

# **Community and Local Level Disaster Risk Management: Considerations as Regards Relations with Poverty Alleviation.**

## **A Contribution to the 2009 ISDR Global Assessment Report on Disaster Risk Reduction.**

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### **1. Introduction.**

Poverty is one of the most urgent problems faced by governments and society in general at the beginning of the 21st century. According to World Bank data near to 2.7 billion people, nearly 40% of the world's population, live on less than two dollars a day. Since the end of the 1990s poverty reduction has become a major issue for the majority of international and governmental development agencies and the subject of numerous policy documents and programming initiatives.

Disasters, associated with numerous different types of hazard, have constantly increased over the last 40 years with ever growing negative impacts on humans and their livelihoods. Particularly fast growth in economic losses is associated with hydro-meteorological events, particularly over the last ten years. On going climate change is seen by some to have contributed to increases in the recent past, whilst new climate change in the future is deemed to bring about even greater losses as climate extremes are projected to increase. The majority of disasters are small or medium scale, many times affecting the same areas on a recurrent basis, signifying a constant erosion of development opportunities over short periods of time. Large scale, one off, long return period events have a severe immediate impact that is recovered from over varying periods of time.

Clear evidence exists that smaller scale events along with the larger, more temporally and spatially dispersed disasters, contribute significantly to the maintenance of, or increase in poverty levels. At the same time, poverty is seen to contribute to the growth in disaster risk conditions, especially where poverty leads to environmental degradation, occupation of unsafe sites, the use of inadequate building techniques and the development of environmentally inadequate or non resilient livelihood options. Moreover, being poor may mean in many instances marginalisation or exclusion from social protection mechanisms, including risk reduction instruments.

Amongst the strategies most favoured for dealing with the disaster risk problematic, Community (CBDRM) and Local Level (LLDRM) based approaches have been increasingly promoted over the last fifteen years, taking up and developing ideas and notions, guidelines and parameters first postulated during the 1980s (see, for example, Maskrey, 1988; Wilches-Chaux, 1988). Over the last two decades there has been an increasing demand and pressure to relate such local schemes to the aims of development

and poverty alleviation. This is commensurate with the move from a vision of disaster risk reduction aimed principally at reducing disaster loss and damage to one where the reduction of the root causes of disaster are confronted in a more decided manner. Despite the fact that a clear relationship between such schemes and poverty reduction or control can be assumed, very little comprehensive analysis has been undertaken to examine the real nature of the relationship or non relationship, the strategies, conditions, and factors that support this or work against it. The present document intends to provide a preliminary analysis of some of the more salient aspects of the disaster risk reduction-poverty alleviation links and the role local and community level risk management can and do play in this

This document is structured in the following manner.

In a first section we outline the objectives pursued and provide a view of the method and reach of our analysis.

A second section briefly defines poverty and summarises the causal factors that come into play in explaining this pervasive human condition.

The third section briefly reviews the ways in which the risk reduction-poverty alleviation relation or debate is taken up on in relevant official international and governmental agency literature and in local and community level risk reduction training manuals prepared by disaster risk related organizations. The intention here is to provide an overview of the policy framework and methodological arena which may affect the ways individual projects are designed and developed.

In a fourth section, we will exhaustively define the community and local level risk management approaches, considering their major defining characteristics and parameters and the principle approaches to and types of intervention promoted.

In a fourth section a summary of types of risk reduction intervention is provided and a series of expected relations established between these and poverty alleviation goals. This follows an autonomously generated classification of types of intervention and their poverty impacts and also takes up on the five strategic areas for intervention established in the Hyogo framework of action

In a final section we will draw some preliminary conclusions and provide some recommendations as to the needed steps or conditions for strengthening the risk and poverty reduction link.

Case study examples or lessons will be referred to throughout the different sections in order to illustrate or confirm ideas and hypotheses established therein on the risk reduction-poverty reduction links.

## **2. Objectives and Method.**

### **2.1 Objectives:**

The objectives of the present document are:

- To take stock of different kinds of processes, initiatives and projects that can lead to a more definitive understanding of the links between disaster risk reduction and poverty alleviation strategies across regions and in rural and urban settings. On a continuum scale of simple to complex strategies, the review will consider a representative sample of corrective (dealing with existing risk) and prospective (anticipating future risk) risk management schemes. An attempt will be made to identify the efficacy of certain approaches as compared with others.
- To consider the risk reduction implications of poverty alleviation programmes and the poverty alleviation implications of disaster risk management programmes where such final goals are not made explicit in the programme objectives. Evidence from this analysis will provide a case for the integration of risk management and poverty alleviation schemes at the local and community levels.
- To examine how the policy and institutional strategic frameworks frame the discourse for risk reduction and poverty alleviation goals through specific projects, programmes and activities on the ground, thus providing evidence for focussed efforts on further integration of risk management and poverty reduction goals in policy and strategic frameworks.

### **2.2 The Methodological Challenge of Analysing the Relations between Local and Community Based Risk Management and Poverty Alleviation Concerns,**

From our ensuing discussion it will be easily appreciated that an exhaustive analysis of the links between LLDRM, CBDRM and poverty alleviation, cutting across continents and the urban –rural divide, is a daunting if not impossible task to accomplish with the time (25 days) and space (30 pages) limitations of the present analysis.

