

# **Social Vulnerability, Sustainable Livelihoods and Disasters**

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Report to DFID  
Conflict and Humanitarian Assistance Department  
(CHAD) and  
Sustainable Livelihoods Support Office

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# Social Vulnerability, Sustainable Livelihoods and Disasters

## Linking the Sustainable Livelihoods approach with reducing disaster vulnerability

The adoption by DFID of the 1997 White Paper priorities has brought a new determination to focus on poverty reduction in UK assistance to developing and transition countries. The White Paper recognised the significance of socio-economic factors in making people vulnerable to disaster. It sets out the objectives of protecting and rebuilding livelihoods and communities after disasters, and reducing vulnerability to future disasters. It also promises that ‘Disaster preparedness and prevention will be an integral part of our development co-operation programme’. (p.44). A key component of this is the promotion of sustainable livelihoods as the means by which people – especially the poor – improve their living conditions.

DFID has also stated that its humanitarian policy is to:

- save lives and relieve suffering;
- hasten recovery, and protect and rebuild livelihoods and communities
- reduce risks and vulnerability to future crises.

(DFID Policy Statement on Conflict Resolution and Humanitarian Assistance, 1999, p.4)

The humanitarian policy is largely implemented by CHAD, which works under considerable pressure to address the first two of the above tasks, since out of necessity it must respond to a wide range of emergencies with limited resources. It is therefore less able to give attention to the future reduction of risks and vulnerability (either directly or through guidance to other DFID departments), and is limited in its ability to link relief to sustainability and the enhancement of livelihoods.

This may mean that priorities for poverty reduction through the sustainable livelihoods approach need to be supported in the disaster context, so as to *strengthen the links between the sustainable livelihoods approach and vulnerability reduction*. At present there is DFID support for poverty reduction and for sustainable livelihoods (which to be sustainable should not be ‘vulnerable’). Yet the focus of humanitarian effort continues to support victims rather than build up preparedness, resistance and resilience through reductions in vulnerability (with concomitant improved sustainable livelihoods). The DFID Strategy Paper *Halving World Poverty by 2015* (2000) identifies ‘natural disasters’ as one of many threats to achieving the poverty reduction target, and states that ‘the vulnerability of poor people to shocks needs to be reduced’ (pp. 14 and 12). It argues that natural disasters are frequent in the poorest countries. The poor are usually hardest hit ‘because they often only have access to low cost assets (for example land or housing) which are more vulnerable to disasters.’ (p.26). Moreover, the Strategy Paper states that reducing vulnerability to shocks is one of the three ‘fundamental requirements’ for meeting the poverty reduction target.

The need to analyse and prepare for peoples’ vulnerability to natural hazards could be rooted in the sustainable livelihoods (SL) approach, and in development work which aims to reduce the elements of vulnerability that are a result of poverty. As such, **vulnerability analysis** (VA) may help to bring humanitarian work in line with DFID’s other main objectives and tie it in with the sustainable livelihoods approach. From the other side of DFID’s work, the promotion of sustainable livelihoods and poverty reduction also needs to incorporate the

reduction of vulnerability to hazards as part and parcel of such assistance. At the moment the SL approach incorporates shocks as a highly significant component of the ‘vulnerability context’. But there is little analysis of how shocks affect livelihood assets and outcomes, and in most ‘normal’ DFID development work there appears to be very little or no attempt to reduce peoples vulnerability to hazards and disasters.

Vulnerability analysis can:

- be incorporated into all aspects of sustainable livelihoods support policies, such that reduction of vulnerability to natural hazards is included in ‘normal’ pro-poor development activities,
- become an integral part of humanitarian work, so that there is a shift from disaster relief to hazard preparedness which is better integrated with the mainstream of development support.
- enable DFID’s humanitarian work to be more closely integrated with the SL approach, by using vulnerability analysis in both the operation of emergency preparedness and reducing poverty.

The purpose of this report is to provide CHAD and DFID generally with an enhanced capability to develop policy for reducing social vulnerability to hazards. It contains

- information, analysis and resources to improve the incorporation of disaster vulnerability awareness into mainstream development assistance, and
- suggestions for an improved basis for the inclusion of vulnerability analysis in humanitarian policies.
- an initial survey and assessment of various vulnerability analysis methods and analyse their relevance to policy design in humanitarian and development work;
- an inventory of existing work on vulnerability analysis and their links to sustainable livelihoods approaches;

### **What is vulnerability?**

To conduct vulnerability analysis, we need a clear idea what vulnerability is. It is not the same as poverty, marginalization, or other conceptualisations that identify sections of the population who are deemed to be disadvantaged, at risk, or in other ways in need. Poverty is a measure of current status: *vulnerability* should involve a *predictive* quality: it is supposedly a way of conceptualising what may happen to an identifiable population under conditions of particular risks and hazards. Precisely because it should be predictive, VA should be capable of directing development aid interventions, seeking ways to protect and enhance peoples’ livelihoods, assist vulnerable people in their own self-protection, and support institutions in their role of disaster prevention.

In order to understand how people are affected by disasters, it is clearly not enough to understand only the hazards themselves. Disasters happen when a natural phenomenon affects a population that is inadequately prepared and unable to recover without external assistance. But the hazard must impact on groups of people that are at different levels of preparedness (either by accident or design), resilience, and with varying capacities for recovery. *Vulnerability* is the term used to describe the condition of such people. It involves much more than the likelihood of their being injured or killed by a particular hazard, and includes the type of livelihoods people engage in, and the impact of different hazards on them.

