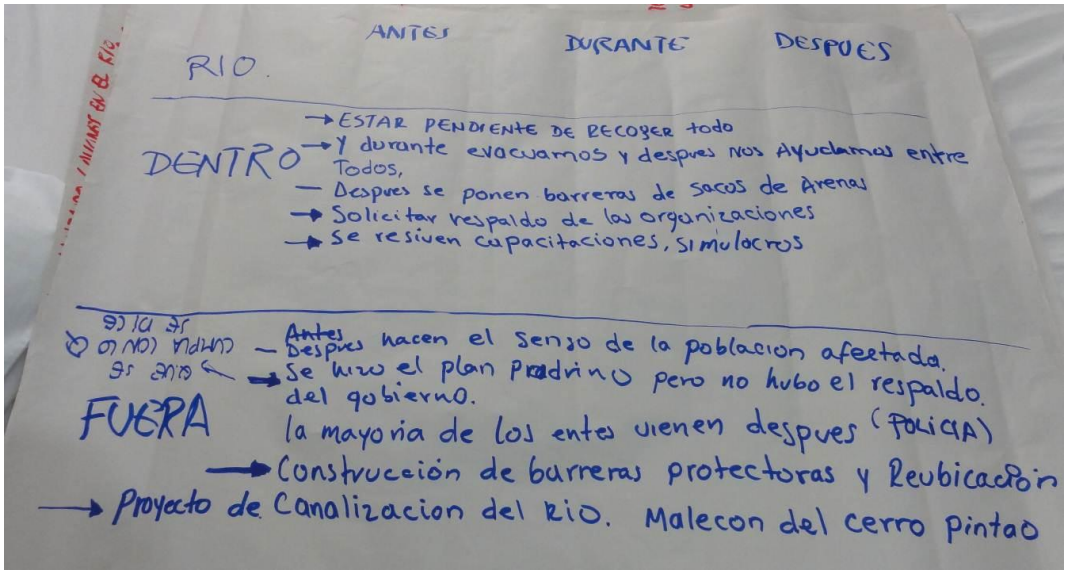
Exercise 2: What makes your community safe and resilient? / *Ejercicio dos: ¿Qué hace ser a su comunidad segura y resiliente?*



NAME OF SHOCK OR STRESS: Lack of public lighting ***Nombre de problema repentina o presión***			
	Before (Prepare & Prevent)	***During (Cope)***	***After(Recover)***
Inside the Community	They come together to buy lighting, but then the posts are stolen. They took photos of the damaged posts and lights to the government but they haven't done anything They have had this problem for more than 20 years and they have never come to a solution The year before there was an electricity company that said they would help but now they have left and there is no one to help		
Outside the Community	There isn't an energy company for the public lighting so they don't have anywhere to go. They have to go to another municipality to ask for help, but they can't help		



NAME OF SHOCK OR STRESS: Crime in the community ***Nombre de problema repentina o presión***			
	Before (Prepare & Prevent)	***During (Cope)***	***After(Recover)***
Inside the Community	**They are too scared to report crimes (1)** They don't have secure houses **They tell each other if there is a crime, but they don't do anything else. (4)** **They make their houses as secure as they can. (5)** **They alert each other if there is a crime happening (3)**		
Outside the Community	**They call the police if there is a crime (2)**		

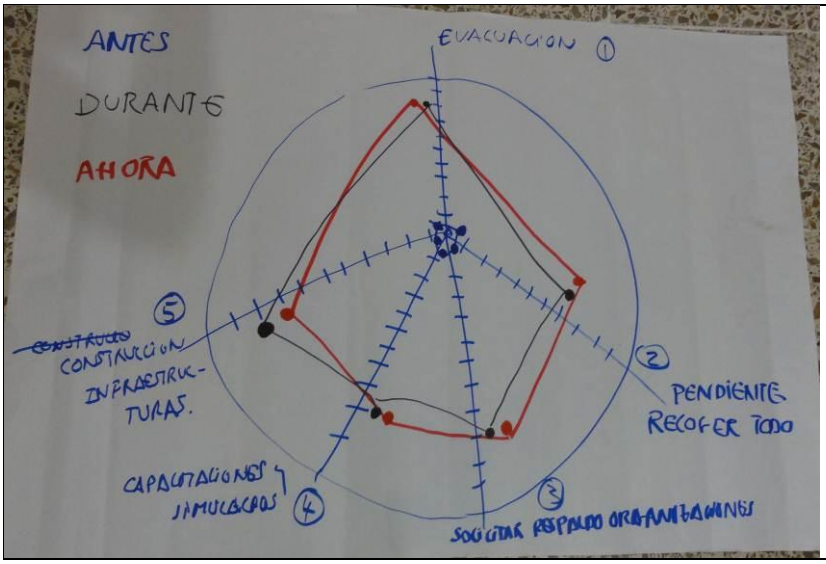


NAME OF SHOCK OR STRESS: River flooding ***Nombre de problema repentino o presión***			
	Before (Prepare & Prevent)	***During (Cope)***	***After(Recover)***
Inside the Community	**They are responsible for collecting all their things (2)** **During the disaster they evacuate (1)** After they help each other They put up sacks of earth to stop the water **They look for help from organisations (3)** **They have received training and simulations (4)**		
Outside the Community	They made the plan ‘pandrino’ of the damaged houses, but the government didn’t do anything Then they made a census of the affected population The majority of the actors come after, then the police arrive **They are constructing barriers, protections and relocating people (5)** A project for channelling the river Dam / Flood Gates “Cerro Pintao”		

Comments / Observations:

They don’t have any purpose-built refuges, they have to use the colleges

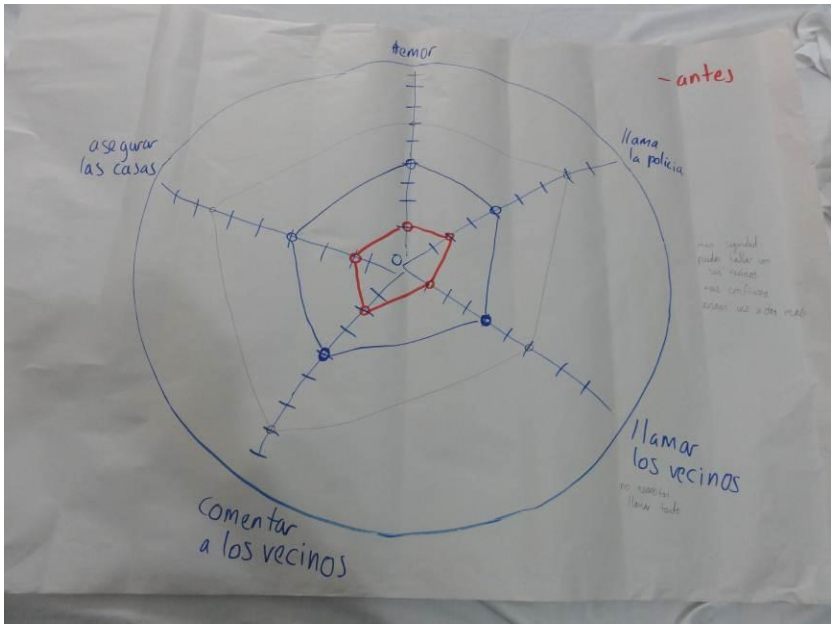
Exercise 3: How have things changed? / *Ejercicio Tres: ¿Cómo han cambiado las cosas? (50 minutos)*



- **River flooding**[46]

Number in Diagram	What	What has changed	Scores
1	Evacuation	When the river comes they evacuate. Before they didn't evacuate in time because there wasn't time. There is an alarm in the leader's house and he now alerts them in time.	Before = 0 After = 8 Now = 8
2	They are responsible for collecting everything	Now they have more time to collect their belongings and evacuate in time	Before = 0 After = 7 Now = 7
3	They look for support from organisations	Before they didn't know who to call in an emergency. Now they know who to call.	Before = 0 After = 8 Now = 8
4	Training and simulations	Before they didn't have the skills, but now they are prepared and know what to do.	Before = 0 After = 9 Now = 9
5	Construction of infrastructure	Before they didn't have any infrastructure and now they have built the barriers, the early warning system and channelling the river. Now they have put in place all those things but the early warning system has since broken.	Before = 0 After = 9 Now = 8

[46] Changes to factors relating to only two shocks or stresses were identified here, due to a misunderstanding of the exercise by one of the RC volunteers.



Crime in the community			
Number in Diagram	**What**	**What has changed**	**Scores**
1	They are afraid to report crime	Now they are not so afraid because they support each other, but they are still a bit afraid to make reports.	Before = 1 After = 4 Now = 6
2	They call the police	Before they didn't know who to call but now they know who to call in an emergency	Before = 2 After = 4 Now = 8
3	They alert their neighbours	Before they didn't know their neighbours very well, but since the programme people have become better at watching out for each other. They have more trust.	Before = 1 After = 4 Now = 6
4	They support each other	They feel more secure and feel like they can talk with their neighbours	Before = 2 After = 4 Now = 8
5	Secure their houses	Before e they weren't so aware of how to keep their houses secure, but now they are more careful and watch out for each other	Before = 2 After = 4 Now = 7.5

Comments & Observations:
The Red Cross programme seems to have strengthened community networks and cohesion in the community. Community members commented that they felt they had a good relationship with the Red Cross and they liked the way they work with them.

Exercise 4: Recommendations and lessons learnt

Recommendations:

That they train them more 2

That they help them relocate 4

That they help us in Humanitarian help (e.g. food, clothes, basic needs)

Run more simulations so that the community is better prepared for a flood 1

Train volunteers 2

To be in contact with them

Lesson learnt:

The importance of relocation 2

How to help people when there is a flood

To take more responsibility and be more aware of their problems

They have learnt a lot from the training to help each other

Notes:

They want to relocate because they are aware that they are in a high risk area

Community workshop photos

D1.2 Community tour

(with community leaders, RC local staff)

A typical house construction

While the community had been offered a potential opportunity for relocation many didn't want to as they felt happy where they were. For example this man was growing banana plants and said he was happy to stay where he was.

The government had said they were going to relocate the community, but they were also building protective barriers to stop the river flooding.

