Disaster Risk reduction Guidelines

DRR Working Group Publication

2012

This guide is designed by the DRR Working Group to help CAFOD programme staff understand DRR and consider hazards in their programme work.

It provides a brief overview of DRR, a selection of tools for CM-DRR and DRR M&E.

CAFOD
DRR Working Group Publication
DRR Advisor
ex5233

Disaster Risk Reduction Guidelines

About this Guide

This guideline is designed to help programme staff consider DRR within their programmes and projects. In addition it will help staff consider the potential impact of natural hazards in their regions and how they can take practical steps to improve community disaster resilience and protect their projects.

This document explains common terminology, a selection of DRR approaches and methods, some tools and templates and finally a short guide to monitoring and evaluation. This guide does not provide an exhaustive list of methods and they should be adapted to fit with the cultural and geophysical contest that you work in.

Throughout the guide there are various text boxes. The Additional tool ideas highlight some potential new and exciting methods from the DRR sector. They are designed to stimulate ideas and most come from *The Handbook of Hazard and Disaster Risk Reduction* (2012).

If you need further information regarding these tools please contact the DRR Advisor. Other boxes contain summaries, additional resources, case studies or top tips.

Every efforts has been made to ensure that these guidelines compliment existing CAFOD tools and ways of working so that taking a Risk Reduction approach does not necessarily mean doing more work or duplicating what has already been done.

This is a live document and will be updated regularly. If you have any queries about or suggestions for this document please contact DRR Advisor Kate Crowley, kcrowley@cafod.org.uk or ex. 5233

Contents

About this Guide 2
Chapter 1: What is DRR? 5
International DRR Agreements: Hyogo Framework for Action 2005-2015 6
Expected outcome 6
Priorities for Action 6
Programme level: 7
It is essential to consider the hazard landscape 7
The newly revised VIA tool 8
Community level: 9
CAFOD's approach to DRR 9
Government involvement: 9
Resources: 8
CM-DRR relies on three crucial principles 9
The process is simple and logical following a series of steps: 10
Summary: 10
Chapter 2: Hazard, Vulnerability and Capacity Analysis (HVCA) Tools 11
CAFOD include 'hazard' in their approach because understanding the hazard is a vital component of DRR 11
1. Preparation: Forming Community groups 11
A community organised committee 11
Inclusive 12
Existing power structures: 12
Facilitating not dictating: 12
Questions to ask: 12
Forming community groups - Top Tips and examples from across CAFOD: 13
2. Workshop tools 14
Logistics and initial checklist: 14
Question to ask: 14
The sequence of these activities 14
3. Hazard assessment: 14
Timelines 15
Story telling 15
Transect walk 16

Hazard mapping 16
Recording not hording 18
4. Vulnerability and capacity assessment 19
Life histories: 19
Trees: 19
Mapping: 20
5. Planning 20
Chapter 3: Monitoring and Evaluation 23
Guiding principles of DRR work 24
HVCA indicators 25
Monitoring tools 27
Community participatory monitoring 27
Batteries tool for DRR. 27
Annex 1:Inter-agency VCA challenges and opportunities 29
Annex 2: Vulnerabilities and Capacities 30
Annex 3 Characteristics of a Disaster Resilient Community: Risk Assessment 31
Annex 4: Milestones to a disaster resilient community 33
Annex 5: Guideline questions for interviews with beneficiaries 34
Annex 6: Guideline questions for Partner interviews 36

Chapter 1: What is DRR?

DRR is the systematic development and application of policies, strategies and practices to minimise vulnerabilities and disaster risks throughout society, to avoid (prevent) or limit (mitigate and be prepared for) the adverse impact of hazards, within the broad context of sustainable development. (UNISDR).

Fundamentally reducing risk involves examining both the hazard (e.g. floods, wildfires, earthquakes) and the vulnerabilities (e.g. community vulnerability, structural vulnerability, environmental vulnerability). Conventionally this has been visualised through this equation:

Risk= Hazard x Vulnerability/ Capacity

Therefore what we and our partners need to do is consider both the hazards and the vulnerabilities in designing country strategies, programmes and projects.

Ignoring hazards hurts: Not being prepared and not considering the hazards in a region can led to a project doing more harm than good or the destruction of an entire project and therefore wasting supporter funds, partners and community time and in the worst case can cost lives.

However there are simple steps that can be taken to consider and act!

There are two scales to DRR and both should interact and complement each other.

- At programme design
- At community implementation

However, no single group or organization can address every aspect of DRR.

Definitions:

Disaster: *A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources.*

Hazard: *A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.*

Capacity: *A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster.*

Vulnerability: *The conditions determined by physical, social, economic, and environmental*

International DRR Agreements: Hyogo Framework for Action 2005-2015

The Hyogo Framework for Action (HFA) is the first international plan to explain, describe and detail the work that is required from all different sectors and actors to reduce disaster losses. It was developed and agreed on with the many partners needed to reduce disaster risk - governments, international agencies, disaster experts and many others - bringing them into a common system of coordination. The HFA outlines five priorities for action, and offers guiding principles and practical means for achieving disaster resilience. Its goal is to substantially reduce disaster losses by 2015 by building the resilience of nations and communities to disasters. This means reducing loss of lives and social, economic, and environmental assets when hazards strike

It is due for revision in 2015.

Expected outcome:

- The substantial reduction of disaster losses, in lives and in the social economic and environmental assets of communities and countries

Strategic goal

- The integration of DRR into sustainable development policies and planning
- Development and strengthening of institutions mechanisms and capacities to build resilience to hazards
- The systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes

Priorities for Action

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

Programme level:

CAFOD has a number of excellent tools to help staff take a resilient approach to programming. Tools such as the Vulnerability and Inequality Tool can help you and partners identify issues and opportunities that may impact the running of a programme. However, more needs to be done so that you consider the environment you are working in. Importantly you must consider the impact of the environment on your programme and the impact of your programme on the environment. You may think the latter relates more to do with an Environmental Impact Assessment than DRR but you would be wrong!

Ignoring hazards hurts:

- Following an earthquake in India a well meaning NGO re-built the road to a higher standard than existed previously. However there was no consideration of the impact of this new road. Unfortunately the following rainy season the road was impenetrable and the rain water flowed off the road destroying nearby houses.
- On Montserrat volcano Hurricane Hugo in 1989 destroyed the hospital but it was rebuilt in the high hazard zone of the islands volcano which then erupted in 1995 destroying the new hospital.

All these examples have one thing in common which should always be considered – it is

We MUST take a multi-hazard approach.

It is essential to consider the hazard landscape when designing a country strategy, programme or project.

There are a number of user friendly website that can help you identify the hazards that may impact your region of work.

The first website to examine is http://preventionweb.net

This is a comprehensive and reliable website run by the UNISDR. On the front page you can select countries and regions and located resources, maps and news about your region.

It also holds information about the Hyogo Framework for Action (a core international agreement on DRR) and upcoming trainings and events, as well as new reports.

Figure 1: PreventionWeb - you're first stop for DRR information.

The DRR Advisor can also help create a picture of your hazard landscape and start to design programme accordingly.

The newly revised VIA tool will help you and partners carry out a rapid vulnerability and capacity assessment.

Resources:

Vulnerability and Inequality Tool (VIA): Rapid assessment of context and potential impact of programme.

DRR COW: CAFOD DRR library, news and events.