It is especially important to recognise this *social* vulnerability as much more than the likelihood of buildings to collapse or infrastructure to be damaged. It is crucially about the characteristics of *people*, and the differential impacts on people of damage to physical structures. Social vulnerability is the complex set of characteristics that include a person's

- *initial well-being* (nutritional status, physical and mental health, morale);
- *livelihood and resilience* (asset pattern and capitals, income and exchange options, qualifications);
- *self-protection* (the degree of protection afforded by capability and willingness to build safe home, use safe site)
- *social protection* (forms of hazard preparedness provided by society more generally, e.g. building codes, mitigation measures, shelters, preparedness);
- *social and political networks and institutions* (social capital, but also role of institutional environment in setting good conditions for hazard precautions, peoples' rights to express needs and of access to preparedness).

*In the case studies below, and in other VA methods we are aware of, there is a clear sense of comparability and convergence in the analysis of these different components of vulnerability.* There is also a clear realisation that the vulnerability conditions are themselves determined by processes and factors that are apparently quite distant from the impact of a hazard itself. These 'root causes', or institutional factors, or more general political, economic and social processes and priorities are highlighted in much of the VA work that has been done. The apparent absence of such analysis in DFID's own approach to disaster preparedness may indicate why it is difficult for the SL approach and disaster preparedness to become better integrated. Just as peoples' livelihood opportunities and their patterns of assets and incomes are determined by wider political and economic processes, vulnerability to disasters is also a function of this wider environment. All the vulnerability variables are inherently connected with peoples' livelihoods (lower vulnerability is likely when livelihoods are adequate and sustainable), and with poverty (in most disasters, it is mostly the poor who are disproportionately more vulnerable than other groups, and much less capable of recovering easily).

### **Vulnerability analysis and sustainable livelihoods: what are we trying to achieve?**

There is generally a very high – but not absolute – correlation between the chance of being harmed by natural hazard events and being poor. In which case, it should follow that development work that reduces poverty should also be instrumental in reducing disaster vulnerability. But the relationship does not seem to be that straightforward, and there seems to be general acceptance that advances made in development projects and programmes can be wiped out in a matter of minutes or hours by a sudden hazard impact, or over months by persistent drought. And in any case, much disaster relief and recovery assistance fails to take account of the need to support livelihoods and future resistance to hazards by reducing vulnerability as well as dealing with peoples' immediate needs.

Simply put, development work should aim to protect and reinforce livelihoods in such a way that people are able to become more resilient to hazards, and be better protected from them. This protection must come either through

- the strengthening of peoples' 'base-line' conditions (nutrition, health, morale and other aspects of well-being),

- reinforcement of their livelihood and its resilience to possible hazard impacts;
- peoples' own efforts ('self protection') to reinforce their home and workplace against particular hazards,
- or by access to proper support ('social protection') by institutions of government or civil society.

Livelihoods and social protection are also influenced by *social and political networks* (including social and political capital), given that different groups may have access to different networks and sources of alleviation. These networks may have varying levels of cohesion and resilience in the face of hazards, and may also engage in rivalry and disputes, especially over aid and the recovery process.

When disasters occur, the key point will be to ensure that *relief and recovery is tied into the restoration and reinforcement of livelihoods*, and also to the strengthening of self-protection and the reinforcement of social protection (e.g. through support to relevant institutions). However, there are issues that go much deeper than this, as recognised in most of the case studies of different types of vulnerability analysis below. In these examples, the NGOs or authors concerned have highlighted the fact that people are vulnerable because of processes and conditions that are quite 'remote' from the household or livelihood itself. How vulnerable someone is, is determined by how weak or strong their livelihoods are, how good their access is to a range of assets that provide the basis for their livelihood strategy, or how useful different institutions are in providing social protection.

All these aspects are determined by social, economic and political systems that reflect the power relations of any given society. These have to be traced from the immediate assets and livelihood base of a household along a 'chain of causation' back to the processes and institutions that determine the distribution of safety and vulnerability in society. Vulnerability can be seen as a term that encompasses all levels of exposure to risk, from high levels of vulnerability to low. But there has been some opposition to the use of the term in this way, because of its implication that disasters always produce victims who have no strengths or capacities to resist and recover. In this sense, the opposite of being vulnerable is being capable (or having capacities to cope and recover).

## **Vulnerability and Capacity**

There appear to be two separate approaches to the terms vulnerability and capacity. The first conceives of them being the two ends of a spectrum, so that people who have a high degree of vulnerability are low in capacity (and vice versa). In this approach, there is no separate set of factors that should be considered capacities or capabilities: these are simply scales on which high levels indicate low vulnerability. The second perceives them as two distinct (or only partly inter-related) sets of factors. This is potentially confusing, since someone with a good nutritional status might be considered as having a high capacity, while poor nutritional status is considered highly vulnerable: the same measure is interpreted using two different terms. But other factors are captured by the term capacity/capability, so it may be a useful distinction. A capacity might include institutional membership, group cohesion, or literacy. Vulnerability can include poverty, house quality, or illiteracy. The implication is that some capacities are not the opposite of vulnerabilities, and that some low-level vulnerability characteristics are not amenable to being considered capacities when they are at the higher end of the scale. For example, is being rich a 'capacity' or a part of the problem for poor people? Is being part of a particular network a capacity, or a denial of capacity to others (as with caste behaviour in India).