D2 C-12, Guatemala

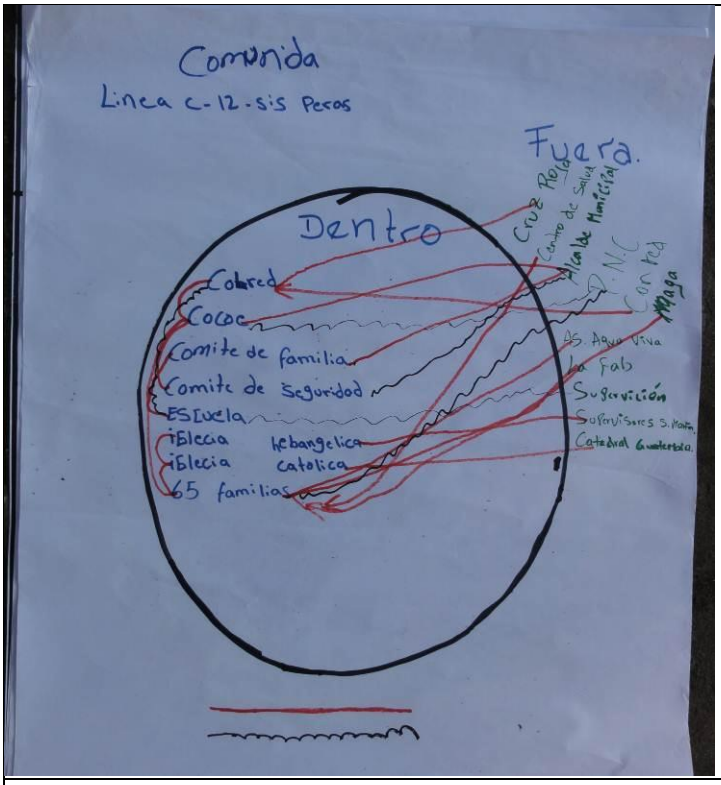
ASSESSMENT INFORMATION			
Date:	31/10/2012	**Time:**	10-3pm
Assessment Team Members:		**Branch Staff:**	
Location:	C-12, Retalhuleu	**Key Informants Interviewed:**	Community leaders (COCODE and COLRED)
Community Size:	Small (rural)	**No Households**	65 families
Number of Participants- Community workshop	35 men 32 women	**Number of Participants- Focus Group Discussion**	

PROGRAMME INFORMATION			
Project Name:	DIPECHO 7	**Project Costs:**	543.254 euros
Implementing Society:	Guatemalan RC	**Number of Communities in District:**	15
Donor Society:	Spanish RC and Netherlands RC	**Project Duration:**	15 months
Back donor:	European Commission	**Beneficiaries per community:**	Approx. 873
Start Date of Project in Community:	2011	**End Date of Project in Community:**	2012
Key Shocks and Stresses:	Flooding	Disease/outbreaks	n/a
Brief history of the village/key characteristics: The community were already organised before the RC with an active female leader of the COCODE (community development committee) and active COLRED (local disaster reduction committee) representatives.			
Key project activities in this community: 6 month project. Training of the community. Radios given out. Built a stove for the refuge. Emergency plan made.			
Notes on vulnerability: There are about 12 houses in a high risk zone for flooding.			

D2.1 Community Workshop

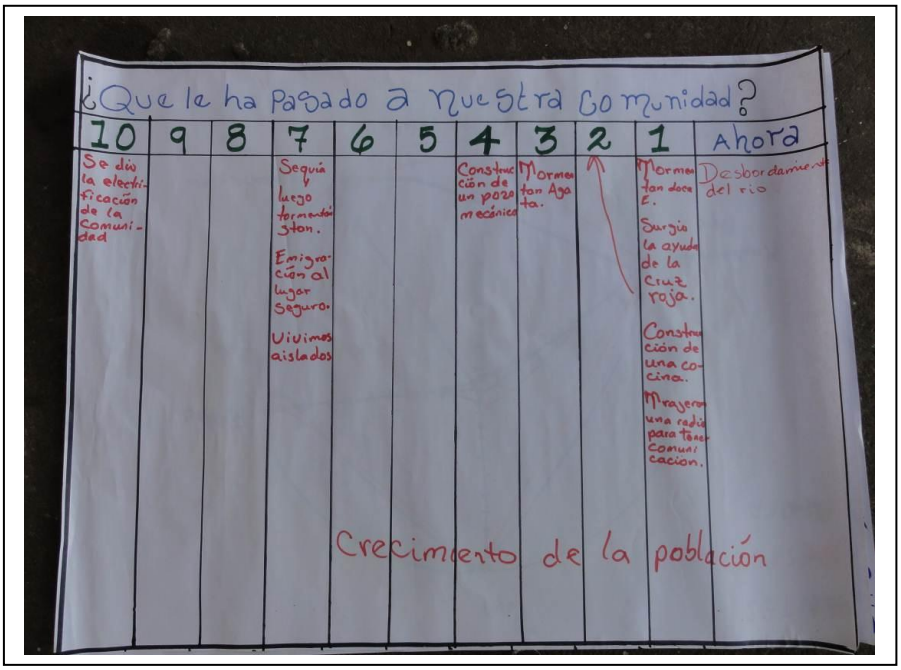
Exercise 1: Understanding your community / *Comprensión de su comunidad*

(a) Who is in your community? / *¿Quién está en su comunidad?*



Inside the community (Dentro)	Outside the community (Fuera)
COLRED	Red Cross
COCODE	Health centre
Family committee	Municipality
Security committee	PNC
School	
Churches	CONRED
65 families	Maga
	Agua Viva
	La Fab
	Supervision
	Guatemala cathedral

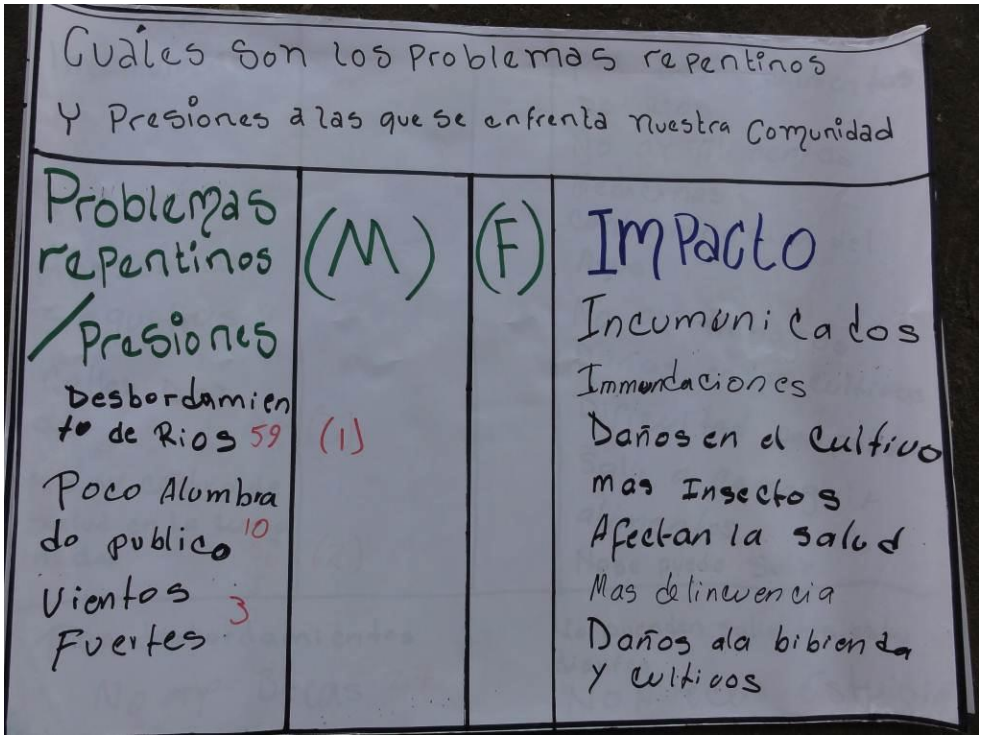
b) What has happened to you community? / *¿Qué le ha pasado a su comunidad en los últimos 10 años?*

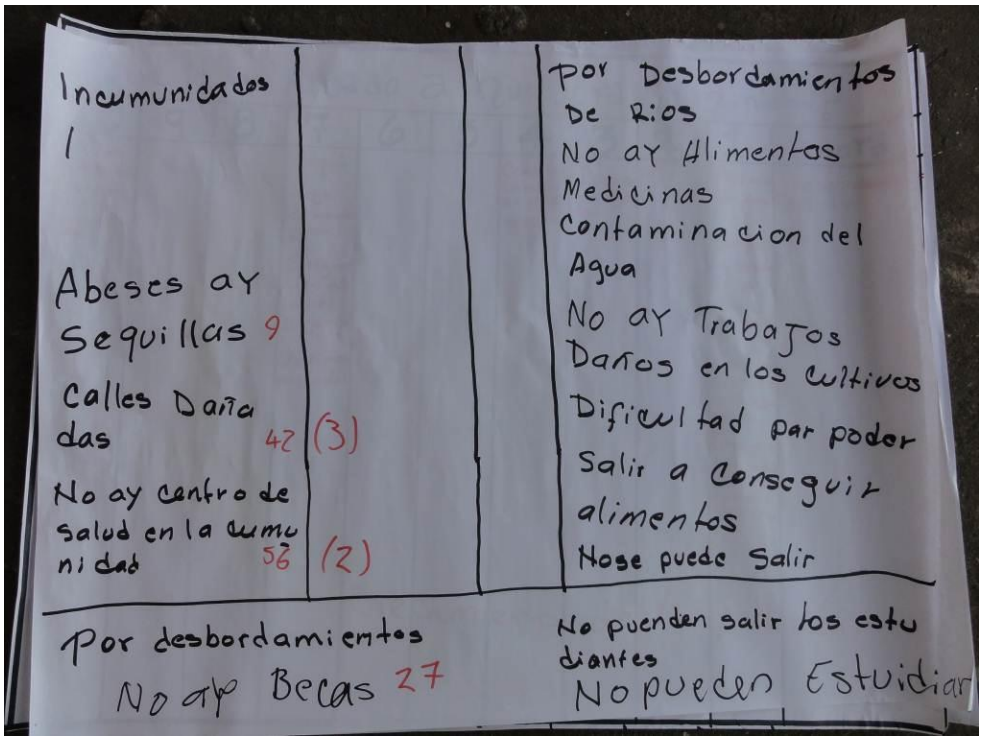


Year / *Año*	Key events / *Eventos claves*
Now	Flooding of the river
2011	Doce E storm Construction of the kitchen Gave out radios for the community to communicate with
2010	The Red Cross started to help them
2009	Storm Agatha
2008	Construction of a mechanical pump
2007	
2006	
2005	Drought Hurricane Stan Evacuation to a secure location When there are hurricanes and floods they are isolated
2004	
2003	
2002	Electricity came to their community

The population has continued to grow during these years

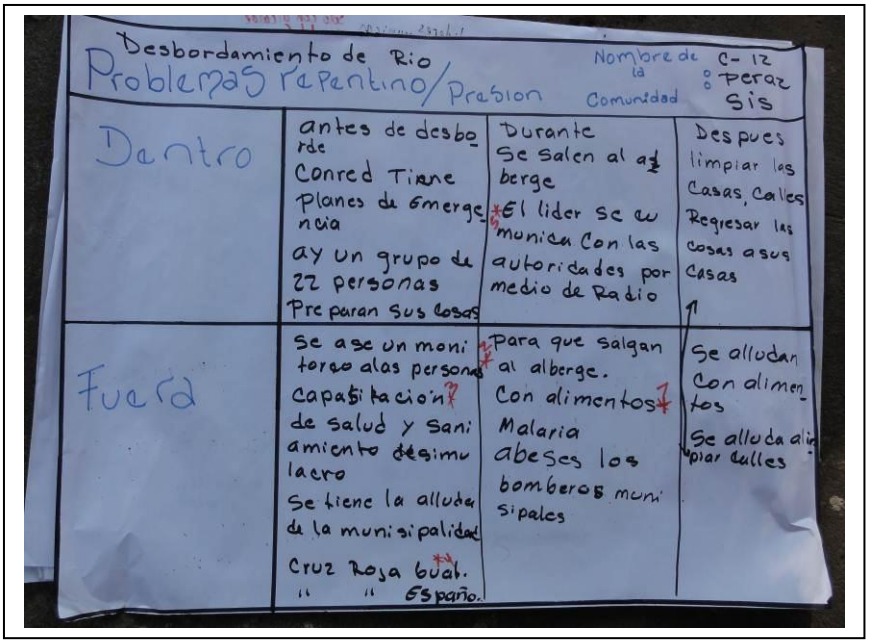
c) What shocks or stresses does your community face? / *¿A qué problemas y presiones se enfrenta?*