PreventionWeb.net: UNISDR website for DRR.

Community level:

A focus on disaster resilience means putting greater emphasis on what communities can do for themselves and how to strengthen their capacities, rather than concentrating on their vulnerability to disaster or environmental shocks and stresses, or their needs in an emergency[1].

CAFOD's approach to DRR is therefore **community focused**, incorporating community based interventions within a wider and broader advocacy strategy at local, regional, national and international level.

Community managed or based DRR (CM-DRR) consist of self-developed, culturally and socially acceptable, economically and politically feasible ways of coping with and avoiding crisis related to natural hazards.

CM-DRR ideally strengthens people's livelihoods and makes them more sustainable, resistant and diverse.

Government involvement: Implementation on a large scale requires the support of local and national governments. Since governments often provide basic services to communities and primary assistance in times of disaster it is crucial that they are involved in both the assessment of vulnerabilities and needs of communities[2]

Scientists and outside professionals may also provide additional knowledge which CM-DRR may successfully combine with local knowledge of hazards and potential preventative measures. This is essential when communities face hazards that have not occurred for a very long period of time and of which knowledge may be lacking. Along these lines scientific knowledge is most useful in assisting communities with long-term climate change adaptation[2].

CM-DRR relies on three crucial principles: participation and empowerment, integrated development and humanitarian - orientated activities and a multi-stakeholder approach[2].

CM-DRR goals, objectives and activities are rooted in the people's understanding of disaster risks and their priorities. The first step has been taken when people are aware of the hazards they face. They then must identify and implement their priority DRR measure. This may require resources, information and knowledge or political access. Yet whatever the level of outside input the community must remain the focus[2].

An inter-agency group in 2011 review their Vulnerability Capacity Analysis (VCA) processes and identified some core challenges. These are integrated within the process below along with some challenges and opportunities identified by the CAFOD DRR working group but are summarised

Community-managed DRR allows local communities to take ownership of the activities, processes and outcome and ultimately their own risk reduction. In order to do this effectively and systematically CAFOD encourages partners to use a simple participatory approach called Hazard, Vulnerability and Capacity Assessment (HVCA). The HVCA process provides

[1] John Twigg (2009) Characteristics of a Disaster Resilient Community, A guidance note, version 2.
[2] Wisner, B., Gaillard, J-C and Kelman, I (2012) The Routledge Handbook of Hazards and Disaster Risk
[2] Wisner, B., Gaillard, J-C and Kelman, I (2012) The Routledge Handbook of Hazards and Disaster Risk Reduction, Routledge Handbooks

Taking a participatory approach requires the facilitator to 'take a step back' and allow the community to take ownership of the project. The communities should be guided and encouraged rather than taught. Participation is about empowering the community appropriately.

the foundation of any DRR project. Risk reduction strategies should be identified, monitored and reviewed through this process.

The process is simple and logical following a series of steps:

1. Hazard analysis
2. Vulnerability assessment
3. Capacity Assessment
4. Designing a plan of action

This guide provides an outline of some of the participatory methods that partners can use in order to work through these steps.

Summary:

- DRR is the systematic analysis of hazards, vulnerability and capacity in order to reduce the risks faced by vulnerable people.
- Risk=hazard x vulnerability/capacity
- Country strategies and programmes must consider the impact of hazards on their development strategies and vica versa.
- CAFOD takes a community based or managed approach to DRR
- CM-DRR follows three principles: participation, development and humanitarian orientated activities and a multi-stakeholder approach.
- CAFOD uses the participatory community focussed HVCA framework.

Chapter 2: Hazard, Vulnerability and Capacity Analysis (HVCA) Tools

Background: A report produced by the Global Network of Civil Society Organisations for Disaster Reduction (2009) called *Views from the Frontline* suggest that participatory assessments are a strategic entry point to building resilience because the foundation of resilience is people's awareness and understanding of the risks they face.

Community-based activities and participation requires a basic but systematic approach.

In order to do this, many NGO's conduct a vulnerability and capacity analysis or assessment (VCA). The VCA is a component of DRR planning and aims to identify vulnerable groups, factors that make them vulnerable and assess their needs and capacities[3].

VCA is considered a major stimulus to understanding and importantly action. It can be viewed as a tool and a process. An interagency review in 2011 note that as a process it is not tied to some fixed point in the project cycle and its findings remain 'live' and responsive to local conditions. It is also flexible and should be updated and modified to ensure relevance and learning.

CAFOD include 'hazard' in their approach because understanding the hazard is a vital component of DRR. It is essential for partners and communities to identify and assess the multiple hazards they face and consider their vulnerabilities to them. VCA is only part of the story.

HVCA provides a more complete picture and opens up the opportunities for integrating local knowledge with technical and scientific knowledge.

The next section is divided into 5 sections that focus on an analysis-action-reflection framework:

1. Preparation
2. Workshop tools
3. Planning
4. Taking Action
5. Monitoring and Evaluation (chapter 3)

1. Preparation: Forming Community groups

The core element of CM-DRR is the community. Invoking community emphasises the local dimension of development and disaster reduction. It further suggests that ordinary people are capable of finding collective solutions to their problems.

Strong community organisation to ensure sustainability.

A community organised committee should be encouraged to carry out the CM-DRR process which includes participatory risk assessment, planning, implementation, monitoring and evaluation.

Ideally the local level links up with the intermediate, national and international levels to address the complexity of disaster risks.

[3] Twigg J and Bottomley H, 2011, DRR NGO inter-agency group learning review.

There are some key guiding principles in forming community groups that should be adhered to.

Inclusive: The HVCA to be inclusive but also practical, participants should reflect all sections of the community and therefore provide an opportunity for all sectors of that community to participate e.g. men, women, young, old, disabled.

However in certain context this is not possible. However it is still important to try and capture the voice of the most marginalised as well as the group leaders.

Most importantly it is important that both **men and women are equally represented**.

Existing power structures: Also it is vital that you work within or an awareness of the **existing power structures** and where possible with local government.

Facilitating not dictating: The facilitator plays a crucial role in introducing the ideas of DRR and the methods but should try to 'take a step back' and allow the communities to take the lead in activities.

Questions to ask:[4]

- What is the purpose?
- How does it fit with longer-term processes?
- How are the participants to be selected? Against what criteria?
- How many will take part?
- What will they expect?
- How participatory will it be?
- What is your role?

[4] Many of the' questions to ask' have been taken from Chambers, C (2002) Participatory workshops a sourcebook of 21 sets of ideas and activities, Earthscan.

Forming community groups - Top Tips and examples from across CAFOD:

Allowing all the members of the community to take part is crucial, but this can be a challenge.

It might be necessary to hold women only groups or group specifically for people with disabilities. By doing this action groups have a use beyond the HVCA and hopefully form a support system for the community especially the most vulnerable.

Examples of effective community action groups from our work include ADDs self help groups in Bangladesh and all women network organised by Asumopro in Nicaragua.

The group should be dynamic but represent the entire community – giving a chance for the most vulnerable to contribute.

In most cultures, women have special knowledge of risk reduction possibilities. They have been referred to as 'the guardians of environmental knowledge'.

Similarly so do children and youth because they notice different things than adults and visit other locations in the course of schooling, play and carrying out chores.

Community elders also hold vast stores of historical information and should not be excluded from the group discussions.

2. Workshop tools

There are a variety of powerpoint presentations about workshop tools available on the DRR COW.