The use of the concept of capabilities emerged in response to the supposed negativity of the term vulnerability: it was suggested that to speak of people as being vulnerable was to treat them as passive victims and ignore the many capacities that make them competent to resist hazards. And yet logically there is no reason that the term vulnerability cannot include capacities as its scalar 'opposite'. Some characteristics may be considered capacities when they score well, and vulnerabilities when they score badly, even when they are in fact opposite ends of a scale (like literacy/illiteracy). The problem is the title of the scale that is used: there can be high and low levels of vulnerability without implying that this means victim-hood in using the label.

One of the reasons that capacities seem to be often separated from vulnerability is that capacities are regarded as dependent on groups or some form of social organisation, while vulnerabilities are socially-determined but the characteristic of individuals or households. In all the case studies below, we can observe the analytical stresses that surround the way the methods try to deal with this issue. One way round the problem is simply to acknowledge that where capacities are high, it is likely that vulnerability is reduced. If we accept that measuring vulnerability includes any factor or process that can alter the exposure of a person or household to risk, then capacities can also be considered as scaled factors that lead to greater danger (vulnerability) when they are low, and reduced danger when they are high.

### **DFID's task: convergence and integration?**

Vulnerability analysis offers DFID the opportunity to integrate development work using the SL approach with disaster preparedness, prevention and recovery. By its focus on assets, livelihoods, and vulnerability components such as self and social protection, VA (along with the recognition of support for enhancing of capacities) can be properly integrated into pro-poor development work. CHAD's work requires that it deal with disastrous events where by definition vulnerability had not been sufficiently reduced. Relief and reconstruction work is likely to continue to be a significant feature of its work, as vulnerability can only be reduced slowly. But by adopting a VA approach, disaster prevention, preparedness and recovery work should be capable of integration with development work. But this depends on the acceptance that reducing disaster vulnerability must be properly integrated with 'normal' development work. In other words, disaster preparedness should be seen as a part of development, through the tools of vulnerability analysis.

Given that many of the issues involved in this integration have been considered by other authors, NGOs, and international organisations like the Red Cross, there is also scope for DFID to learn from these methods. But in its own engagement with VA as a means of integrating its development and disaster work, DFID may also be able to foster the better integration and convergence of the wide range of vulnerability and capacity methods developed by these organisations and authors. This will assist in its work of creating partnerships and enable a much better 'fit' between DFID objectives and the activities of its partners.

## Case Study

### Capacities and Vulnerabilities Analysis (CVA)

#### Background

The CVA method was designed and tested in the late 1980s by an inter-NGO initiative, the International Relief/Development Project (IRDP). Its stated purpose is to ‘help the givers of aid learn how to give it so that it supports the efforts of people to achieve social and economic development’<sup>1</sup> (i.e. how to make relief interventions more developmental) but it has been used more widely in disaster preparedness and mitigation. It is a practical tool but above all a diagnostic one: it is not prescriptive.

The CVA format and basic concepts have since been adopted by or absorbed into other vulnerability assessment methodologies and used in training courses and manuals to varying degrees.<sup>2</sup> The extent of its use on the ground is not clear although it does appear to be widely known. The best documented and perhaps most significant adoption of the CVA method has been in the Philippines by the Citizens’ Disaster Response Center and Network (CDRC/N) of NGOs since the early 1990s, as part of their Citizenry-Based and Development-Oriented Disaster Response (CBDO-DR) approach that emphasises a developmental approach to disaster management together with community participation in project planning and implementation. Much of the following discussion about the application of CVA is based on experience in the Philippines, where CDRC/N has progressively reviewed and revised its methods over more than a decade.

Lessons learnt in the development and application of the CVA approach have been documented. The methodology and 11 of the 30 case studies of its application under the IRDP were published in 1989 in the book *Rising from the Ashes* by Mary Anderson and Peter Woodrow, which was republished in 1998 due to continuing demand. Experiences of using CVA in the Philippines have recently been written up by Annelies Heijmans and Lorna Victoria as part of a broader review of the CBDO-DR approach: their *book Citizenry-Based and Development-Oriented Disaster Response* was published in 2001 but is still not widely available outside the Philippines. An analysis of the use and effectiveness of methods for risk and vulnerability analysis used by CRDC/N, including CVA, was carried out in a recent research project on community-based vulnerability analysis managed by South Bank University in the UK. The South Bank University project’s findings have not been published but were made available to this study. Full references for these documents are given below.

#### Description

Anderson and Woodrow’s *Rising from the Ashes* explains the CVA approach in detail. The basis of the CVA framework is a simple matrix for viewing people’s vulnerabilities<sup>3</sup> and

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<sup>1</sup> Anderson and Woodrow 1998 [1989]: 1.

<sup>2</sup> For its use in other vulnerability analysis methods, see e.g. IFRC n.d. *Tool Box for Vulnerability and Capacity Assessments*. Geneva: IFRC. For its use in manuals and training, see e.g. Hugo Slim, John Harris and John Seaman 1995 *A Regional Resource Pack for Disaster Management Training in South Asia*. Kathmandu: Save the Children (UK); Astrid Von Kotze and Ailsa Holloway 1996 *Reducing Risk: Participatory learning activities for disaster mitigation in Southern Africa*. Oxfam/IFRC.

capacities in three broad, interrelated areas: physical/material, social/organisational and motivational/attitudinal (see Figure 1).