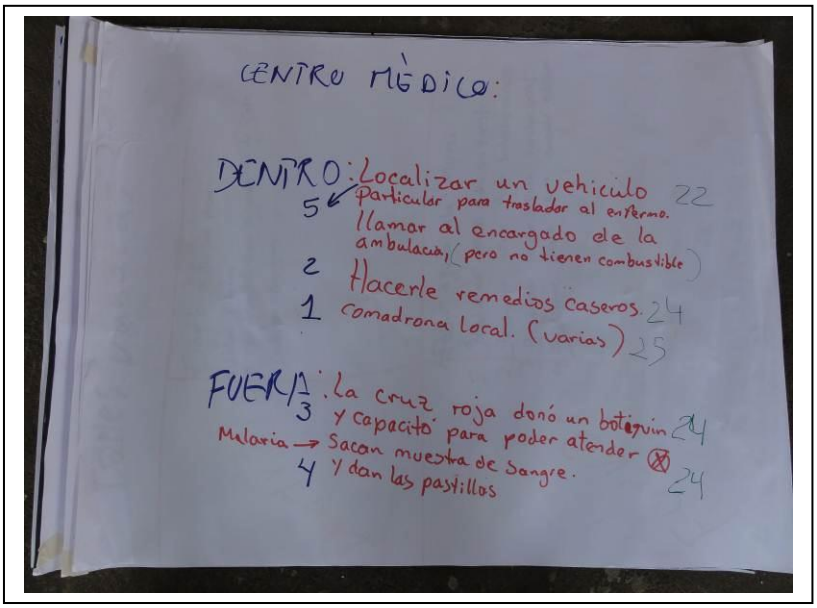
Shock or stress / problemas *repentinos o presiones*	**Impact**	**Votes**	**Ranking**
Flooding of the river	Cut off from communication Houses flood Damage to crops More insects affect their health (mosquitos) When they are disconnected they cannot access medicine or food Contamination of drinking water Students can't get to school	59	1
Lack of public lighting	Delinquency	10	
Strong winds	Damage to houses and crops	3	
There are sometimes droughts	There is no work in agriculture Damage to crops	9	
Damaged roads	Difficult to go and look for food	42	3
There is no health centre in the community	When they are cut off during flooding there is no medical support They have to travel a long distance and wait a long time for medical support	56	2
There are no scholarships for students	They can't afford to study	27	

Exercise 2: What makes your community safe and resilient? / *Ejercicio dos: ¿Qué hace ser a su comunidad segura y resiliente?*

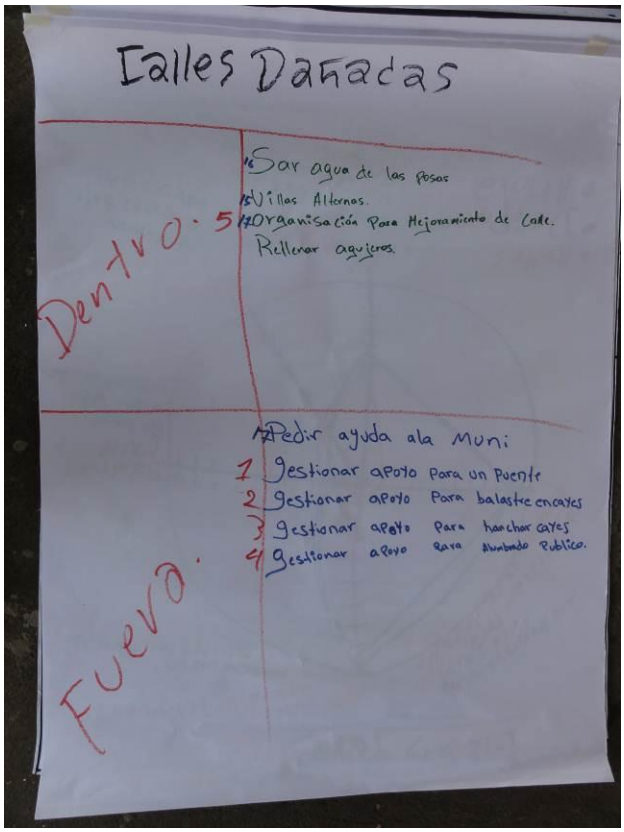


NAME OF SHOCK OR STRESS: Flooding of the river ***Nombre de problema repentina o presión***			
	Before (Prepare & Prevent)	***During (Cope)***	***After(Recover)***
Inside the Community	CONRED have made emergency plans There is a group of 22 people organised as part of the CONRED They prepare their things The CONRED monitor the people in the community	**They go the refuge (3)** **The leader communicates with the authorities by radio (5)**	They clean their houses and roads They put back their things in their houses Everyone helps clean the roads
Outside the Community	**Training (3)** in health and sanitation and holds simulations The municipality helps **The Guatemalan and Spanish RC have helped them prepare (4)**	**Help with food (1)** Help with malaria Sometimes the firemen come and help	They help with food

(Top five shocks and stresses highlighted with ranking in brackets)

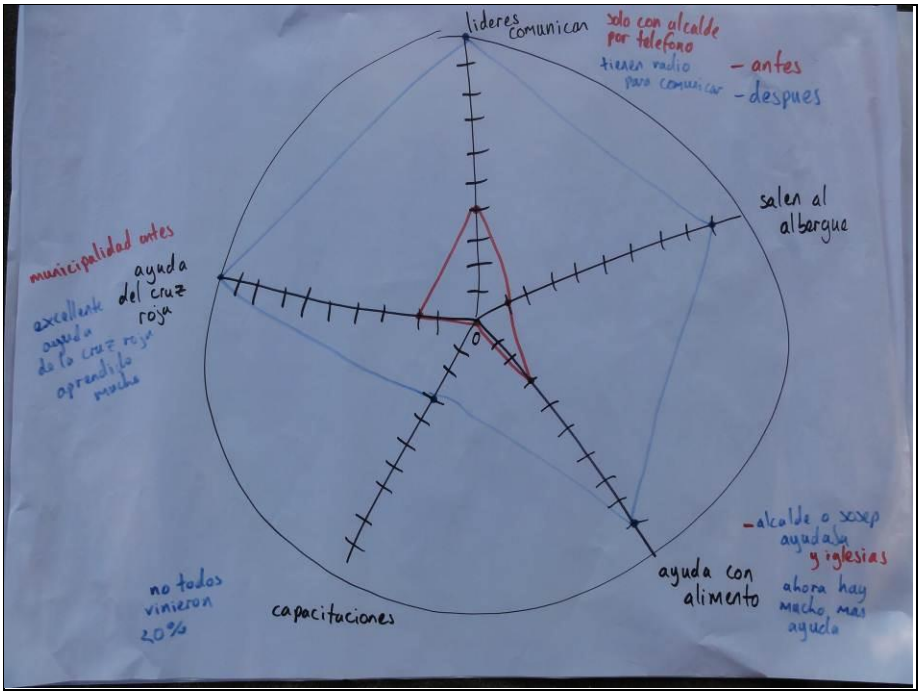


NAME OF SHOCK OR STRESS: The medical centre ***Nombre de problema repentino o presión***			
	Before (Prepare & Prevent)	***During (Cope)***	***After(Recover)***
Inside the Community	**They use a particular vehicle to transport ill people (5)** They call an ambulance (but they don't have fuel) **They use home remedies (2)** **The local midwife helps (there are several) (1)**		
Outside the Community	**The Red Cross gave them a first aid kit and training to attend victims (3)** **The health centre in La Maquina has malaria tablets and does blood tests (4)**		



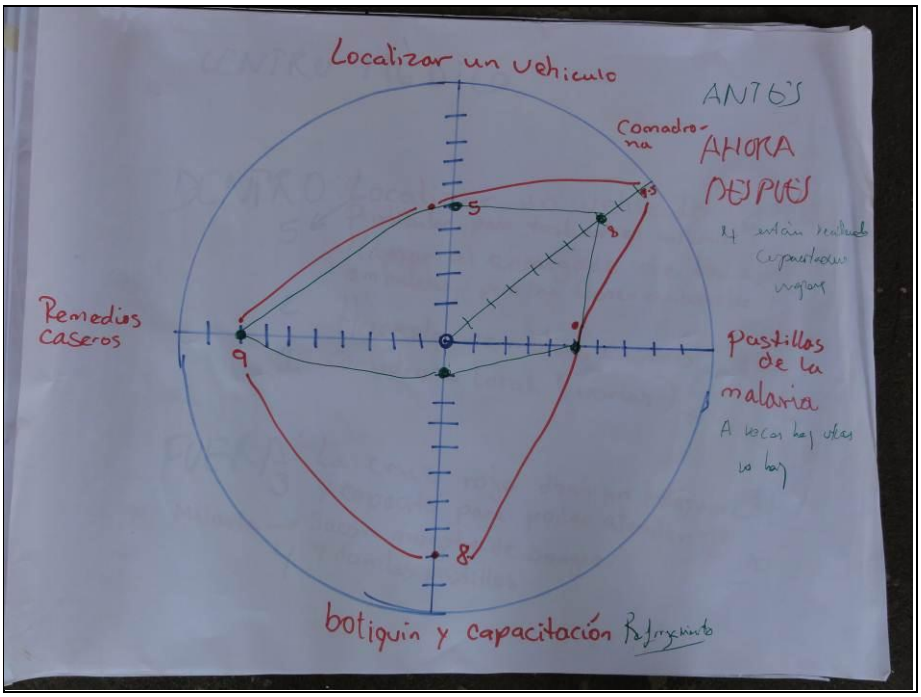
NAME OF SHOCK OR STRESS: Damaged Roads ***Nombre de problema repentino o presión***			
	Before (Prepare & Prevent)	***During (Cope)***	***After(Recover)***
Inside the Community	They are taking out water from wells They use alternative roads **They organise to improve the roads (4)** They fill holes in the road They are looking for help for the bridge They are looking for support from the municipality		
Outside the Community	They ask the municipality for help **The municipality has built a bridge but they are talking with them to improve it (1)** **The municipality has made the road wider (5) and helped with repairs (2)** **The municipality has improved the lighting a little but they still need more improvement (3)**		

Exercise 3: How have things changed? / *Ejercicio Tres: ¿Cómo han cambiado las cosas? (50 minutos)*