Logistics and initial checklist:
Workshops should 'fit in' where possible with the daily routine of the participants. Holding workshops in the evening may mean that participants are not always engaged.

It is vital to consider where to hold these activities, what refreshments and facilities will be available,

Question to ask:

- Where, When and for how long?
- Who will facilitate?
- Is it a safe and culturally acceptable location for all participants?
- Will there be access to food to water?
- Access to facilities?
- What language will be used?
- What materials will be needed?
- Do we need to invite a local liaison (local government representative)?
- What are the desired outputs?
- What will the follow-up be?
- What is missing from this list?

The sequence of these activities depends on the context and how well the groups work together although it is always good to begin any work shop with some simple introductory activities.

Additional tool ideas!

Participation and facilitation

Tools: group dynamic; team building; groups formation; leadership skills; DEMOCS (deliberative meetings organised by citizens); SARAR (self-esteem, associative strengths, resourcefulness, action-planning, responsibility); RAAKS – participatory action research; social mobilization and animation; citizen' juries'.

These include:

- Introduction to the goals of the workshop and why it is important
- Ask the community to discuss why they are here and what they hope to achieve as a group
- Ask the group to elect a men's and women's group leader and if appropriate a youth group leader
- Decide as a group these roles and their function
- Also may want to decide on a set of 'rules' for the workshop.
- It is also good to discuss with the communities what activities you hope to do

3. Hazard assessment:

There are a variety of tools that can be used to help communities below is one example of a good sequence of activities.

Timelines

Within groups ask the participants to draw either on paper or on the ground a timeline starting from the earliest village memory within the group. This could be anything significant to the group such as the first tarmac road or first community school or a significant hazard event.

The community should then work their way to today and note on the timeline significant events. This starts the participants discussing important events in their shared history and should start discussions around key natural hazards.

It may start to provide an indication of the frequency of events.

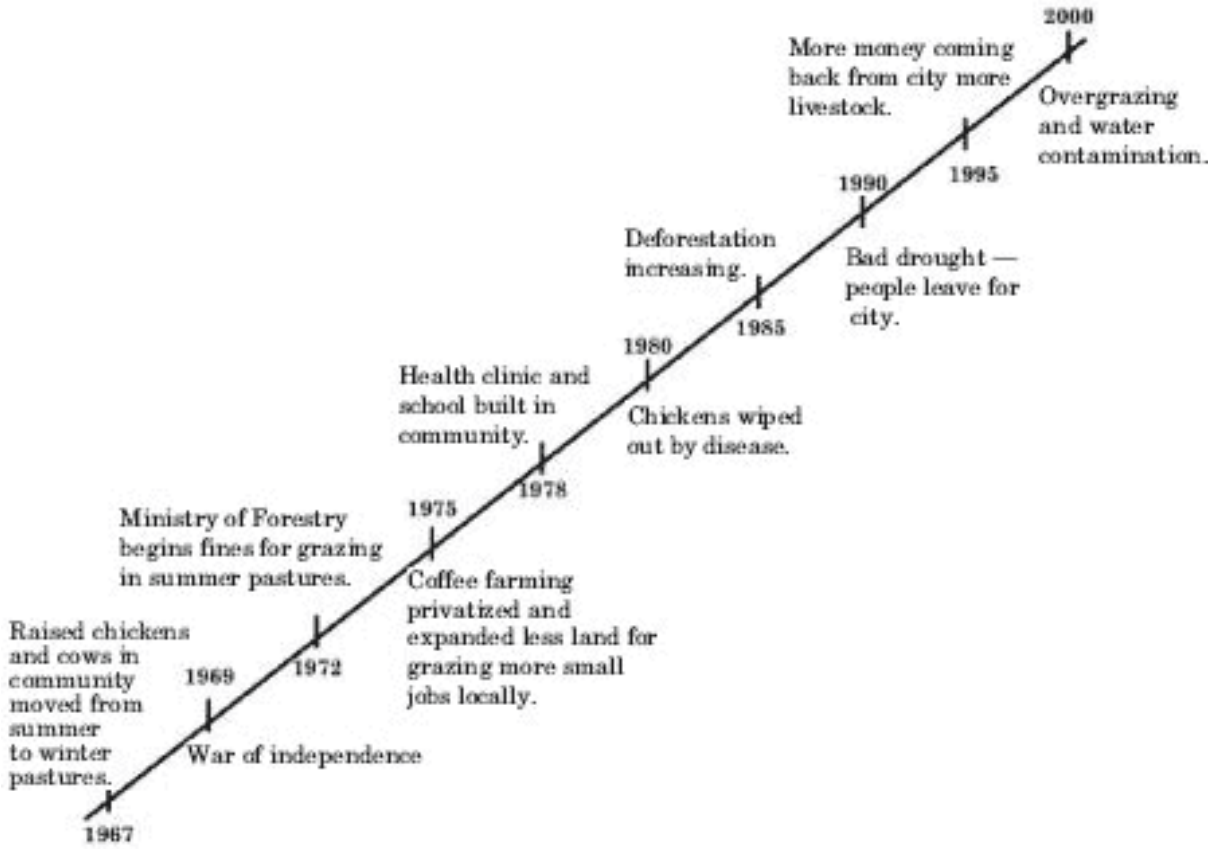


Figure 2: Example of a community timeline.[5]

Story telling around these hazard events may start to uncover the size and impact of hazards. The facilitator or the groups themselves can start to write these key bits of information down using a table.

Hazard	Date	Size	Impact
E.g. flood	10 years ago (2001) rainy season	Flooded two houses up to second step	Destroyed crops and increased disease

[5] http://www.acdi-cida.gc.ca/acdi-cida/acdi-cida.nsf/eng/EMA-218123623-NP9

Transect walk

The transect walk is a tool that can be used at various stages of an initiative. Community members walk through their community and the site of the initiative (or proposed site when used at the planning stage), and collect information on issues related to the community and the initiative through direct observation and discussion with others in the community.

Transects usually involve asking questions, and pointing out and mapping what is being seen: different land use and vegetation zones, local markets, community service centres, schools, and so on. A transect is usually a straight cut through the community, which aims to cover as many of the ecological, production, and social groups of the community as possible. Often, several transects are carried out to get a complete picture of a community.

Hazard mapping

This is a core tool that records the spatial knowledge and priorities of the group, especially those that are less powerful, less articulate and less integrated e.g. gendered risk maps.

In addition these maps serve as vital 'talking points' to stimulate discussions. They can be simple like the one in Figure 3 or elaborate such as the 3-D models produced by partners in the Philippines Figure 4.

In the group encourage the participants to draw a map of their village or region. Be careful to mark on the main features such as roads, rivers, hills, houses, fields, and community buildings.

Innovation! The information within these maps can also be collected during the transect walk and locations recorded using GPS. This means that this information can be plotted on a GIS map or GoogleMaps.