**Figure 1: CVA matrix**

	Vulnerabilities	Capacities
<b>Physical/material</b>  What productive resources, skills and hazards exist?		
<b>Social/organisational</b>  What are the relations and organisation among people?		
<b>Motivational/attitudinal</b>  How does the community view its ability to create change?		

Each of the three categories comprises a wide range of features:

**Physical/material vulnerability and capacity.** The most visible area of vulnerability is physical/material poverty. It includes land, climate, environment, health, skills and labour, infrastructure, housing, finance and technologies. Poor people suffer from crises more often than people who are richer because they have little or no savings, few income or production options, and limited resources. They are more vulnerable and recover more slowly. To understand physical/material vulnerabilities, one has to ask what made the people affected by disaster physically vulnerable: was it their economic activities (e.g. farmers cannot plant because of floods), geographic location (e.g. homes built in cyclone-prone areas) or poverty/lack of resources?

**Social/organisational vulnerability and capacity.** How society is organised, its internal conflicts and how it manages them are just as important as the physical/material dimension of vulnerability, but less visible and less well understood. This aspect includes formal political structures and the informal systems through which people get things done. Poor societies that are well organised and cohesive can withstand or recover from disasters better than those where there is little or no organisation and communities are divided (e.g. by race, religion, class or caste). To explore this aspect, one has to ask what the social structure was before the disaster and how well it served the people when disaster struck; one can also ask what impact disasters have on social organisation.

**Motivational/attitudinal vulnerability and capacity.** This area includes how people in society view themselves and their ability to affect their environment. Groups that

<sup>3</sup> CVA makes a distinction between ‘vulnerabilities’ and ‘needs’: vulnerabilities are long-term factors that affect a community’s ability to respond to events or make it susceptible to disasters; needs (in a disaster context) are immediate requirements for survival or recovery after disaster.

share strong ideologies or belief systems, or have experience of co-operating successfully, may be better able to help each other at times of disaster than groups without such shared beliefs or those who feel fatalistic or dependent. Crises can stimulate communities to make extraordinary efforts. Questions to be asked here include what people's beliefs and motivations are, and how disasters affect them.

Five other factors can be added to the CVA matrix to make it reflect complex reality. These are: disaggregation by gender, disaggregation by other differences (e.g. economic status), changes over time, interaction between the categories, and different scales or levels of application (e.g. village or national levels).

### **Application of the method**

CVA was designed principally for NGOs, to help them consider when and how to respond to a disaster by understanding what impact interventions will have on capacities and vulnerabilities. It is intended to provide concepts, tools and guidance on decisions and choices in project design and implementation throughout the project cycle. It is seen as a simplified (but not simplistic) framework for mapping complex situations by identifying critical factors and the relationships between them.

It was first applied by the IRDP to 30 projects in Asia, Africa and Latin America, implemented by a diverse set of NGOs (large/small, technical/general, relief/development, North/South) and different disasters (drought, flood, earthquake, typhoon, volcano, tsunami, refugees). This application was largely retrospective, so whilst it provided many lessons about how particular interventions had affected capacities and vulnerabilities, it had relatively little to teach about how to use the method in project design. However, the IRDP cases did demonstrate that CVA could be applied in a wide variety of contexts (including conditions of social and political upheaval or polarisation, and in countries where the régime in power imposes limits on NGO work), and that it could generate valuable insights into vulnerabilities and capacities for use in planning and implementing projects.

As in the IRDP, CVA's use in the Philippines has been confined to individual NGO projects. Most CVA applications have been at community level, in organised communities that already have some kind of disaster response structure as the result of earlier CDRC/N training and technical support. CVA has largely been used post-disaster, to identify appropriate approaches to rehabilitation and mitigation that will support development, but in the past few years it has been increasingly used for pre-disaster project planning in conjunction with other diagnostic tools. Its applicability to different phases in the disaster and project cycles is seen as one of its strengths. Because the Philippines is a highly disaster-prone country and many communities are exposed to recurring disasters, CDRC/N feels that the standard distinction between pre- and post-disaster phases makes little sense.

CVA and the other tools form part of CDRC/N's ongoing counter-disaster programming with communities at risk. A typical initiative at community level involves discussion of disaster issues and approaches with the community, training and analysis of hazards, capacities and vulnerabilities, leading to the development of a counter-disaster plan (sometimes also called a community development plan).

The components of the implemented plan are likely to include organising a disaster response committee to manage preparedness and mitigation measures, raising public awareness, establishing early warning systems, planning and practising evacuations, training for emergency response, and identification of a range of mitigation measures. The mitigation

undertaken may include a number of actions to reinforce existing livelihood and coping strategies (mostly through a food security and nutrition programme) such as crop and livelihood diversification, propagation of disaster-resistant crops, establishing seed banks and nurseries, production of crops with different nutritional values, improved post-harvest facilities, improved land management and sustainable agriculture, community health, village pharmacies and herb gardens, functional literacy, and collective marketing of products. CDRC/N's rehabilitation initiatives similarly involve livelihood support. They include: rebuilding houses; providing seeds, farm tools, machinery, fishing gear, working animals and livestock; rehabilitation of irrigation works, foot-bridges, trails and water supply systems; negotiation and networking; and ongoing capacity-building and advocacy.