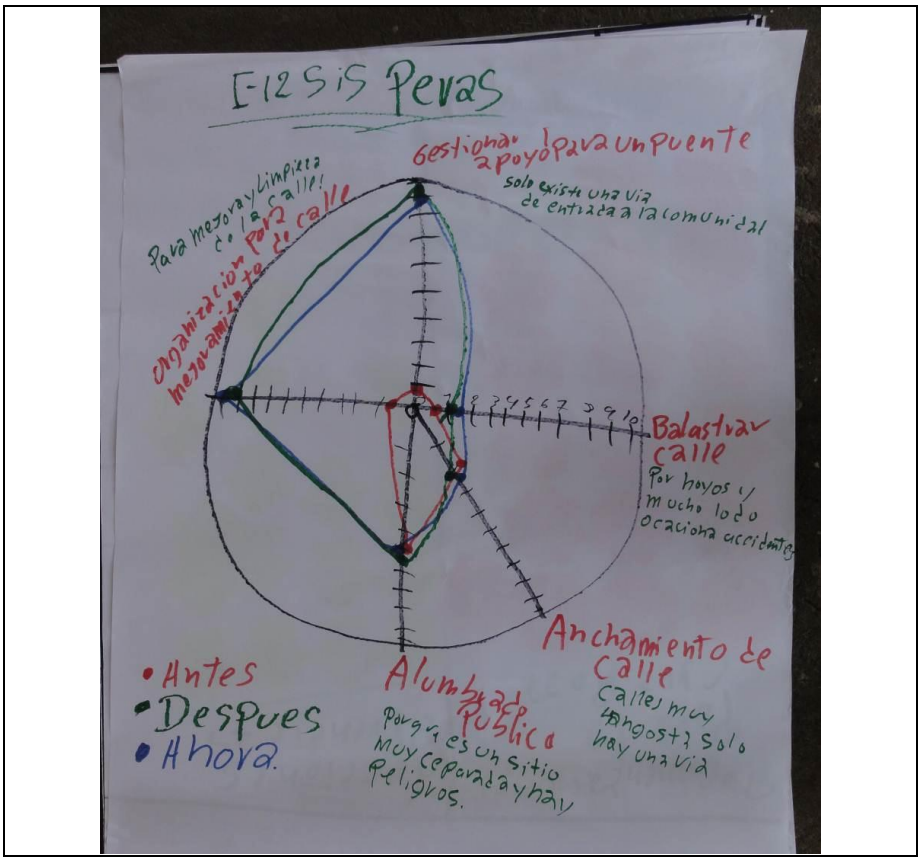
- **Medical centre**

Number in Diagram	What	What has changed	Scores
1	Leaders communicate with actors outside	Before they only communicated with the local authority by telephone Now they have radios to communicate with the RC and other actors	Before = 4 Now = 10
2	They go to the refuge	Before not many people left their homes, now they evacuate in time to the refuge	Before = 1 Now = 9
3	Help with food	Before the local authority, SOSEP (Secretaria de Obras Sociales del esposa de president) and the churches helped. Now there is a lot more help from more organisations	Before = 3 Now = 9
4	Training	Before they hadn't been given any training in what to do in an emergency. Now they have been given some training but not everyone came. Only about 20% of the community have been trained	Before = 0 Now = 3
5	Help from the red cross and other actors	Before the local authority gave them some support. Now the RC has given them excellent support. They have learnt a lot.	Before = 2 Now = 10



- **Flooding**

Number in Diagram	What	What has changed	Scores
1	Use a local vehicle	They always have to look for a vehicle. If they call the medical centre they tell them they have to pay petrol so they always have to look for someone in the community who can help.	Before = 5 Now = 5
2	The midwife helps	This has helped because the community midwifes have been better trained and gone on courses. They are better organised.	Before = 8 Now = 10
3	Malaria pills	This hasn't changed. They can only give them when there are pills to give for malaria and sometimes they don't have any.	Before = 5 Now = 5
4	First aid kit and training from the RC	Before they didn't have a community first aid kit, and hadn't been trained. Now they have been trained and have a first aid kit.	Before = 1 Now = 8
5	Home remedies	They have always used home remedies and they are very good at this because there is little support from outside.	Before = 9 Now = 9



- **Roads**

Number in Diagram	What	What has changed	Scores
1	Look for support for the bridge	Before there wasn't a bridge and now they have built a bridge but it isn't enough	Before = 1 After = 10 Now = 10
2	Repair and clean the road	Before there wasn't a good road, now it has been improved a lot	Before = 0 After = 1 Now = 2
3	Electric lighting	Now it has improved a little because 30% of the community have lighting	Before = 5 After = 6 Now = 6
4	They organise to improve the roads	Now they are more organised for maintaining the road. They have organised a group and there wasn't one before.	Before = 1 After = 10 Now = 10
5	Widening of the road	Before the road was very narrow and flooded easily, now they have made it wider with the help of the municipality. They still need it to be wider. It is only one lane at the moment	Before = 2 After = 2 Now = 3

Exercise 4: Recommendations and lessons learnt

Recommendations

More training so we have a better chance of surviving
Continue their support of our communities 17
Keep training us to make a better community 2
Keep thinking of the community
They are well coordinated and they have given us good lessons
Help families
Keep helping the community
Give help, continue projects and give training
Keep working in the community
Don’t abandon us because it has been a big benefit to us
Always look for what we most need
Continue helping those that need it most
Help people in malnutrition

Lessons learnt

I have learnt it is good to help others 2
How to combat natural disasters
To evaluate the disasters which affect them
First aid 4
To make groups to clean the roads
How to fight to keep repairing the road
It is good to be always united
To be organised
How to help
To be humanitarian in the community 2
How to improve my way of life

Community workshop and focus group photos

D2.2 Community tour

(with community leaders, RC local staff)

Crops growing in the flooding zone

Animals in the flooding zone

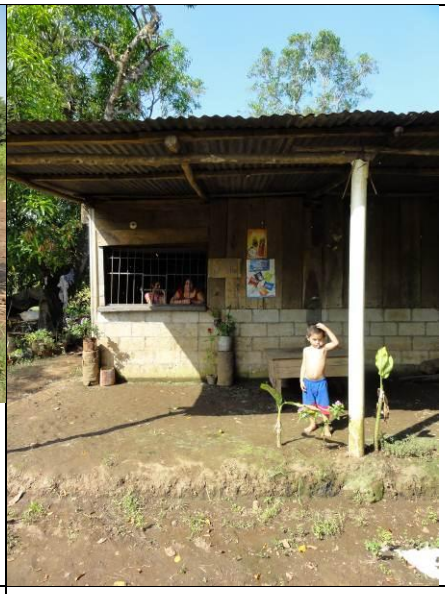
The laguna which floods

The kitchen built by the RC

Evacuation point

DIPECHO 7 sign

Crops destroyed by floods



House located in a high risk flood zone

Community water pump

Evacuation route sign

The house of the leader of COCODE next to the playing field and school. These are used for community meetings. They would like to make an area where it would be possible for helicopters to land but this is not possible in this area with the electricity lines.

Risk map of the area located at the house of the COCODE leader on the outside wall.

Alert sign and information located on the outside of the house of the leader of COCODE.

D3 Dennery, Saint Lucia

ASSESSMENT INFORMATION				
Date:	23rd October 2012		**Time:**	Tour: 1pm Workshop: 7pm
Assessment Team Members:	Flora Tonking Vera Bukachi		**SLRC Staff:**	*Terrencia Gaillard*
Location:	Dennery secondary school	Peri-urban	**Key informants interviewed:**	n/a
Number of participants - Community workshop	21 (16 women, 5 men)		**Number of participants - Focus Group Discussion**	n/a

PROGRAMME INFORMATION			
Project Name:	Readiness to Respond	**Project Costs:**	*TBC*
Implementing Society:	SLRC	**Number of Communities in District:**	n/a
Donor Society:	American Red Cross	**Project Duration:**	3 years
Back donor:	USAID	**Beneficiaries per community:**	8000 people
Start Date of Project in Community:	*Tbc*	**End Date of Project in Community:**	*Tbc*
Key Shocks and Stresses:	Flooding	Social issues; drug abuse, domestic abuse, unemployment	

Brief history of the village/key characteristics:

Dennery is a large settlement of around 8000 people in the centre of the island of Saint Lucia. The community sits in and around a small delta, along the Atlantic Ocean, surrounded by hills, ravines and rivers. This makes the community vulnerable to sea flooding/storm surges as well as river flooding from the upland areas. Landslides have also occurred in the hilly areas of the community.

The community's economic activities used to be farming and fishing, however in recent years the farming has seen a decline (in part due to a disease that affected banana crops) and even the fishing industry is reportedly struggling. Efforts have been made to support the industry, building a protective wall around the fishing boat harbour and establishing a fishermen's group. The EU is also helping to fund a weekly fish festival which takes place in Dennery, attracting people from all over the island, including tourists. Residents also discussed a large manufacturing plant which used to be in the community but was closed down over 10 years ago, causing mass unemployment which remains a problem in the community.

There are plenty of schools (various grades/ages) in the community, and roads/transport links to the rest of the island. Dennery's hospital however has been closed since Hurricane Tomas in 2010, during which the roof of the building was blown off and has never been repaired, in part due to its exposed and therefore vulnerable location (at the top of a hill). With no existing hospital and a new site yet to be determined, the nearest hospital is therefore now in Castries, about half an hour's drive away.

Key CBDRR project activities in this village:

Formation of CDRT
Establishment of kit store at the local fire station
Training – first aid, CDRT

Response to Hurricane Tomas in 2010; delivery of relief items, assistance with evacuations.

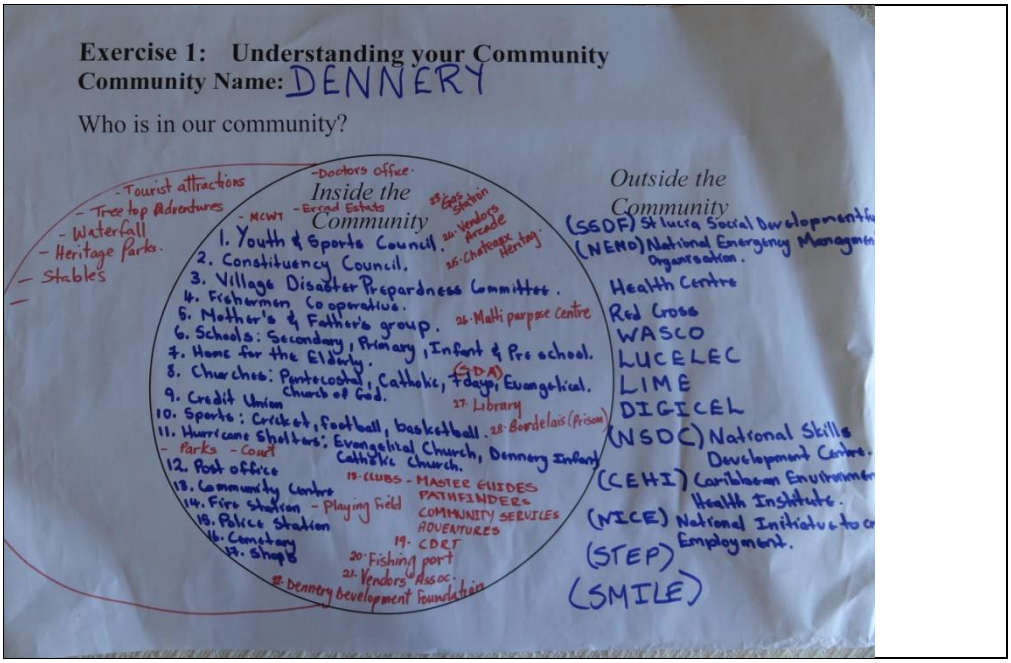
Methods used for identifying & reaching the most vulnerable:

Whilst how they knew/learnt where the vulnerable people in their community lived was not clear, CDRT members spoke of providing particular assistance to the elderly during flooding, by helping to move their furniture out of reach of flood waters and evacuating them to safety.

D3.1 Community Workshop

Exercise 1: Understanding your community

(a) Who is in your community?