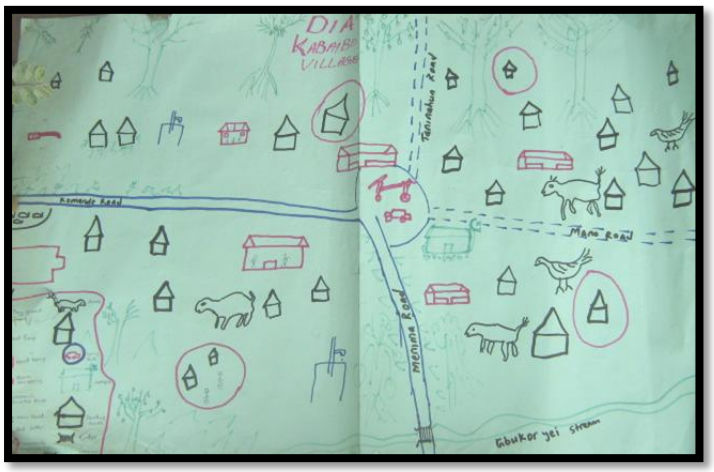


Figure 3: A basic village map produced by communities in Sierra Leone.

Figure 4: Community members carrying their half completed 3d map.

The next step would be to encourage the groups to mark on where hazards usually impact – the geographical extent of the **hazard 'footprint' (Figures 5 and 6)**

Figure 5: An example hazard map designed by a women's group in Nicaragua. This community are planning to use the map as a tool to persuade local authorities to support river bank protection.

Figure 6: This hazard map defines hazards zones, contains a key, and an emergency structures and key contacts, in addition to a warning system and related actions. It has been laminated and will be hung in the school.

The groups can also mark **on 'safe' areas**, existing emergency plans or warnings.

Top tip! Hazards may be natural or man-made. They also interact with each other for example one hazard may trigger another hazard – heavy rainfall may cause landslides or low rainfall may cause droughts and subsequently conflict over water access.

Recording not hording: Although we should **always** take a record of the workshops and the outputs the maps and diagrams (notes and photographs) should always remain with the community. Ideally placed somewhere central where anyone from that community can view it, such as a school or community meeting hall.

4. Vulnerability and capacity assessment

The second phase of the HVCA concerns identifying and examining the community members vulnerability and capacity. Again there are various tools and methods to help facilitate discussions around these topics.

Annex 2 provides a list of potential vulnerabilities and capacities that may help to stimulate the group and guide discussions

Life histories:

Exploring what happened during a previous hazard event may start to provide an insight into how and why people were negatively or positively affected. In groups you can ask each of the members to tell their story of the last flood, or drought etc. The facilitators should ensure that all stakeholders get a chance to share their stories especially the women, elders and were appropriate the children.

It is vital that during these discussions the facilitator or a member of the group start to write down key vulnerabilities and capacities discussed.

Trees:

A core tools used in the Philippines has been to visualise vulnerabilities and capacities' through tree diagrams. These diagrams

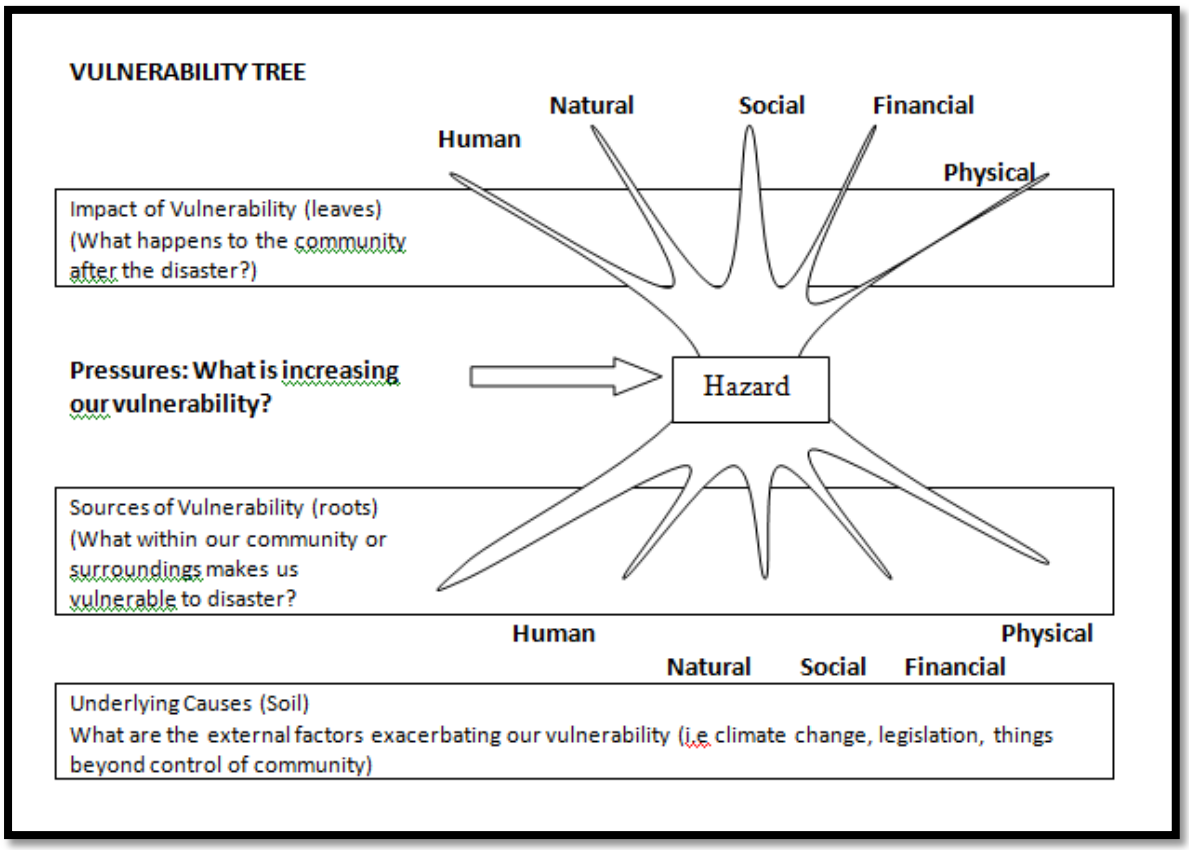


Figure 7: Example of a vulnerability tree.

Mapping:

Using the hazard map produced during the Hazard Assessment participants can start **to mark vulnerabilities** on the map, for example how many people live in each house, women headed households, households with elderly or children etc.

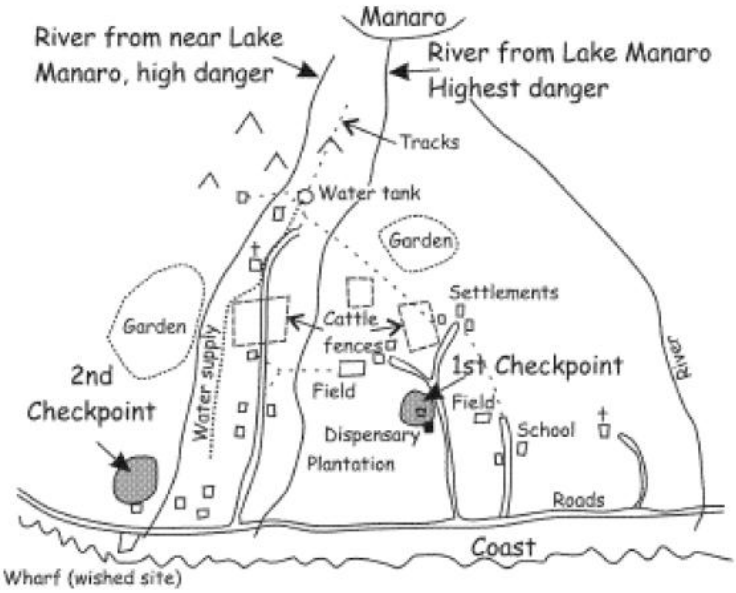


Figure 8: A community hazard map from an all male group in Vanuatu. Note that they have marked on vulnerabilities as well as hazards, such as water tanks, gardens, water supply and schools (Source: Cronin et al 2004). Interestingly the women's map also noted each house and the size of household. You may also want to encourage communities to note single parent households, the number of children or elderly, and location of people with disabilities.