It is significant that CDRC/N applies CVA in conjunction with three other diagnostic tools. This is principally because it feels that CVA alone cannot provide sufficient information for counter-disaster planning (see the discussion of data below). All of these methods are informed by and build upon each other.

CDRC/N points out that CVA should not necessarily be undertaken at one go because the situation in a community varies during the year and people may not have time to attend meetings and group discussions. It can therefore be spread over several months and be continued while initial disaster response measures are being implemented. In practice, however, it is applied – like the other methods used by CDRC/N – principally at the start of individual projects or project phases to provide baseline data. Data limitations (see below) also limit its use beyond individual projects and communities, to inform other partners or in advocacy. Nevertheless, the application of CVA does enable CDRC/N to take a broad view of the longer-term impact of their pre- and post-disaster interventions on vulnerabilities and capacities – which is the main purpose for which the method was designed.

### **Data and data collection**

CVA collects information to assist projects. Information is a critical element in control – over conditions and plans or programmes for addressing them. Overall, the CVA method is a robust tool for data-gathering, at least at project or community levels. Its main strengths and weaknesses in this regard are considered here, particularly insofar as they affect the range and depth of coverage of vulnerabilities, capacities and livelihoods.

### **Methods**

The participation of vulnerable people is an essential component of CVA. In Anderson and Woodrow's words, 'This is a powerful way to help them increase their understanding of their own situation, and, therefore, their capacities to effect desired change.' (Anderson and Woodrow 1998 p.21). They also argue that much of the information that agencies need is either already available or can be easily obtained from local people ('After all, local people usually already "know" what the situation is. Only the outside agency needs this information.') (Anderson and Woodrow 1998 p.45). But it is acknowledged that local people do not always have the skills for understanding and organizing what they know.

In the Philippines, participatory approaches are central to the CBDO-DR approach and hence also to CVA. CDRC/N staff do take a participatory approach to projects and are committed to working in this way. Community members take an active role in participatory data gathering. They analyze factors that generate their vulnerabilities (including searching for root causes) and identify the resources and strengths they use to deal with and respond to crises: disasters and other periods of stress.

In the Philippines, the most commonly used tools for participatory data gathering as part of CDRC/N's CVAs<sup>4</sup> include the following:

- Secondary data review to get an overview of the situation and context, covering the community, threats, hazards, policies and legislation. Information may be obtained from libraries, government offices, universities, research centres, newspapers and maps.
- Semi-structured interviews among groups and individuals to obtain both general and specific information on problems, vulnerabilities and capacities, and community perceptions, as well as to discuss counter-disaster plans.
- Historical profiling to give an insight into hazards and links to vulnerabilities, and to make people aware of changes. Methods used are group discussions, life histories, history tracing. Historical profiling can reveal, for example, trends in levels of food security, crops grown and forest cover.
- Community mapping of topography, houses, land use, hazards, elements at risk and safe areas. Maps can be made of local resources and capacities, marked to show the flow of resources into and out of a household and identify who controls resources
- Transect walks with key informants to visualise interactions between physical environment and human activities over space and time, focusing on issues like land use and tenure, environmental changes and areas vulnerable to hazards.
- Seasonal calendars identify periods of stress, hazards, disease, hunger, debt and vulnerability. They can also be used to identify what people do in these periods, how they diversify livelihood sources, when they have savings, how they cope and whether they are involved in community activities. Community members can describe all the work they do for each source of livelihood/income during the year. Different aspects of the calendar can be linked: for example, how do disasters affect sources of livelihoods, and when is the workload heaviest? Details of seasonal food intake, periods of food shortage and out-migration are also collected through such exercises.
- Livelihood/coping strategies analysis: a combination of individual household interviews and drawing diagrams that show different income or food sources. This gives an understanding of perceptions, behaviour and decisions related to livelihood strategies.
- Institutional and social network analysis is creation of a diagram showing key organisations, groups and individuals, and the nature and importance of relationships.
- Problem trees are used to identify major local problems and vulnerabilities, including the root causes and long-term effects. This is usually done through community meetings. CDRC/N stresses the importance of following the problem tree back to the root causes of vulnerability.
- Assessing the capacity of the People's Organisation<sup>5</sup> involved in the project through semi-structured interviews, SWOT analysis and planning processes.
- Direct observation to obtain a better picture and cross-check verbal information.

Most of these methods deploy or are derived from PRA techniques and therefore will probably be familiar to many NGO staff if not to the communities. Experience in the Philippines points to the importance of having a clear plan for gathering data during a CVA, covering the data to be collected, methods to be used to collect data, sources of information

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<sup>4</sup> CDRC/N's complementary approaches – HVCA, SICA and DNCA (see below) use similar techniques to gather information.

<sup>5</sup> In the Philippines, community-based organisations are commonly called People's Organisations.

or who needs to participate in analysis, the sequence of methods and schedule, allocating tasks among team members, and the process of validation or cross-checking the information.

The active participation of all community members requires time and patience, and sometimes there are obstacles or conflicts to be overcome before the CVA can start. CDRC/N's experience is that in many cases sufficient time is not available due to the rigidity of its donors' timetables and expectations.