Inside the community	Outside the community
Youth and Sports Council	Saint Lucia Social Development Fund (SSDF)
Constituency Council	National Emergency Management Organisation (NEMO)
Village Disaster Preparedness Committee	Health Centre
Fishermen's Cooperative	Red Cross
Mothers and Fathers Group	WASCO (water company)
Schools (secondary, primary, infant and pre-school)	LUCELEC (electricity company)
Home for the elderly	Lime (telecoms provider)
Churches (Pentecostal, Catholic, 7th Day Adventist, Evangelical, Church of God)	Digicel (telecoms provider)
Credit Union	National Skills Development Centre (NSDC)
Sports (Cricket, football, basketball)	Caribbean Environmental Health Institute (CEHI)
Borderlais prison	National Initiative to Create Employment (NICE)
Hurricane shelters (Evangelical church, Dennery infant school, Catholic church)[47]	STEP
Post office	SMILE (Single mothers support programme/initiative)
Community centre	
Fire station	
Police station	
Cemetery	
Shops	
Doctors office	
Enrad Estate	
MCWT (*unknown acronym*)	
Tourist attractions; Tree-top Adventures, waterfall, heritage park, stables	
Doctors office	
Gas station	
Vendors arcade and association	
Chateaux Heritage (meeting space/conference facilities)	
Multi-purpose centre	
Library	
Clubs (Master guides, Pathfinders, Community services, Adventures)	
Community disaster response team (CDRT)	
Fishing port	
Dennery Development Foundation	

[47] The 7th Day Adventist Church and primary school are also hurricane shelters as determined from the community tour, although this was not mentioned during the inside-outside the community activity.

(b) What has happened to you community?

Year	Key events
2012	Black sigatoka (disease affecting banana crops) Excess seaweed (affecting fishing) Rehabilitation of Dennery playing field VAT introduced
2011	**Flash flood (November)** Bush fire General election Drought
2010	**Flash flood (October)** **Hurricane Tomas (October, after flash flood)** Bush fires Construction of village parks Loss of Dennery hospital due to hurricane
2009	Bush fire
2008	Bushfire
2007	**Earthquake (November)** Bush fire
2006	**Hurricane Dean** Bush fire
2005	Bush fire
2004	**Hurricane Ivan** Bush fire
2003	Bush fire

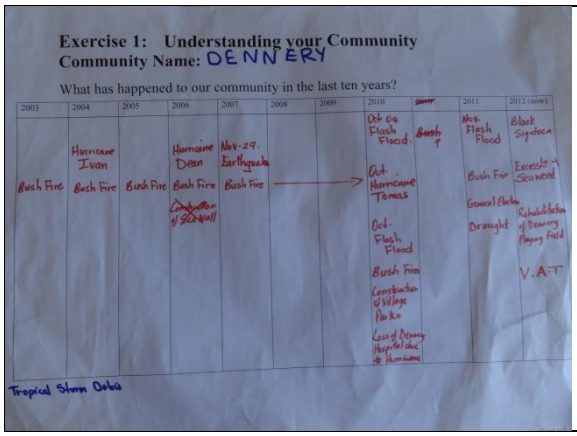
(disasters in bold)

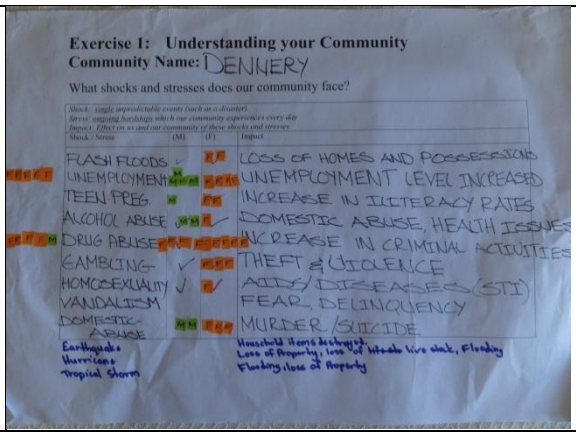
c) What shocks or stresses does your community face?

Shock or stress	Impact	Votes – Men	Votes - Women	Ranking
Flash floods	Loss of homes and possessions		2	5
Unemployment	Unemployment level increases / money problems	4	9	2
Teenage pregnancy	Increase in illiteracy rates	1	2	=4
Alcohol abuse	Domestic abuse, health issues	2	1	=4
Drug abuse	Increase in criminal activities	1	13	1
Gambling	Theft and violence		3	=4
Homosexuality	AIDS/diseases (STIs)		1	6
Vandalism	Fear, delinquency			=7
Domestic abuse	Murder / suicide	2	3	3
Earthquake	Household items destroyed			=7
Hurricane	Loss of property, loss of livestock, flooding			=7
Tropical storm	Flooding, loss of property			=7

Discussion/comments/observations

- *Only two votes per person due to number of people and time constraints*





Exercise 2: What makes your community safe and resilient?

NAME OF SHOCK OR STRESS: Unemployment			
	Before (Prepare & Prevent)	***During (Cope)***	***After (Recover)***
Inside the Community	Night classes (Adult Literacy Programme)		
	Schools literacy (#1)[48]		
	Skills training (cake making, garment making, electrical installation, construction, plumbing, bread and pastry making, computer training) (#2)		
	Small scale farming / fishing		
	Internet café		
	Vending[49]		
	Self-employment with small businesses (shops etc.) (#4)		
	Elderly care		
	Babysitting		
	Caretakers		
Outside the Community	Short Term Employment Programme (STEP)		
	National Skills Development Centre (NSDC)		
	National Initiative to Create Employment (NICE) (#3)		
	Government contracts and Government construction work (footpath maintenance, drains)		
	Caretakers		
	Apply for a job in public service		
	Apply for a job in private sector (#5)		
	NELP		

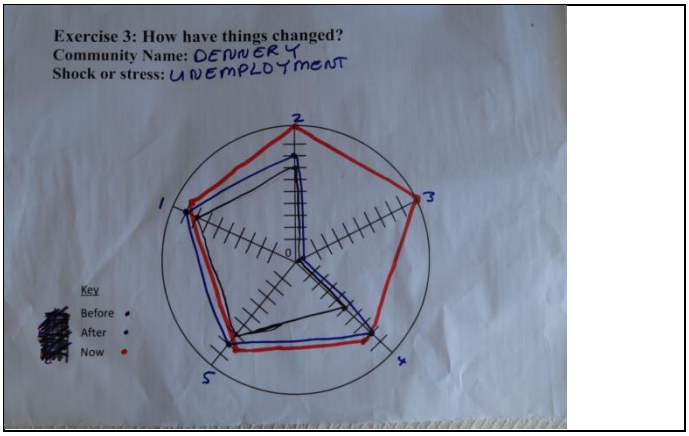
NAME OF SHOCK OR STRESS: Drug abuse			
	Before (Prepare & Prevent)	***During (Cope)***	***After (Recover)***
Inside the Community	**Home and family life education in schools (#1)**	**Counselling (#2)**	
	Drug campaigns	**Police (#4)**	
	Lectures / seminars	Bordelais prison/correctional facility	
	NELP		
	Support from families and relatives (#3)		
	Churches		
Outside the Community	National Initiative to Create Employment (NICE)	**Turning Point rehabilitation Centers (#5)**	
	Schools/centres with drug programmes/support (Monroe College, Uptown Girls, Boys training centre)	Drug squad	Schools/centres with drug programmes/support (Monroe College, Uptown Girls, Boys training centre)
	NSDC / NELP		NSDC / NELP

[48] The top 5 coping mechanisms or factors are highlighted and shown with their 1-5 ranking in brackets.
[49] i.e. selling small items on behalf of people (appears to be door-to-door rather than opening a small shop – though it still falls in the realm of small business)

NAME OF SHOCK OR STRESS: Domestic abuse			
	Before (Prepare & Prevent)	***During (Cope)***	***After(Recover)***
Inside the Community	**Education on family life (#1)**	Seek help from professionals	
	Provide employment (#2)	Seek mediation	Find a source of employment
	Build independence	Walk away	
	Build self esteem		
	Counselling (#4)		
	Conflict resolution (#5)		
	Financial management (#3)		
Outside the Community	Gender relations		Shelter
	Social workers		
	Provide employment		Family court
	Counselling		
	Financial management		

Exercise 3: How have things changed?

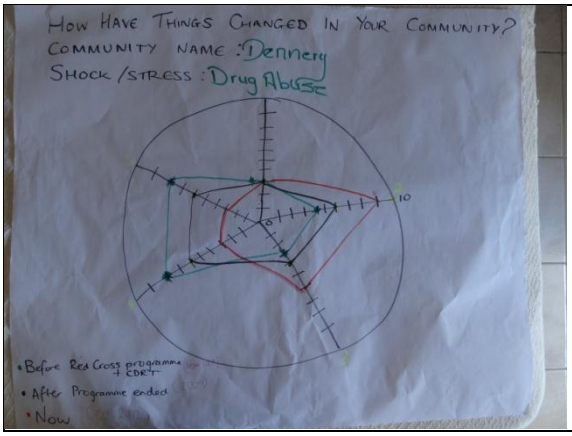
Unemployment



What	What has changed	Number in Diagram	Score Before	Score After	Score Now
Schools literacy	Increasing literacy in schools	**1**	**8**	**9**	**9**
Skills training	CBDRR programme has provided some training to volunteers/CDRT members	**2**	**7**	**8**	**10**
National Initiative to Create Employment (NICE)	Came into existence a year or so ago; supports training/skilling of unemployment.	**3**	**0**	**0**	**10**
Self-employment with small businesses	More people have established their own businesses now.	**4**	**5**	**8**	**8**
Apply to private sector for job	More people are now seeking work with private sector companies outside the community.	**5**	**7**	**8**	**8**

Comments & Observations:
See comments in table above

Drug Abuse



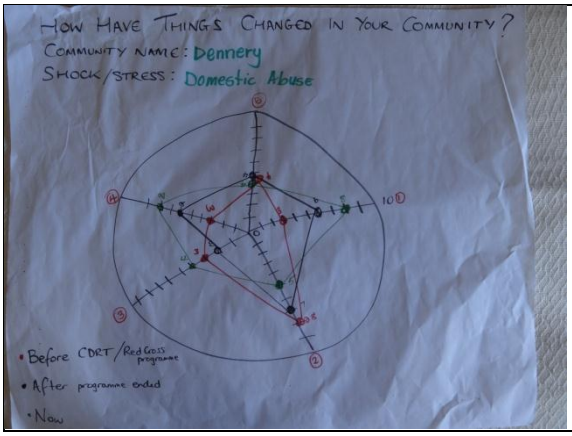
What	What has changed	Number in Diagram	Score Before[50]	Score After[51]	Score Now
Home and family life classes in schools	Unchanged; they occur but are failing to have much impact on the challenge of drug abuse – not happening regularly enough?	**1**	**3**	**3**	**3**
Counselling	Greater counselling facilities/personnel support in the community. More people willing to talk about it.	**2**	**4**	**6**	**9**
Support from families and relatives	Greater awareness at personal/household level and an increased willingness to talk about the issue.	**3**	**3**	**4**	**6**
Police	No details given	**4**	**8**	**6**	**3**
Turning Point Rehabilitation Centers	Rehab centres exist but only outside the community; with increasing problem community needs such support within it.	**5**	**8**	**6**	**3**

Comments & Observations:

Issues such as drug abuse and domestic violence linked by participants to the issue of unemployment. Both problems were seen as coping mechanisms or results of a lack of economic empowerment and occupation. (*See table above.*)

[50] Before 2009
[51] 2009 (as RC did not tackle this, different times were attached here)

Domestic Abuse



What	What has changed	Number in Diagram	Score Before	Score After	Score Now
Education on family life	This was in the context of recognising the idea of 'family'; including taking care of vulnerable persons.	**1**	**3**	**6**	**8**
Provide employment	Increasing levels of unemployment; both for youth and elderly people who are having to acquire new skills.	**2**	**8**	**7**	**5**
Financial management	No details given	**3**	**3**	**2**	**4**
Counselling	Greater counselling facilities/personnel support in the community. More people willing to talk about it.	**4**	**3**	**6**	**8**
Conflict resolution	Situation has remained the same; need for greater conflict resolution services.	**5**	**4**	**4**	**4**

Comments & Observations:
(*See table above)*

Exercise 4: What have you learned and what would you recommend for future programmes?