5. Planning

Once you have identified the hazards, vulnerabilities and capacities it is vital for the group to plan how they might start to reduce their own risk. In other words, how can they change their vulnerabilities into capacities?

There are three simple steps:

- Identifying actions to transform vulnerabilities into capacities
- Identification of long term and short term actions
- Identification of Roles: Community/ External Support

Planning action is the most crucial step in the DRR approach and may require additional research on other actors in the area and the wider environment.

There are a number of templates available on the DRR COW to help produce the Risk Reduction Plan.

There are different strands of action illustrated in figure 9

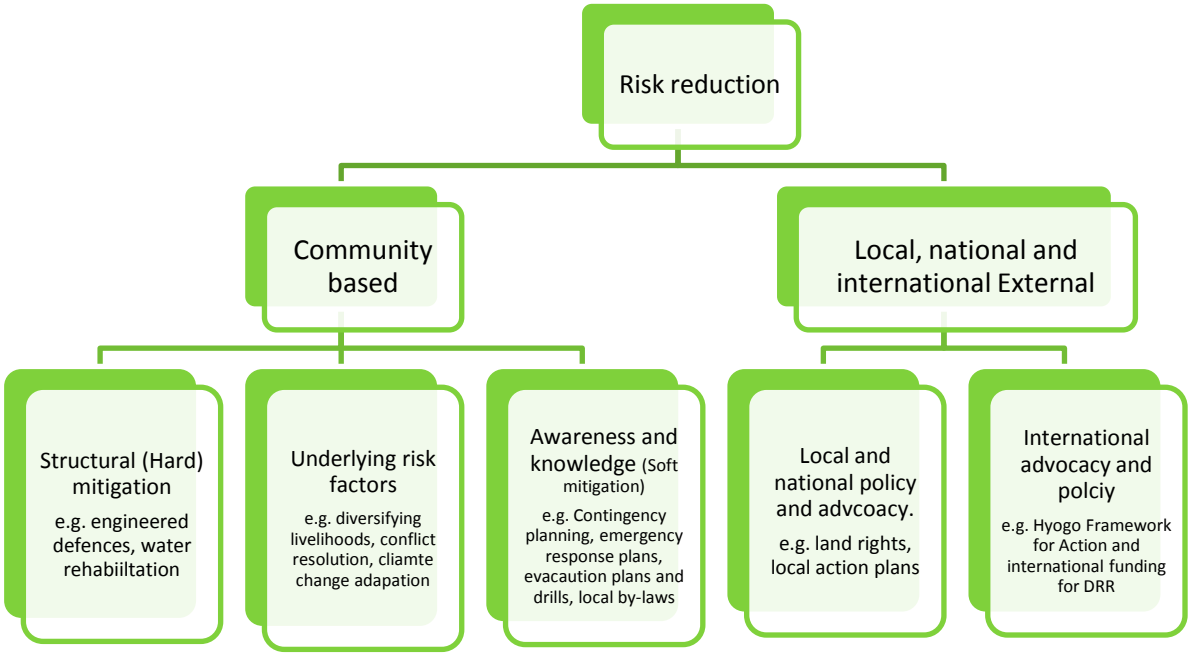


Figure 9: This diagram illustrate the different strands of risk reduction; however it should be noted that many of these overlap and are interrelated.

There are also two main types of direct hazard mitigation, soft and hard. Soft mitigation relates to efforts that require no 'hard' engineering such as building dams or culverts or structures. Soft mitigation may be the formation of community action groups or task groups and the development of environmentally sensitive by-laws like the project in Box X (example form Sierra Leone). It may be a combination of both soft and hard mitigation.

Hard mitigation such as the construction of sand dams or water pans requires specialist technical assistance and guidance - remember to factor this in to the project design and budget.

Another crucial approach to risk reduction is addressing the underlying risks identified through the initial phases of the HVCA. This may mean improving people's ability to recover or prepare through improved livelihoods options or conflict sensitive approaches. This is where DRR overlaps with livelihoods and other important sectors which have their own tools and approaches. A blended method, appropriate for the context, is recommended.

Complimentary tools for planning and sustainable action:

Tearfund's Think Livelihoods tool - A facilitator's manual for applying a livelihoods lens when working with people, households and communities affected by HIV
http://tilz.tearfund.org/webdocs/Tilz/HIV/Livelihoods%20Toolkit_FINAL.pdf

The DFID Sustainable Livelihoods Analysis tools,

Market analysis

The most important things in terms of the mitigation is that it does no harm, is effective, culturally acceptable and is sustainable.

Additional ideas for HVCA !

These ideas mainly come from The Handbook of Hazard and Disaster Risk Reduction (2012).

Action learning:

Tools: participatory theatre, participatory video and photography; games, gaming, music; contextual analysis; mind mapping; scenario development and Imagineering; participant observation.

Hazard data collection:

Tools: Aerial photograph inspection; checklists; direct measurement; transect walks; photographic interpretation; folktales; crowd sourcing.

Gathering local and indigenous knowledge:

T**ools**: critical event analysis; key information interviews; life histories; photograph interpretation; analysis of folktales, songs and dances; indigenous technical knowledge.

People's attitudes and preferences:

Tools: Attitude scales; Likert scales; motives, interests and objectives tables; goals achievement matrix; problem and decision trees; preference matrix; rating and scoring; wealth and well-being ranking.

Chapter 3: Monitoring and Evaluation

Monitoring refers to the systematic collection of data on a pre-defined project or programme indicators. It enables stakeholders to check whether an initiative is on track in achieving set objectives.

CAFOD takes a Results Based Management (RBM) approach focussing on the performance and achievement of outputs, outcomes and impacts:

Output: the products, capital goods and services which result from a development intervention; may also include changes resulting from the intervention those are relevant to the achievement of outcomes.

Outcome: the likely or achieved short-term and medium-term effects of an intervention's output.

Top tip: The separation of baseline indicators, intermediate milestones and final targets can be useful for monitoring project activities and assessing whether these have been achieved.

Impact: positive or negative, primary or secondary long-term effects produced by a development intervention, directly or indirectly or unintended.

RMB has two components. Firstly, implementation measurements to ensure that project or programme inputs and activities are in compliance with the deign budget and work plan and secondly, results measurements examining the achievement of the projects objectives in terms of immediate outputs, intermediate outcomes and long-term impacts.

For the second component it is common to use a Logical Framework Approach (LFA) and accompanying log frame.

These usually consist of a brief narrative, indicators, means of verification, assumptions and risks, see table 1 for an example.