CDRC/N uses complementary vulnerability analysis approaches to flesh out the picture gained from CVA. Hazards, Vulnerabilities and Capacities Assessment (HVCA) is undertaken as an initial stage in counter-disaster planning. HVCA is largely based on CVA though it tends to be carried out more rapidly. Its key difference is that it includes a more detailed analysis of hazards and their likely impact. Damage, Needs and Capacity Assessment (DNCA) is a needs assessment tool used immediately after disaster strikes. Social Investigation and Class Analysis (SICA) looks at a range of socio-economic conditions and relationships – basically the same issues as CVA but in political and organisational terms instead of disaster management language. The need for so many different procedures is debatable and their use does cause some confusion and duplication of effort in practice, even though they are integrated conceptually and there are signs of growing harmonisation in the methods that they use.

### **Issues**

CVA is not intended to be prescriptive where methods for data collection are concerned. This flexibility can be seen both as a strength and a weakness. Its strength is in allowing different organisations to use it in a variety of contexts according to their needs and capacities. Its weakness is that the diversity of data sources and data sets makes comparison between projects very difficult and hence limits the potential for drawing more general lessons.

Anderson and Woodrow argue against over-emphasis on data collection. Although some agencies are afraid of inadequate information, over-done data collection can be expensive, redundant, ineffective and anti-developmental. Agencies often fail to use information gathered, which is a waste of effort and expense. Information gathering sometimes becomes an end in itself, while the purpose – to promote effective programming – is forgotten. It was acknowledged when the CVA method was designed that it is difficult to know how much information is necessary at each stage of project design and implementation – and for whom (e.g. headquarters and field staff have different information needs).

CDRC/N, on the other hand, sees overlap of information not as a waste of effort but as a way of cross-checking information. For CDRC/N, CVA in application is clearly a longer-term process.<sup>6</sup> Understanding community-level situations starts with getting a general picture, followed by more detailed and focused analysis. Its guidelines are specific about the sequence in which data-gathering methods should be used. But CVA is only one of the approaches CDRC/N uses to build up community profiles through a series of 'snapshots of the community at particular moments.' (Heijmans and Victoria 2001 p.43). From a community perspective, the different approaches are integrated because people at risk make less distinction between the different phases of disaster management, and the findings of all the analyses are integrated into the counter-disaster plan.

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<sup>6</sup> In practice, however, there are some indications that it may tend to be applied on a one-off basis, without follow-up surveys.

Problems have arisen over indicators. CVA does not define indicators. It is up to each user to define these and their respective weighting. This makes sense as part of an open-minded, participatory approach but experience in the Philippines suggests that the lack of more specific guidance on appropriate indicators can cause problems for field staff who find it difficult to apply CVA as an analytical tool for identification of interventions.<sup>7</sup> Reviewing CDRC/N's experience, Heijmans and Victoria observe that 'The CVA matrix is useful as a guideline for data gathering, because it reminds you of the different aspects to look into. However, when you collect the data according to the three categories, the result is often more descriptive than analytical.' (Heijmans and Victoria 2001 p.42). There is clearly a risk that the projects that ensue from the CVA will be based on evidence that is over-subjective and too broad-based.

To help overcome this problem, CDRC/N uses a vulnerability checklist, derived and developed from earlier CVA training workshops, that makes vulnerabilities 'more concrete' (Appendix 1). This is helpful but it could go much further in helping to specify indicators of the characteristics identified.

The CVA matrix is structured in such a way that it is easy to remember what sort of data to collect. It is comprehensive and covers the important variables in a community. It gives equal consideration to different aspects of capacity and vulnerability. This approach is clearly advantageous in terms of ensuring that all relevant data are collected. Analysis of vulnerabilities and capacities, however, requires some kind of weighting of these different factors. CVA as generally practised in the Philippines does not weigh the many different aspects of vulnerability, which are not all equal in their nature or consequences.

Other issues concern cause-effect linkages and coverage of hazards. Cause-effect relationships of vulnerabilities are specifically covered in the original CVA method and by CDRC/N's methodological toolbox but do not appear in CVA matrices presented in the Philippines and this makes it difficult to use the matrix for analysing the root causes of vulnerability. Regarding hazards, CVA and even HVCA as applied do not relate capacities and vulnerabilities well to the many different kinds of hazard facing Filipino communities. With staff not often having sufficient expertise in hazard and risk to fill this gap, there is the possibility that some hazards' significance will be underestimated.

Appendix 2 – an example of a typical CVA – demonstrates some of the above problems.

Because of these limitations, CDRC/N members find it difficult use to CVA to identify appropriate interventions systematically. It can identify individual vulnerabilities that can be addressed immediately and those that take more time, 'but a thorough analysis is seldom made. Its use is limited to counter-check selected interventions' for their effects on people's capacities and vulnerabilities (Heijmans and Victoria 2001 p.42). Interventions such as advocacy, raising public awareness in general and even specific disaster-related training are seldom identified when using a CVA. Bellers (2000) found that the detail and accuracy of risk measurement provided by CVA and the other assessment methods used by CDRC/N was sparse: it was only when subsequent sectional plans were developed that more details on levels of comparative risk and need were articulated.

Lack of guidance and consistency in the use of indicators means that CVA 'still does not offer a systematic way of analysing vulnerabilities with community members' (Heijmans and

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<sup>7</sup> The IRDP case studies published in Anderson and Woodrow [1989]1998 do not discuss the selection and value of different indicators.