What have they learned?

Preparation

'We must always be prepared' 'I have learnt that risk reductions help keep the community aware and alert in aiding and making the community a safer and better place, and I've learnt different ways I can play my part.' 'It is good to be ready at all times before it is too late for any and all disasters.' 'Disaster preparedness is very important in the community.'

The Red Cross

'I have seen the Red Cross help family member and other people in my community after Hurricane Tomas. They received hurricane relief.' 'Red Cross programmes are educational and help build unity in the community.'

RC training: 'CPR. First Aid. How to deal and cope when a disaster happens.' 'Learn how to deal with family sickness, e.g. fever, nose bleeding, CPR, fire – it has helped me in first aid.' 'Red Cross assisted business staff, training for first aid, disaster preparedness.'

'What I have learnt so far is that the Red Cross is seeking the best interest of my people. So they have my full support. God bless!!'

The CDRT

'Groups such as CDRT are responsible for helping the community cope with disasters and issues pertaining to the community.' 'Groups such as CDRT aids in preparing persons to handle disasters.' 'Being a CDRT member as well as a victim of natural disasters, I have been better able to cope with the after effects while helping other people.'

Coping with disasters

'Different ways and means of coping with disasters. Do's and don'ts during a disaster. What to expect after a disaster. And ways to be helpful to others around my community.' 'Different ways to deal with disasters.'

Social issues in the community

'People of Dennery are more concerned with drug abuse. Employment can curb lots of our societal problems.' 'I learned that drug abuse is the most important thing affecting my community.' 'I learnt that drug abuse has the highest rating in the community of Dennery.' 'Drug abuse is the number one problem in Dennery followed by unemployment.'

'Employment is the main cause of if not all social problems.'

'I learned more than I ever knew about my community and things that I don't even know that happen in the community like teenage pregnancy.'

External organisations

'NEMO: Disaster preparedness, hurricane relief, assistance to disasters such as fire, floods, earthquakes. Hospitals and churches.'

Recommendations for the Red Cross / for future programmes

Sustainability (further training and regular CDRT action)

'Provide equipment and materials for groups to function year round.' 'These programmes [should be] always available to the public.'

'Need more training in risk management and other hazards.' 'More programmes to educate individuals are vital. The programme needs to be exposed to more people.' 'I believe that this CDRT course should be marketed properly to facilitate community awareness. More follow up programmes with CDRT members would keep meetings afloat.' 'Other life saving programmes are needed in the community, e.g. CPR'

'CDRT needs to be more active in the community.' (x2) 'The CDRT should be having regular meetings and keep members actively involved in the voluntary work, and also hold awareness programmes and recruit new members.' 'Recruit new members every year and provide more training.' 'CDRT should become more involved in community work prior to disaster.'

Community cohesion

'The best way for communities to solve problems is to come together in group and discuss problems.' 'You should study more about your community so you will know what's going on in the community (good/bad) to make it a better place.'

'Have more community based seminars.'

Further Red Cross work

'The Red Cross should work with the churches, schools and TV and radio to educate citizens. Training on health, education, social problems also.'

'Continue your good work, e.g. distributing food, clothes, tent, and the training. Recommend in future to have a home for the homeless, train on domestic violence.'

Social issues

'I would like to see more workshops and seminars on social issues.' 'I would like to see the Red Cross do more when it comes to social issues e.g. unemployment, drug abuse, domestic violence etc. not on natural disasters.' 'I recommend programme dealing with social issues.' 'More programmes for couples, conflict resolution, community policing, build independence.'

'Better policing, more community-based counsellors. More training sessions. Training camps. Educate people on better choices when building their homes.'

'I would recommend that much time is spent on the family, educating them on how to care for their members because the family is the cornerstone of and for society. God bless!!'

D3.2 Community Tour

Risks

Flooding

Flash flooding was discussed as one of the most significant disaster events that affect Dennery. The village is located by the sea as well as being on a delta where water from the hills is channelled into the sea (through rivers and engineered canals).

Effects of this in the past have included:

- Flooding of Dennery houses by the coast.
- Destruction of household possessions.
- Structural damage to homes, which remains when people move back in to their homes following dispersal of floodwaters.

The water was so high during the flooding that occurred before Hurricane Tomas in 2010, that the CDRT members who took us round the community described the use of dinghies and kayaks (many of which belonged to the local fire service) to rescue people from Dennery Village.

We conducted a brief household interview with Dennery resident, Beatrice, about the number of times her house near the sea has been flooded. This happens not only during flooding disasters but also during periods of heavy rain.
Her house (like some others on the street) appears to be more at risk from flooding due to being lower than the rest of the street (although she remarked this was not the case when she built her house in 1981 – suggests newer buildings have been built higher). In heavy rain her house gets flooded and she has had to be housed at the nearby emergency shelter, Dennery's Seventh Day Adventist Church. (The Arup team noted that she seemed oblivious to the fact that her house appears to be extremely vulnerable even during dry seasons, as it contains severely cracked walls and supporting columns; the resident did not identify such structural damage as a concern).

The flooding in 2010 affected the cemetery and there were concerns about what could have been in the water; several bodies were noted to have

Canal in Dennery Central

7th Day Adventist church designated as an emergency shelter

been dislodged and water snakes were also found in the village. One of the CDRT members reported getting ill (a stomach infection and rashes from where she had walked through the water during the disaster response efforts) after this flooding. Suggests health/other safety risks of flooding besides property damage.	
Hurricanes	
Hurricane Tomas had a major impact in Dennery, with properties by the sea damaged predominantly by sea-surge flooding, while properties on the hills were affected by winds (roofs blown off). These hillside properties included the hospital (at the top of the hill) which was very heavily damaged. Although repair work started on the hospital, it has since been abandoned as another less vulnerable site is to be located to be used as a new hospital site instead. As a result, two years after the hurricane the nearest hospital is in Castries, more than 30 mins away. Hurricane Tomas had a particularly devastating impact on Dennery as it came a few days after another flooding incident, caused by heavy rains upland. These two events occurred within 20 days of each other, creating a compound disaster.	

Settlement characteristics

Community spirit is high in this community, e.g. it is common to help those in need during disaster.

Infrastructure & buildings

Drainage:
The canalising of flows from the hills appeared to be the source of at least one of the flooding events (in addition to sea flooding). In some cases the flooding appeared to be made worse by canalising of flows from hills upstream to the sea – which would speed up rather than attenuate flows into the river; one of the volunteers mentioned that the flooding in 2010 and 2011 started when this canal overflowed.

In some cases, roads were built along retaining walls without drainage at the top of the wall, and we were informed that houses immediately on the other side of the wall were heavily affected by

Damaged bridge in Dennery; one of the safety hand-rails was destroyed during floods.

flooding and during heavy rainfall

Structural integrity of buildings:
Big cracks were observed in the community house visited; which did not appear to cause concern to either the residents. It was not clear if these cracks in the walls and columns were as a result of disaster events (it was not earthquakes as this was specifically asked), and it is not known if this has been checked either for this house or any of other houses affected by flooding / hurricane events in Dennery.

The bridge on the walkway across the river / canal had one barrier missing; it appears to have been built from steel or a steel based material that has been corroded by the sea.

Road opposite catholic church where drainage runs off into houses in Dennery

Preparation and mitigation

Disaster management projects funded by the Japanese Government (with the Saint Lucia government) such as setting up a pumping station near the ocean to pump water back into the sea if it rises beyond a certain level. The Japanese Government has also undertaken some public space remodelling and beautification projects along the seafront to prevent people building houses along the high risk seashore. This work was in response to the compound disaster of the flooding and Hurricane Tomas in 2010, and another flooding event in 2011.

Rock sea walls were observed but these were built by the government before the effects of flooding in 2010. Their effect was not thought to be very significant in preventing flooding/reducing its impacts.

Desilting of the river: Approximately 5 years ago, regular desilting of the rivers above the community used to take place, however this practice had been abandoned in recent years. A community member who lived in the community since 1981 seemed to think that the river had been desilted again in 2012 and she suggested that this was the reason there was no flooding this year, even though there were flooding events a number of times over the previous years. It was not

DM project signage along the seafront at Dennery where a public green space has been zoned to prevent settlement along areas at risk of tidal flooding.

possible to verify this claim however. **Early warning system:** We were informed that an early warning system (using water meters) was planned for Dennery (Phase II) following the implementation of a similar one in Castries (Phase I) which had again been funded in partnership with the Japanese Government. The Saint Lucia government was thought to be seeking funds for this second phase currently.	
Organisations: The Red Cross, various denominational churches and other organisations came to the aid of those in need following flooding in Dennery in 2010, providing them with food (including hot meals three times a day), water, sanitary items and other basic necessities. Clothes were also donated and provided by other communities inside and outside Dennery to aid those affected **Warehouse material**: Red Cross equipment following CDRT training (lamps, dinghies, basic non-food items etc.) were stored at the local fire station and made available to residents during the flooding disaster in Dennery. However, these stocks have not been replenished since 2010, and a CDRT member reported that many volunteers had retained kit in their own homes following the response effort. **Shelters:** We were shown shelters used by the community during disaster events; including the Adventist church which one of the community members (who attends the church) remarked did not get flooded even during Hurricane Tomas, and the large Catholic church at the top of Dennery Village. It should be noted that the schools (primary, secondary, day care centre) although designated shelters, are located in vulnerable areas and were directly affected by the flooding, having to be closed down for four weeks to recover. Community members remarked that even if the school was to be used as a shelter, it was not suitable for housing people due to the lack of useable facilities for cooking and washing etc., and there appeared to be a fear of looting/theft. **Preparedness**: It was also remarked that due to	

the end of the programme and no refresher course, the CDRT did not feel ready for another disaster event	

Recovery

Relocation: Coping mechanisms against flooding included households moving from the flood prone streets to the hills, although in at least some cases this seemed to be squatting rather than a legal move.

Rebuilding: A rebuilding strategy was enacted by the government after disasters in Dennery. However, if the affected people did not have title deeds to prove they owned the property affected, their properties were not rebuilt. This in at least some cases resulted in relocation as described above.

All the houses seen on the hill in the background above were said by CDRT members to be illegally constructed. No planning permission or land rights would be granted for them as they were built on landslide-prone areas.