Table 1: Logical Framework Approach taken from Lamhauge, N., E. Lanzi and S. Agrawala (2011), "Monitoring and Evaluation for Adaptation: Lessons from Development Co-operation Agencies", *OECD Environment Working Papers*, No. 38, OECD Publishing. http://dx.doi.org/10.1787/5kg20mj6c2bw-en

Narrative summary	Objectively verifiable indicators	Means of verification	Assumptions
Goal – the overall aim to which the project is expected to contribute	Measures (direct or indirect) to show the project's contribution to the goal	Sources of information and methods used to show fulfilment of goal	Important events, conditions or decisions beyond the project's control necessary for maintaining the progress towards the goal
Outcomes (or objectives) – the new situation which the project is aiming to bring about	Measures (direct or indirect) to show progress towards the objectives	Sources of information and methods used to show progress against objectives	Important events, conditions or decisions beyond the project's control that are necessary if achieving the objective is going to contribute towards the overall goal
Outputs – the results that should be within the control of the project management	Measures (direct or indirect) to show if project outputs are being delivered	Sources of information and methods used to show delivery of outputs	Important events, conditions or decisions beyond the project's control that are necessary if producing the outputs is going to help achieve the objectives
Activities – the things that have to be done by the project to produce the outputs	Measures (direct or indirect) to show if project outputs are being delivered	Sources of information and methods used to show that activities have been completed	Important events, conditions or decisions beyond the project's control that are necessary if completing activities will produce the required outputs
Inputs	Resources – type and level of non-financial resources needed for the project Finance – overall budget Time – planned start and end date		

Source: Adapted from Mikkelsen, 1995, 51 cited in Bakewell and Garbutt, 2005, 3.

The monitoring and evaluation of any DRR project or implementation should follow the basic principles of DRR. These have been examined and summarised by Twigg (2009) in his publication Characteristics of a Disaster Resilient Community version 2 (available in full on the DRR COW). He has examined the core characteristics of an ideal disaster resilient community and importantly the 'enabling environment'. Annex 3 highlights the set of characteristics or the community and enabling environment most relevant for the HVCA process.

He has also identified some milestones in order to judge the progress of a community towards disaster resilience and these are provided in Annex 4.

However as Twigg note **the *Characteristics* is not a model for every situation. It is a resource, not a checklist to be ticked off. It should stimulate and facilitate discussion. It must be adapted to the context in which it is being used and the needs and capacities of those who use it.**

Guiding principles of DRR work

DRR is a bottom up method that should allow the community to participate, take ownership and expand their own risk knowledge. But in order for this to be achieved effectively there are some guiding principles to be considered and used to support the design, mid-term review and final evaluation.

1. **Participation and voice**: Community groups should where possible and appropriate incorporate all members of that community including women and men, young and elderly, leaders and marginalised.
2. **Power structures**: DRR should work within the existing structures of that community. Any DRR project should be culturally acceptable to that community.

3. **Integrated**: DRR should be integrated with other initiatives that address the under-lying risk factors faced by that community such as food security, income generating activities, conflict sensitivity or advocacy.
4. **Temporal scales:** DRR should consider immediate and long-term hazards and vulnerabilities making the projects sustainable.
5. **Combined knowledge**: DRR should attempt to integrate local knowledge and scientific knowledge.
6. **Do no harm**: DRR interventions should do no harm to the environment or to neighbouring communities.

HVCA indicators

Taken from Twigg's characteristics these indicators can be used to monitor the quality and progress of an HVCA – see Annex 3.

Always remember that indicators should be SMART.

S - Specific

M - Measurable

A - Achievable

R - Relevant

T - Time-bound

Table 2: Example indicators for HVCA process.

Characteristics	Expected results	Example Indicators	Source of verification
1.1. Community hazard/risk assessments carried out which provide comprehensive picture of all major hazards and risks facing community (and potential risks).	Assessments of local HVC and community preparedness.	# of community organised action groups formed using the principles of DRR and participation in year x of the project. # of community action groups carrying out a HVCA workshop in year x of the project. # of community action groups designing a community action plan in year x of the project.	Baseline survey Mid-term review Final evaluation Local and national risk reduction plans. Workshop reports. Group meeting minutes.
1.2. Hazard/risk assessment is participatory process including representatives of all sections of community and sources of expertise.	Inclusive participatory HVCA	% of women/ elderly/youth/men involved in HVCA % of community represented within the community action group	Community reports and feedback. Annual reports. HVCA registration documents.

1.3. Assessment findings shared, discussed, understood and agreed among all stakeholders, and feed into community disaster planning.	Community action plans produced and shared with local authority	# of planning or/and feedback workshops held with communities each year of the project. # of partner follow up visits to the communities per month/year	Perception studies
1.4. Findings made available to all interested parties (within and outside community, locally and at higher levels) and feed into their disaster planning.	DRR learning forum founded and co-owned by local authority and community.	# of awareness raising campaigns organized among local people on disaster risk reduction. # of materials developed for awareness raising on disaster risk reduction. # of locally translated and adapted information materials on disaster risk reduction developed and disseminated. # of forums for enhancing regional cooperation, information sharing and knowledge exchange provided # of documents / reports on good practices for disaster risk reduction shared among different networks. # of disaster preparedness plans and early warning mechanisms developed at national level.	Campaigns and media products Information material School curricula Documents on positive local knowledge and behaviour Mid-term report Final evaluation report
1.5. Ongoing monitoring of hazards and risks and updating of assessments.	Review and revision of HVCA materials in each year of the project. Communities remain up to date on their own risk.	# of monitoring visits/year/month # of community meetings to discuss and update HVCA outputs including the plan.	Mid-term report Final evaluation report
1.6. Skills and capacity to carry out community hazard and risk assessments maintained through support and training.	Long-term project sustainability and community ownership	#. of disaster preparedness assessment tool(s) developed and used. #. of local action plans developed for disaster risk reduction at the community level.	Training reports

Monitoring tools

In order to collect the necessary information in order to monitor the projects progress and impact, there are a number of methods that can be used.

These range from one-to-one interviews with beneficiaries and partners (see Annex 5 and 6 for guideline questions) or case studies to focus groups discussions or recording meeting minutes.

There are therefore two approaches that should complement each other: Community owned monitoring and partner/CAFOD monitoring.