Victoria 2001 p.42). Community profiles are compiled and updated in different ways by different users. The type, accuracy and amount of information gathered and the depth of analysis varies widely according to requirements and the skills of the field workers involved. A lot of subjective judgement is used in completing CVAs. Those applying the methods at community level often don't understand what is required of them or why the tools are being used. Project workers do not have detailed guidelines showing how CVA (and HVCA) matrices should be filled in although it is questionable how far this would help in practice, since the approach as it stands is considered time consuming and difficult by some CDRN members. There is a recognised need for better analysis of information being generated.

### **Coverage of vulnerabilities and capacities**

The CVA method is designed to cover all dimensions of vulnerability, including interactions between the different factors. Its designers were well aware that vulnerabilities often reflect large and deep-seated problems.

The 11 published IRDP case studies show variations according to the nature of the project and the data available, but viewed as a whole they show that CVA is capable of addressing vulnerability and capacity in breadth (they address physical, economic, social and political aspects) and depth (they address unsafe conditions, dynamic pressures and – though to a lesser extent – root causes). Changes over time – that is, the project period – are also addressed.

The CBDO-DR approach in the Philippines is based on the perception that disasters are primarily a question of vulnerability. One of its four stated purposes is to identify immediate and root causes of vulnerability and some of the methods used, such as problem trees, are designed to pick up root causes. In practice, as we have seen above, the field of application of CVA and related tools is largely at community level, and there are weaknesses in the data collection methods involved and the data collected. As a result, the view of vulnerability tends to be limited to identification of elements at risk and the immediate reasons for this.

Those who designed CVA were aware that at times of disaster it is vulnerabilities that are most obvious but capacities assessment is critical for designing projects that have clear developmental impact. Placing capacities before vulnerabilities in the name CVA was a way of emphasising this point. The CVA method is intended to cover the full range of capacities and their interrelationships.

The IRDP case studies showed that when agencies act in a hurry they focus entirely on victims' needs and problems, and fail to note capacities. This is especially true where an NGO assumes all responsibilities for managing relief. They also found agency staff's respect for local capacities to be a far more important determinant of the developmental impact of relief projects than any other staff qualifications (including previous disaster experience). Projects with local staff were more effective developmentally, but these local staff had to respect local capacities, otherwise they were no better than anyone else with the same attitude. The practice of CVA and the insights it brought were found to have improved the capacity of both local and external staff.

The IRDP case studies – again, taken as a whole – showed CVA can address the full range of capacities: physical, economic, social and political (although it is notable that the political factors identified tended to be institutional linkages with local actors rather than higher-level politics). Changes over time were identified. So too were indigenous knowledge and coping strategies.

In the Philippines, investigation of capacities follows the same issues as that of vulnerabilities, looked at in a more positive light. The data collection issues already mentioned therefore apply here too. There seems to be a similar local-level focus, with community members being asked to identify the resources and strengths (including coping strategies) they use to deal with and respond to disasters and other periods of stress; in fact, the method appears to be sensitive to these issues. Issues of community organisation and cohesiveness also appear to feature well.

### **Coverage of livelihoods**

The CVA method set out in *Rising from the Ashes* provides a good all-round coverage of livelihood issues: assets, coping strategies and changes over time. Although not addressed *per se*, the different dimensions of livelihoods marked out in modern livelihoods frameworks fall under the CVA headings of physical, social, attitudinal capacities and vulnerabilities; the model is broad and flexible enough to accommodate this. The trainers' manual produced to promote the method gives further indication that the CVA method was expected to look at livelihood assets, strategies and transforming structures and processes. This is borne out in the published IRDP case studies, which show the same range of coverage although understanding of transforming structures and processes is stronger where local forces are concerned.

In the Philippines it has been found that the process of making CVA categories and factors more concrete leads to more specific detailing of all major livelihood factors. Most of the participatory tools used by CDRC/N and described above can shed light on some aspects of livelihoods and some are designed specifically to identify livelihood strategies and changes over time. However, in the light of the challenges in collecting and analysing data that have already been outlined, one must question how far the CVA permits extensive or detailed examination of livelihoods issues in practice.

### **Conclusions**

CVA is a versatile and effective method capable of covering vulnerabilities, capacities and livelihoods issues extensively. It is fairly easy to grasp at a broad conceptual level but can be less easy to apply in practice. Needing to balance the sometimes competing demands of furthering understanding and taking action, NGOs and communities do find it a challenge to provide information in sufficient quantity and of sufficient quality to permit serious analysis. Greater investment in staff training in the concepts and their practical applications is clearly needed, but in many NGOs operational and funding pressures combine to restrict skills training of this kind.

CVA is arguably most usefully applied at local level, which inevitably limits its potential for assessing some of the broader and deeper aspects of capacities, vulnerabilities and livelihoods. The great divergence between individual CVAs hinders comparative studies that could build up a bigger contextual picture and the very flexibility of the method can sometimes be its undoing, as the difficulties over indicators reveal.