Appendix E

Community perceptions of resilience

E1 Background note: community perceptions of resilience

This note describes in detail how external influences and the types of shocks and stresses that communities face can affect their perceptions of risk, vulnerability and resilience.

E1.1 Community types

Figure 25: Proportion of urban, peri-urban and rural communities visited within the LAC study

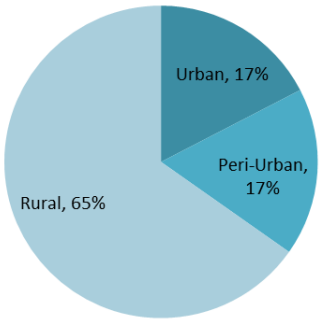
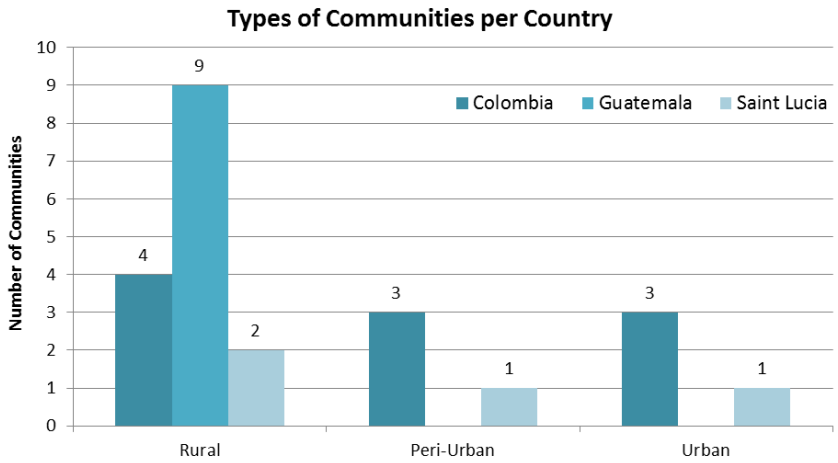


Figure 26: Proportion of urban, peri-urban and rural communities visited by country



Figures 25 and 26 illustrate the different types of communities visited during the fieldwork. Fifteen of the 23 communities visited were located in rural areas, four were located in peri-urban areas, and 4 were located in urban areas. Similar to the TO study communities, there was a high proportion of rural communities compared to other types of community in the LAC study countries. However, this is in part because all communities visited in Guatemala were rural, whereas in

Colombia and Saint Lucia there was a more even distribution between rural, peri-urban and urban communities (see Figure 26). The type of communities visited determines the kinds of shocks and stresses they experience, and consequently their perception of resilience. These are discussed in the following sections.

E1.2 Types of shocks and stresses

The communities which participated in the LAC study identified a wide range of shocks and stresses that affected them. These included natural hazards, socio-economic, health, water and transport infrastructure related issues. Communities also prioritised these shocks and stresses, thus the following analysis is based on the lists of the top 3 shocks and stresses, which each community selected as most important for their specific contexts.

Reflecting the methodology of the TO study, the focus of exercises on shocks and stresses were on understanding both risks and coping mechanisms, as they were perceived by the community, and which the communities felt were most important. These community-prioritised coping mechanisms were then used to identify what communities regard as making them safe and resilient.[52] However it should be noted that given the bottom-up data collection approach adopted, the community prioritised risks may not necessarily reflect the reality in terms of their likelihood and impact.[53] The top three shocks and stresses in each community are summarised in Figure 27 below.

Table 14, also below, outlines the community-prioritised shocks and stresses grouped into risk themes. Themes are based on rationalisation of the communities' description of the shock or stress and are intended to present the findings in a more accessible format. For example, 'health' encompasses a lack of medical facilities as well as causes of illnesses (mosquito infection) and illness as an issue in itself (chronic illness).

[52] See Appendix B for more detail on the study methodology
[53] This was of lesser importance because the purpose of the exercise was not to inform the design of a programme, rather to understand the range of shocks and stresses.

Figure 27: Top 3 shocks/stresses identified by communities

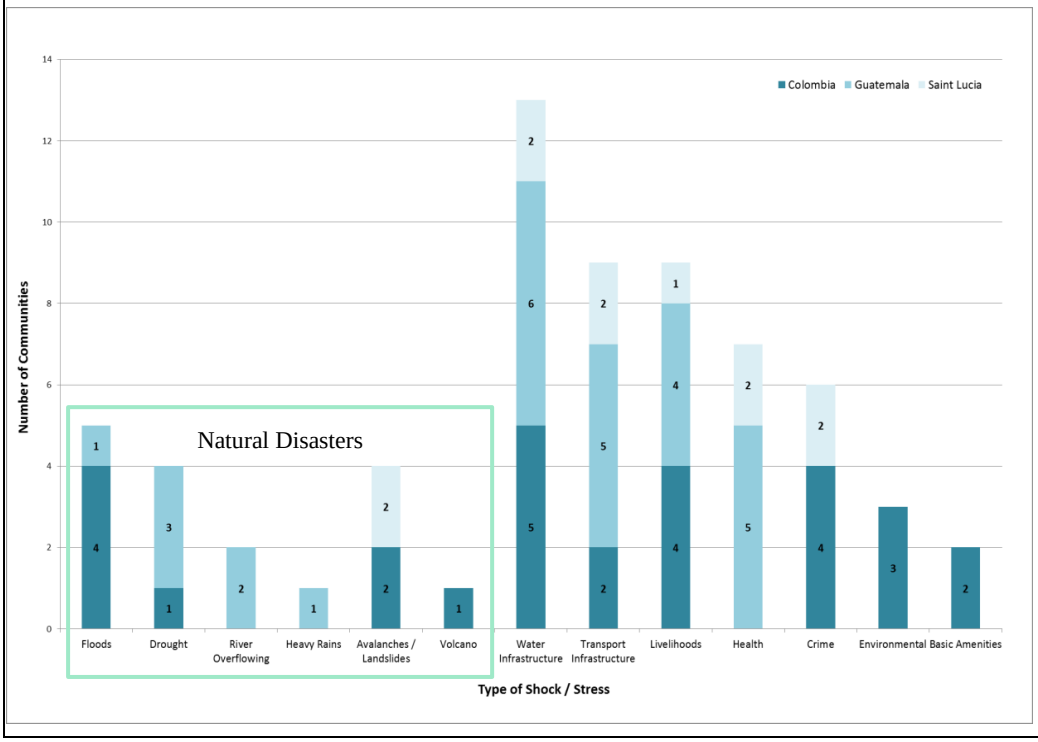


Table 14: Top 3 shocks and stresses and their risks for communities

Shock / Stress theme	Risks and vulnerabilities included
Natural disasters	Floods, drought, river overflowing, heavy rains, avalanches / landslides, volcano
Transport infrastructure	Poor roads, damaged bridge, damaged walkways, lack of public transport
Water infrastructure	Contamination of drinking water, water shortage
Basic amenities	Lack of electricity, lack of sanitation
Livelihoods	Unemployment, economic deflation, agricultural costs
Crime	Petty crime, insecurity, praedial larceny, domestic abuse, drug abuse
Health	Lack of medical facilities, chronic illness, mosquito infestation
Environmental	Rubbish, pollution

Figure 27 shows that, while the prioritised shocks (or disasters)[54] identified in the LAC study communities were important, greater importance overall was given to the day to day stresses that affect them. If all natural disasters are taken as one theme then these are the most important issue affecting the communities in the LAC study. Natural disasters overall therefore appear to be the most important

[54] For the IFRC definition of a disaster, see: http://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/what-is-a-disaster/

issue affecting communities in the LAC study countries, but no one single type of disaster is more important than some of the major stresses affecting communities. Removing natural disasters, water infrastructure appears to be the most prioritised issue affecting the communities, with transport infrastructure and livelihoods also significant.

An important new issue identified in the LAC study, affecting six communities in two countries, was crime.[55] All but one of these communities were urban or peri-urban settlements (only one rural community mentioned a specific type of crime that affects rural communities in that region), with five out of eight urban communities identifying crime as a top priority. This suggests that crime may be a key issue in urban areas in the LAC study countries. Crime (or insecurity) was identified the communities as a source of feelings of fear and lack of trust between community members.

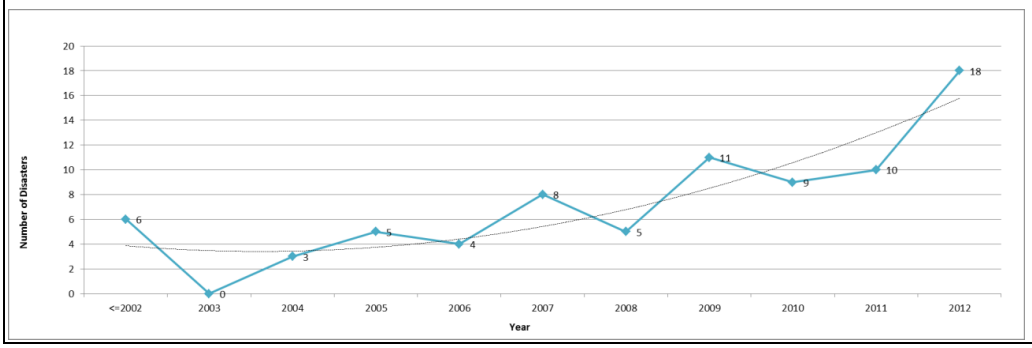
E1.3 Community perceptions of risk, vulnerability and resilience

While natural disasters affected the majority of the communities visited, every day stresses were also given significant importance in the LAC study. A number of issues that were expected to affect the communities were also not mentioned during the workshops (for example, reference to the civil conflict in Colombia, food security, HIV/AIDs, violence, lack of shelter etc.). In the TO study countries high levels of investment to address the threat of tsunamis may have encouraged communities tot consider tsunami risk as being addressed; therefore their prioritised risks would be less likely to include this hazard. However, there may be many other influences over what communities perceive as key issues. Some of the reasons for why some shocks and stresses may have been given greater prioritisation than others will be discussed in this section.

Figure 28 suggests that the communities perceived an increasing frequency of disasters affecting them. These shocks were identified in the timelines produced in the community workshops.[56] This may be in part due to the memory of communities of more recent events. However, it may also be reflective of global trends showing an increasing frequency of disasters worldwide.

[55] See Appendix G for further details on the effect of crime on community resilience in the LAC region.
[56] See Appendix B for the fieldwork methodology

Figure 28: Number of annual disasters over the past 10 years



The frequency of natural disasters may affect the way communities perceive their risk. While disasters may be defined as sudden events, the relative newness of that event to the community can greatly affect how they perceive it, and also their ability to cope and recover from it. Shocks and stresses can therefore be defined in several ways:

- **Emergent**: A new shock or stress for a community. If a shock or stress is new to a community it is likely to have a greater impact.
- **Recurring**: If a community has experienced a shock or stress repeatedly they may be better prepared to cope with it and recover afterwards. However, if they know it is likely to occur again then they may see it as a key issue that they need to address.
- **Persistent**: If a shock or stress has continued to affect a community for some time then they may develop ways of coping with its continued affects. They may see it as a key shock or stress as it has affected many of their life decisions, or they may not see it as of importance because they have developed ways to cope with it.

Box 20 gives several examples of how different types of shocks and stresses have affected community perceptions of vulnerability, risk and resilience.