Community participatory monitoring

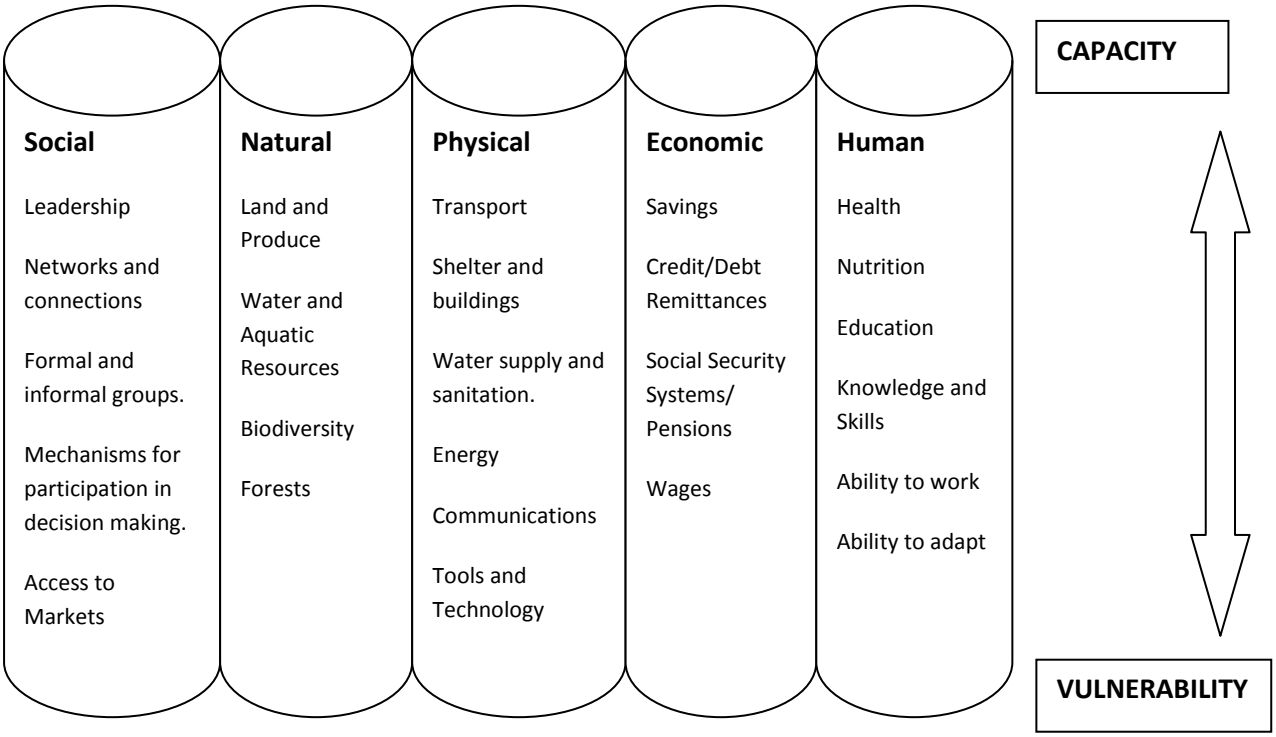
The idea is that the community monitor the progress of the project themselves through registers and other methods such as the one below.

Batteries tool for DRR.

This section is taken by the work carried out by CAFOD staff and partners in the Philippines and a full report on the process is available on the DRR COW.

1. Participants were asked to name the hazards which they prioritized in the community action plan and to give reasons for why they were considered to be priorities.
2. Participants were asked to name some of the vulnerabilities and capacities within their community which they had identified last year which increased or reduced their risk to disaster. They were then shown a diagram of 5 columns (see below) and the facilitator allocated each group of vulnerabilities or capacity mentioned by to the community to one of the columns. The facilitator then explained that these columns represent the different elements of vulnerability and capacity within the community.[6]
3. The facilitator compared the columns to a set of batteries. Each battery has a different energy level. Batteries can be full, empty or somewhere in between. A low energy level indicates that the community feels that they have greater vulnerability than capacity in this domain, and a high energy level indicates that the community feels that they have greater capacity than vulnerability. Any community can have different levels of vulnerabilities and capacities under each category. These levels can change from day to day, week to week and year to year, depending on the context of the community and the actions it is undertaking.
4. Communities were asked to give examples to illustrate high levels or low levels for each category. Examples of how levels may increase or decrease with availability/ access to resources or how the community organises itself or develops its resources were discussed.

[6] These 5 elements of vulnerability/capacity were first introduced to participants during 2009 DRA assessment (see Annex 3)



<u>Additional ideas for Monitoring and Evaluation!</u>

Gathering verbal information and monitoring:

Tools: interviewing; checklists; focus groups; life histories; questionnaires.

Describing the current situation:

Tools: Beneficiary assessment; conflict analysis; community diaries; impact flows; mobility diagrams; problem trees; resource ownership and access; social relations matrix; spider diagrams; stakeholder analysis; systems diagrams.

Analysis of change:

Tools: biographical analysis; content analysis; narratives; critical event analysis; local diaries and histories; historical transect walks; timelines and trend lines; seasonal calendars of livelihoods, land use, stresses, hazards and conflicts.

Future planning:

Tools: SWAT (Strengths, weaknesses, opportunities and threats); scenario planning; Imagineering; visioning and pathways; mind mapping.

Annex 1:

Inter-agency VCA challenges and opportunities	
Opportunities	***Challenges***
The VCA facilitates community investigations that go beyond listing the immediate effects of vulnerability and reach towards understanding of its **root causes**.	The processes, outcomes and impact of VCA are all too easily affected by existing **power** relations.
Community can articulate their **perspective** of vulnerability and risk.	NGOs often assume independence from local **power** structures
Gender analysis is also vital and can help to determine interventions that are more sensitive to the specific needs, skills and capacities of men and women in the community, especially in times of crisis.	**Scaling up** DRR efforts
Building **capacity** of local groups and organisations to a level where they generate their own resources and access their entitlements from local government is essential in establishing sustainable DRR programmes.	Benefits are of a **less tangible** nature but contribute to make a community more resilient.
Working with **young people** opens the possibility of broader community outreach.	There is **little guidance** available on how to make effective DRR partnerships or the challenges in attempting to do so.
Schools are important hubs of contacts and linkages with other official institutions.	As a principle or aim, **partnership** is straightforward but in practice it can be very challenging.
NGOs that work with communities act **as facilitators**, supporting community empowerment and mobilisation instead of directing them.	The **governance** context or enabling environment exerts a great influence on communities, their organisations and supporting NGOs.
Partnership approaches are also a central aspect of integrating DRR with other issues and sectors.	Scaling up the impact of local, technical interventions and reducing risk long-term may require NGOs to enter a more **political** environment.
Organising in groups and mobilising communities for action – the software dimension of DRR projects – gives people **voice and strength** to influence.	The **local** and **middle** levels of **government** tend to be neglected- there is no clear road map for progress here.

Annex 2: Vulnerabilities and Capacities

Categories	*Vulnerabilities*	*Capacities*
Human	• Poor Health • Poor Nutrition • Low Education • Low Knowledge and Skills • Inability to work • Inability to adapt	• Health • Nutrition • Education • Knowledge and Skills • Capacity to work • Capacity to adapt
Natural	• Poor access to/ quality of Land and Produce (degraded land, unsuitable crops/livestock) • Loss of Biodiversity • Lack of access/ poor quality water & aquatic Resources • Loss of trees and forest products (ie deforestation) • Loss of Wildlife (pollination of crops, natural pest management, food source) • Loss of Wild foods and plants	• Land and Produce • High Biodiversity (forests, wildlife, seeds) • Water and Aquatic Resources • Trees and forest products • Wildlife • Wild foods and fibres

Social	Lack of/ poor:
	• Leadership
	• Networks and connections
	  ○ Neighbourhoods
	  ○ kinship
	• Formal and informal groups.
	• Mechanisms for participation in decision making.
	• Common rules and sanctions.
	• Relations of trust and mutual support.
		Presence of:
		• Good Leadership
		• Networks and connections
		  ○ Neighbourhoods
		  ○ kinship
		• Formal and informal groups.
		• Mechanisms for participation in decision making.
		• Common rules and sanctions.
		• Relations of trust and mutual support.