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## Appendix 1: Checklists for vulnerabilities and capacities

<i>Physical/material vulnerability</i>		<i>Social/organisational vulnerability</i>		<i>Motivational/attitudinal vulnerability</i>	
CVA training workshops *	CDRC/N	CVA training workshops	CDRC/N	CVA training workshops	CDRC/N
<p>Economic activities: means of livelihood, productive and other skills.</p> <p>land, water, animals, capital, other means of production (access and control).</p> <p>Infrastructure and services: roads, health facilities, schools, electricity, communications, housing, etc.</p> <p>Human capital: population, mortality, diseases, nutritional status, literacy, numeracy, poverty levels.</p> <p>Environmental factors: forest cover, soil quality, erosion.</p>	<p>disaster-prone location of community</p> <p>insecure sources of livelihood</p> <p>risky sources of livelihood</p> <p>lack of access and control over means of production (land, farm inputs, animals, capital etc)</p> <p>dependent on money-lenders etc</p> <p>inadequate economic fall-back mechanisms</p> <p>occurrence of acute or chronic food shortage</p> <p>lack of adequate skills and educational background</p>	<p>family structures (weak/strong)</p> <p>leadership qualities and structures</p> <p>decision-making structures (who is left out, who is in, effectiveness)</p> <p>participation levels</p> <p>divisions and conflicts: ethnic, class, caste, religion, ideology, political groups, language groups and structures for mediating conflicts</p> <p>degree of justice, equality; access to political process</p> <p>community</p>	<p>weak family/kinship structures</p> <p>lack of leadership, initiative, organisational structure to solve problems or conflicts</p> <p>ineffective decision-making, people/groups left out</p> <p>unequal participation in community affairs</p> <p>rumours, divisions, conflicts (ethnic, class, caste, religion, gender, ideology, etc.)</p> <p>injustice, lack of access to political processes</p> <p>absence of or weak</p>	<p>attitude towards change</p> <p>sense of ability to affect their world, environment, get things done</p> <p>initiative</p> <p>faith, determination, fighting spirit</p> <p>religious beliefs, ideology</p> <p>fatalism, hopelessness, despondency, discouragement</p> <p>dependent/independent (self-reliant)</p> <p>consciousness, awareness</p>	<p>negative attitude towards change</p> <p>passivity, fatalism, hopelessness, dependent</p> <p>lack of initiative; no fighting spirit</p> <p>lack of unity, cooperation, solidarity</p> <p>negative beliefs/ideologies</p> <p>lack of awareness about hazards and their consequences</p> <p>dependence on external support/dole-out mentality</p>

<p>natural hazards: drought, flood, earthquake, cyclone, etc. and systems for coping with them (or lack thereof).</p>	<p>lack of basic services (education, health, safe drinking water, shelter, sanitation, roads, electricity, communication etc)</p> <p>high mortality rate, malnutrition, occurrence of diseases, insufficient caring capacity</p> <p>over-exploited natural resources</p> <p>exposed to violence (domestic, community conflicts, or war)</p>	<p>organisations: formal, informal, traditional, governmental, progressive</p> <p>relationship to government, administrative structures</p> <p>isolation or connectedness</p>	<p>community organisations (formal, informal, government, indigenous)</p> <p>no or neglected relationship with government, administrative structures</p> <p>isolated from outside world</p>	<p>cohesiveness, unity, solidarity, co-operation</p> <p>orientation towards past, present, future</p>	
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\* In subsequent workshops to present the CVA method, Anderson and Woodrow exemplified features of the three main categories to give trainees guidance on how to fill in the matrix. This presented the features in a slightly different way using some terms that are part of or closer to those used in livelihoods analysis. Heijmans and Victoria 2001: 115

Source: Heijmans and Victoria 2001: 40, 115.

## Appendix 2

### Example of CVA used as a tool to identify rehabilitation activities in Sagada, Mountain Province, 1992 (area prone to earthquakes and typhoons).

Aspect	Vulnerabilities	Capacities
Material/physical	<p>Area is prone to typhoons and earthquakes, causing landslides, damaging irrigation canals and intakes.</p> <p>Earthquakes cause shift in water sources affecting drinking water supply and irrigation facilities.</p> <p>Climate conditions permit only one rice crop; farming is highly dependent on irrigation.</p> <p>Fast growing population, which causes pressure on natural resources.</p>	<p>Indigenous engineering/ construction skills to build and repair water works</p> <p>Construction materials which are locally available.</p> <p>Employable skills other than farming (mining, weaving).</p> <p>Availability of new water sources to be tapped for potable water and irrigation.</p> <p>Traditional labour system to synchronise farm activities to avoid pests.</p>
Social/organisational	<p>Due to militarisation many members of the People's Organisation (PO)** became inactive, although now the PO is recovering again.</p>	<p>Presence of indigenous <i>dap-ay</i> system to mobilise villagers to take action and to guarantee sustainability of the projects.</p> <p>Presence of active PO (ASUP) linked to <i>dap-ay</i> system.</p> <p>Presence of traditional women and youth organisations.</p> <p>PO is assisting non-members as well.</p>
Motivational/Attitudinal	<p>Due to growing population, farming cannot provide for all needs any more. More young people leave the area for a better livelihood.</p>	<p>People fight against plans they do not like (Chico Dam, mining and logging concessions).</p> <p>Positive attitude towards involvement of women in community decision making.</p> <p>High awareness of regional issues.</p> <p>High motivation for projects which benefit whole community, regardless of PO membership.</p>

\*\* The term commonly used in the Philippines for a community-based or grass-roots organisation.

Source: Heijmans and Victoria 2001: 41