Box 20: Examples of factors affecting community perceptions of risk and vulnerability

Multiple communities, Saint Lucia

Nearly all communities in Saint Lucia, whilst recognising the risk and having felt the effects of hurricanes over many years, did not cite hurricanes as priority risks. Emergency shelters, such as the church in the photo on the right, are common features of the landscape. A sense of 'hurricane fatigue' was observed by the fieldwork team across the island. This was suspected to be due to continued exposure to this risk over a long period of time, and thus a familiarity with how to respond/cope with hurricanes. Communities therefore placed higher priorities on disasters which they perceived as 'newer', i.e. that they were less familiar with, but that were seen to be increasing in frequency/impact.

Sabana Grande, Guatemala

Sabana Grande is located in an area at high risk of flooding. However, though flooding was discussed extensively by community members outside of the workshop it is not a prolonged event affecting the community. Other shocks and stresses that affected the community over a longer period (drought, damaged bridges that affected their ability to communicate, contamination of the drinking water) were instead chosen as key shocks and stresses.

Mapachico, Colombia

Mapachico is a community located on the side of a volcano. However, the volcano has not caused serious damage to the community for several decades. A series of false alarms and the poor state of the evacuation shelter for the community have reduced the importance the community give to the volcano erupting. Now very few people evacuate the community if there is an alarm as they believe it is unlikely anything will happen to them. Divisions have also been caused by a government decree stating that only indigenous people can build new structures in the community. This was not, however, discussed in the community meetings. This was probably because it is a sensitive topic for community members.

Maria Auxiliadora and Las Americas, Colombia

Both of these communities were built on stilts on the outskirts of the town of Tomaco. Both were densely populated at high risk of fire, with evacuation difficult due to the density of the settlements and the poor state of walkways over the water. Both had taken part in a tsunami preparation programme with the RC. However, the major issues that concerned the communities were related to the state of the structures, contamination of drinking water, crime and unemployment. Only one of the two communities mentioned flooding as an issue.

Bexon, Saint Lucia

Praedial larceny was a problem unique to rural communities in Saint Lucia, and was specifically highlighted in Bexon. The risk is the theft of agricultural resources – crops, tools etc. – conducted on individual scale, specifically to fund drug habits. The residents of Bexon noted that this risk was relatively new (i.e. had only become a significant concern over the past five years or so), and cited increasing rates of cocaine use on the island as a primary cause of this type of crime. Large billboards, provided by the national government, were visible along roadsides near the community, together with a hotline phone number for victims or people with information about this crime to call.

The examples above illustrate how different types of disasters affect the perception of communities of their risk, and the importance they give to natural hazards. However, they also highlight other factors that can influence how a community perceives risk. In particular, how the interventions of external actors can change community perceptions. For example, the increased resilience of the Saint Lucian communities to hurricanes had meant that their perception of risk to flooding had reduced; interventions of local authorities had affected community cohesion in Mapachico; drug abuse in Bexon, Saint Lucia, was the root cause of an increase in praedial larceny – the theft of agricultural resources. The example of Mapachico also highlights that what a community (or a sample group) perceive, or are prepared to discuss, as key issues may be very different to the key issues discussed by a different group or in a different setting. For example, sensitive issues such as HIV/AIDS may be important in a community but not discussed. In the LAC study communities, crime and insecurity were expected to be important

issues, but there was much less mention than anticipated, particularly in reference to civil conflict[57].

E1.4 Regional trends and variations

Similar to the TO study, natural hazards feature strongly in the LAC study communities as they have a high impact, and are common across the countries/communities visited. However, many more stresses were identified as top issues by community members who participated in the LAC study. This may be because many of the communities visited in the TO study were directly affected by the tsunami. Of particular note was the evidence that crime was given similar importance to health by communities who participated in the LAC study. In the TO study communities would have identified health as the most important stress if it had been categorised in the same way, while drugs (categorised under 'crime' in the LAC region study) were only mentioned by 2 communities in Asia.

[57] See Appendix F for more detail on crime and insecurity in the LAC region.

Appendix F

Crime, security and resilience in the LAC study countries

F1 Crime and security in the LAC study countries

Both the literature review and meta-analysis of programme documents suggested that we might expect to find evidence that crime, security and the political situation would have an effect on the community-based disaster risk reduction (CBDRR) programmes run by Red Cross Red Crescent (RCRC) partners in the Latin America and the Caribbean (LAC) region.

Colombia and Guatemala have both witnessed prolonged civil conflicts over recent years, both of which were at their peak during the 1990s. While the civil war has officially ended in Guatemala both countries still suffer from high crime rates. In contrast Saint Lucia has relatively lower levels of crime and has had a long period without conflict.

Colombia has seen over 40 years of conflict between government forces and insurgent guerrilla groups, most notably the Revolutionary Armed Forces of Colombia[58] (known as the FARC). This group remains operational, and is noted to have administrative control over certain areas of the country (see Figure 29 below).

Figure 29: FARC-controlled areas of Colombia

[58] *Fuerzas Armadas Revolucionarias de Colombia—Ejército del Pueblo*

The FARC has financed most of its operations since the 1990s from its involvement in the international drug trade. The group also practices hostage-taking and kidnapping for the purposes of financial extortion, and has in the past targeted foreign nationals. (Colombia is the global leader in recorded kidnappings.[59]). One programme report[60] reviewed noted that a CBDRR programme being implemented in Bogota had been made aware of threats being made towards NGOs/foreign embassies by a paramilitary group. However, as the Red Cross was not mentioned specifically in the threats – circulated via pamphlet in the programme area – the programme continued uninterrupted; programme staff ensured that they left the area before 5pm each night and reported the situation to their security system. The work plan for the final four months of the programme was unaffected however.

Guatemala witnessed a civil war which formally ended in 1996, having raged for 36 years. Similar to Colombia, this conflict was fought between government forces and left-wing rebel groups; many of these were combined underneath an umbrella group known as the Guatemalan National Revolutionary Unity (URNG). The rebels obtained populist support for their war as government forces had been accused of killing Mayan people, effectively practicing a form of ethnic cleansing.

Both the conflicts in Guatemala and Colombia have been noted for their brutality and also the highly international nature of their supposedly 'civil' struggles. The US, Israel, and several other countries in the LAC region have been noted as supporters of either side of the Guatemalan Civil War, and the US has supported the Colombian government in its fight against the FARC.

Furthermore, both Colombia and Guatemala still have high crime rates. For example in 2010 the intentional homicide number and rate per 100,000 people within the population[61] in Guatemala and Colombia was 38.5 and 33.4 respectively, while in Saint Lucia it was 25.2.

Saint Lucia has not witnessed conflict since the early 19th century, when possession of the island was finally won by the British after decades of fighting with France. On a political level security is stable, however at community level there are incidences of petty crime, in both rural areas and urban areas including Castries. The island also shares with Colombia an involvement in the global drugs trade, to which much of this crime is linked. Saint Lucia is a noted transit route for cocaine from South America into the US and Europe, and consumption within the island itself has created a rise in crimes such as praedial larceny in rural areas over the past 20 years or so; praedial larceny is the theft of agricultural products, primarily to finance individual drug habits, and a significant rise in this crime is currently being tackled by national policy efforts.

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59 http://www.criminology.fsu.edu/transcrime/articles/The%20Kidnapping%20Economy%20in%20Colombia.htm

60 Netherlands RC (2009*) Single Form for Humanitarian Aid Actions FINAL REPORT details: 'Strengthening the risk reduction and emergency response capacity of the communities, the educational sector and the Bogotá System for Prevention and Response (SDPAE)*

61 United Nations Office on Drugs and Crime (2010) *Downloaded from: http://data.un.org/Data.aspx?d=UNODC&f=tableCode%3A1 on10/12/12*

F1.1 Impact on fieldwork

Past/ongoing security situations in all three countries had minimal impact on the fieldwork carried out in the LAC study countries. In Colombia, communities selected for fieldwork had been approved by the Colombian Red Cross as safe for travel and working in. Communities in which programmes had been run but which were located in FARC-controlled areas were removed from the sampling strategy, as the Colombian RC/IFRC could not have guaranteed the safety of the study team. In Bogota the fieldwork team had to leave the communities by 4pm under the RC security guidelines. All travel after dark in Colombia and Guatemala was avoided and the location of the team was communicated at all times to the national HQ. It was essential that the team wore easily identifiable RC clothing in the communities visited to ensure they were viewed as part of the RC team. The team was also accompanied on all walks through the communities by a local leader to provide further awareness of local risks and to demonstrate that the team were with a respected person from the community.

F1.2 Characteristics of a safe and resilient community

Crime or insecurity was mentioned as a top priority in 4 of the urban/peri-urban communities included in the study, and was mentioned as a key shock/stress in several others. This is reflected in the proposed characteristics coded for in the LAC study. In particular the importance of community support networks, connections to the police and law enforcement officials, and the importance of personal awareness of security risks (the 'law of silence' and avoidance of getting involved in other people's problems were mentioned in several communities).

In one community (Villa del Rio) the work of the Colombian RC had had an indirect effect on the activities taken to reduce crime. Through improving community cohesion and connectedness the community felt more able to support each other and alert their neighbours to crime. In another community (Rafael Uribe Uribe, an urban community in Bogota, Colombia) a good relationship with the local police had led to community members being given training on personal security and the provision of personal alarms with a direct connection to law enforcement officials. In other communities where there was a less good relationship with the police it seemed there was more reliance on informal community support networks, and where these were ineffective community members tried to keep to themselves and not get involved.

However, while local crime and insecurity seems to have had a strong influence over a number of the communities in the LAC study, there was no mention of national level insecurity of civil conflict in any of the communities. Some reasons for this unexpected omission are suggested in Section 4 below.

F1.3 Key determinants of a successful CBDRR programme

Besides the programme report mentioned above (which discussed the minimal impact to the CBDRR programme run in Bogota, Colombia) the meta-analysis of lessons learned highlighted one other disruption to CBDRR programming as a result of political insecurity. In Belalcazar, also Colombia, shootings between local state police and guerrilla groups resulted in a ban on programme staff travel affecting the DRCB programme implemented by the French and Colombian RC. Besides these two reports evidence of programme disruption as a result of crime and security was minimal.

One key informant in Guatemala reported that the Guatemalan RC's procedures should be strong enough to avoid being disrupted by a change of government, however no other mention was made about the effect of civil conflict or crime on the success of the programme. Our analysis has attempted to reflect the potential effect of insecurity within the final key determinants of a successful CBDRR programme however, by including a key determinant which reflects this challenge - **Management of uncertainty -** under the theme of programme design.

F1.4 Suggestions for the lack of evidence in the research for the impact of crime and security on CBDRR programmes and community resilience

- We were unable to conduct fieldwork in any seriously insecure areas.
- Programmes will not be run in extremely insecure areas in which there is little likelihood a programme can continue uninterrupted, due to:
    - Staff safety
    - Programme activity continuity / sustainability following RC withdrawal
    - Relevance of the programme – CBDRR may not be the top community priority in areas controlled by/affected by guerrilla activity for example
- Communities are less likely to identify political insecurity on a national scale as having as much significance for them as, for example, more local threats such as a nearby volcano or even localised crimes such as praedial larceny.
- The rule of silence – particularly relevant in Colombia. Community members do not talk about crime or try to get involved for fear that they will be targeted in the future.
- While many urban communities were visited in the LAC study, the majority were still rural communities who may be less likely to be affected by high crime rates at a local level.