Financial	• No/Low Savings • No access to Credit/Debt – loan schemes • No Remittances • No Social Security Systems/ Pensions • Low Wages	• Savings (can be alternatives to cash savings i.e seed/ rice savings) • Credit/Debt – loan schemes • Remittances • Pensions • Good Wages
Physical	• Poor Infrastructure (Transport – poor roads, vehicles etc; Insecure shelter and buildings; Irrigation and Sanitation systems; Energy; Communications) • Unsuitable/lack of Tools and Technology (including Seeds, fertiliser and pesticides • Loss of Traditional technology.	• Good Infrastructure (Transport – roads, vehicles etc; shelter and buildings; Irrigation and Sanitation systems; Energy; Communications) • Tools and Technology (including Seeds, fertiliser and pesticides • Traditional technology

Annex 3 Characteristics of a Disaster Resilient Community: Risk Assessment

Tables below: Taken from Twigg 2009 Characteristics of a Disaster Resilient Community - p31-32

THEMATIC AREA 2: RISK ASSESSMENT

Components of disaster resilience:

1. Hazards/risk data and assessment

2. Vulnerability/capacity and impact data and assessment

3. Scientific and technical capacities and innovation

Components of resilience	Characteristics	Enabling environment
1. Hazards/risk data and assessment	1.1. Community hazard/risk assessments carried out which provide comprehensive picture of all major hazards and risks facing community (and potential risks).	• Hazard/risk assessments mandated in public policy, legislation, etc., with standards for preparation, publication, revision. • Systematic and repeated assessments of hazards and disaster risks undertaken in higher level development programming. High-risk areas identified. • Good-quality data on hazards and risks (scientific databases, official reports, etc.)made available to support local-level assessments. • Existing knowledge collected, synthesised and shared systematically (through disaster management information systems). • Participation of all relevant agencies/ stakeholders in assessments. • Government (local and/or national) and NGOs committed to providing technical and other support to local and community hazard/risk assessments.
	1.2. Hazard/risk assessment is participatory process including representatives of all sections of community and sources of expertise.	
	1.3. Assessment findings shared, discussed, understood and agreed among all stakeholders, and feed into community disaster planning.	
	1.4. Findings made available to all interested parties (within and outside community, locally and at higher levels) and feed into their disaster planning.	
	1.5. Ongoing monitoring of hazards and risks and updating of assessments.	
	1.6. Skills and capacity to carry out community hazard and risk assessments maintained through support and training.	

Components of resilience	Characteristics	Enabling environment
2. Vulnerability/capacity	2.1. Community vulnerability and	• VCA mandated in public policy,

and impact data and assessment	capacity assessments (VCAs) carried out which provide comprehensive picture of vulnerabilities and capacities.	legislation, etc., with standards for preparation, publication, revision. • Vulnerability and capacity indicators developed and systematically mapped and recorded (covering all relevant social, economic, physical and environmental, political, cultural factors). • Disaster impact data and statistical loss information available and used in VCA. • Systematic use of VCA in higher-level development programming. Vulnerable groups and causes of vulnerability identified. • Existing knowledge collected, synthesised and shared systematically (through disaster management information systems). Participation of all relevant agencies/ stakeholders in assessments. • Government (local and/or national) and NGOs committed to providing technical and other support to local and community VCA.
	2.2. VCA is participatory process including representatives of all vulnerable groups	
	2.3. Assessment findings shared, discussed, understood and agreed among all stakeholders and feed into community disaster planning.	
	2.4. VCAs used to create baselines at start of community DRR projects.	
	2.5. Findings made available to all interested parties (within and outside community) and feed into their disaster and development planning.	
	2.6. Ongoing monitoring of vulnerability and updating of assessments.	
	2.7. Skills and capacity to carry out community VCA maintained through support and training.	

Components of resilience	**Characteristics**	**Enabling environment**
3. Scientific and technical capacities and innovation	3.1. Community members and organisations trained in hazards, risk and VCA techniques and supported to carry out assessments.	• Institutional and technical capacity for data collection and analysis. • Ongoing scientific and technological development; data sharing, space-based earth observation, climate modelling and forecasting; early warning. • External agencies value and use indigenous knowledge.
	3.2. Use of indigenous knowledge and local perceptions of risk as well as other scientific knowledge, data and assessment methods.	

Annex 4: Milestones to a disaster resilient community

Level 1	Little awareness of the issue(s) or motivation to address them. Actions limited to crisis response.
Level 2	Awareness of the issue(s) and willingness to address them. Capacity to act (knowledge and skills, human, material and other resources) remains limited. Interventions tend to be one-off, piecemeal and short-term.
Level 3	Development and implementation of solutions. Capacity to act is improved and substantial. Interventions are more numerous and long-term.
Level 4	Coherence and integration. Interventions are extensive, covering all main aspects of the problem, and they are linked within a coherent long-term strategy.
Level 5	A 'culture of safety' exists among all stakeholders, where DRR is embedded in all relevant policy, planning, practice, attitudes and behaviour

Taken from Twigg (2009) Characteristics of a Disaster Resilient Community.

Annex 5: Guideline questions for interviews with beneficiaries

Community Interview Guideline – some questions may or may not be appropriate according to the context the interviewer will therefore decide which questions are appropriate during the field visit.

I= Individual, HH = household, G= Group

Demographics

Name of community:

Name of individual or group or family name:

Number in group (men, women and children (under age of 18) ratio):

Date and time:

Location:

Weather:

Questions:

Section 1: Basics

1. (I/HH) How many people live in your house (are in your immediate family)?
2. How many men, women and children?
3. (I/HH) How long have you lived here? (If they moved here recently, why?)
4. (I/HH/G) What are the main challenges you face living here?
5. How do you overcome/ think you might be able to overcome these challenges?

Section 2: Livelihoods

6. (I/HH/G) What is your main source of livelihood/living?
7. Has this always been the case?
8. If no, how have you changed your source of income and food production?

Section 3: Hazards

9. What usually happens during a cyclone/ flood/ earthquake etc? Describe what happened during the last flood/ hazard? (This is a sensitive question and may not be appropriate in some settings)
10. (I/HH/G) How do you normally prepare for drought/flood or other hazard?
11. Have you seen a change in the environment (plants, weather, land) over the last few years?
12. If, yes, what do you think is causing this change?

Section 4 Working with our Partners and the project:

13. (I/HH/G) How do you know partner x?
14. How often do they visit and what do they do when they visit?
15. (I/HH/G) Have you and how have you been able to talk to partner x about any problems or concerns about the activities?
16. Have these been acted upon? Have you seen changes?
17. (I/HH/G) What would you like to see happen in the future within the project (and in general)?

Annex 6: Guideline questions for Partner interviews

Please note that these questions can be adapted for multi-partner and single partner projects.

Partner name:

Individual name and role:

Date and Time:

Location:

Section 1 General Project Overview and Roles:

1. Please describe the project to me?
2. What is your agencies main activities and role?
3. How does each partner contribute to the project?
4. What is your role within the project?
5. Overall how do you feel the project is progressing?
6. What have been the main challenges so far?
7. How have you overcome these challenges?
8. What have been the main opportunities so far?

Section 2 The context:

9. Can you describe the current challenges faced by the communities we are working with?
10. Have you observed a change in the environment over the last few years?
11. Have you observed a change in the environment since implementing the project?
12. What are the biggest barriers to implementing a project like this?

Section 3 Reviewing the log frame activities

13. Results 1 – What have been your main activities relating to result 1?

14. What has gone well and not so well?

    Repeat above question for each result.....

15. How has the multi-partnership worked?
16. What have been the main advantages and disadvantages of a multi-partner project?

Section 4 Reviewing the processes and CAFODs added value and support

17. Have you been able to stick to the log frame?
18. What has worked well and not so well in regards to the monitoring framework?
19. How have you enabled communities to feedback any concerns or ideas relating to the project?
20. What support that CAFOD offers is most beneficial to your agency and the project?
21. Is there anything that CAFOD could do better?