The complex diversity of aspects relating to disaster risk management itself (goals, approaches, instruments etc), the distinction between and complexities of LLDRM and CBDRM, and the range of factors and conditions that must be taken into account in understanding and reducing poverty belie any attempt at a conclusive and comprehensive analysis. Due to this we have opted for a generic, selective approach that builds on a thoroughly well developed definitional, conceptual and contextual framework and uses evidence from a select range of representative experiences, without getting into exhaustive detail. The results are more generic and general than detailed and specific; more suggestive than conclusive; and more indicative of the need for further analysis than determinant and final.

Within the wide range of possible relations that could be examined, three will be of particular importance throughout the analysis.

The **first** is in relation to the ways processes and projects deal with the poverty-risk dimensions. Here a basic division can be made between: a) schemes that take as a point of departure the fact that disasters erode development opportunities and may increase or generate new poverty conditions, and thus attempt to attack the poverty-disaster relation reducing existing conditions that lead to disaster; b) schemes that are based on the idea of reducing the “root” or underlying causes of disaster risk itself, via development inspired actions that increase welfare, incomes, social organization levels and efficacy and the development of more resistant and resilient livelihoods. That is to say, the basis of these interventions is development not disaster risk and disaster risk is anticipated by development inspired actions. Overall, schemes could mix such approaches and hybrid versions will be found.

The **second** relates to the differential impact on the poverty-risk relationship that accrues to interventions guided by the principles of what we have called “local or community level risk management” as opposed to “risk management at the community or local level”. The first refers to processes and projects that are basically controlled, appropriated and sustained by local actors and organizations, and the second refers to those that are promoted and controlled by external actors, even though local participation is encouraged and fomented.

The **third** relates to the principle type of activity promoted by local and community based processes (which affect hazards, exposure and vulnerability) and their differential impact on poverty. This approach can be considered in the light of, or combined with the goals of the 5 strategic objectives of the Hyogo Framework of Action-governance factors, risk analysis, monitoring and early warning, research and education for developing a prevention culture, intervention in underlying root causes of risk and preparedness and response activities. The central question here relates to the types of action that predominate in local and community based schemes today and their relevance for risk reduction and poverty alleviation.

## **2.2. Information sources**

The present analysis has been undertaken in a period of one calendar month. Given this time limitation, only internet and personal contact based access to information has been possible, from Asia, Africa and Latin America. No opportunity for follow up or detailing of these information sources has been possible.

A list of the background documents that were consulted is provided in annex 1. A non exhaustive list of local and community based schemes identified is provided in annexes 2 and 3. These well illustrate, through their titles, the great diversity of approaches and content of local or community based interventions. Annex 2 projects were the more considered for the analysis undertaken

A good part of this case study information is taken from one of the following sources. Firstly, the Global Network of NGOs for DRR, ISDR sponsored compilations of Good Practice in linking DRR and Poverty Reduction (2008) and Good Practice for Resilience (2007); Secondly, the E.U. supported 2008 PREDECAN (Disaster Prevention in Andean

Countries) selection of best cases of local level intervention in the Andean countries; Thirdly, UNDP promoted and systematized projects in Asia, Africa and Latin America (see Pluut, 2005) and, lastly, E.U. DIPECHO promoted projects, with particular reference to Central American interventions. PROVENTION systematization of community level vulnerability and capacities analysis will also be referred to as a common source of information on vulnerability and capacities analysis.

It is not our intention, nor is it possible in the time and space framework to be exhaustive in analysis and quotation, summarizing from all identified experiences of local and community level interventions. Rather we will restrict our use of materials to a very limited number of cases that illustrate the generic points we make and also attempt to emit some sort of evaluation of how prevalent the type of intervention is in general. In our selection, although obviously we have attempted to choose representative cases, this involves no value judgement as to the optimum nature of the case as compared to other non quoted projects of a similar type. In text where reference is made to a project we will only mention aims, place and at times the organization that promotes the scheme. Case study materials in Annex 2 are ordered according to country and identification of the project referred to can easily be deduced from information in that annex.

### **3. Poverty and Poverty Alleviation: the Independent and Dependent Variable.**

In order to examine the relations between interventions promoted by local and community based scheme and poverty alleviation or prevention it is indispensable to first establish a minimum definition of poverty and provide a minimum understanding of the range of causal poverty factors on which disaster risk reduction could operate.

In order to maintain a homogenous approach to definition in the framework of the overall ISDR project report we have opted to use the discussion and definition provided in the draft version of the report's first chapter. This goes as follows:

*“In general terms an individual, household or community is said to be poor when it falls short of a level of welfare deemed to constitute a reasonable minimum, either in some absolute sense or by the standards of a specific society.<sup>1</sup> Poverty can be measured in both absolute and relative terms. Absolute poverty, for example, could be expressed as the proportion of the population eating less calories than is required to sustain health, or as used by the World Bank in terms of the percentage of the population with consumption levels of less than US \$2 per day. Relative poverty views poverty as socially defined in terms of falling below a level of consumption and welfare considered to be a reasonable minimum in a given society and which is commonly referred to as the poverty line.*

*Whether expressed in absolute or relative terms, income or consumption poverty refers to situations where a lack of assets, income, endowments and capital means that people are unable to satisfy minimum consumption needs which in turn are measured with respect to minimum required expenditures on food, housing, health, education, energy and transport*

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<sup>1</sup> Lipton, Michael and Ravaillon, Martin, 1995, *Poverty and Policy* in Behrman and Srinivasan (Eds) *Handbook of Development Economics*, Vol. IIIB Amsterdam, Elsevier.

*etc. It can be assessed in terms of its breadth, which is commonly understood as the proportion of a given population falling below what is considered minimum consumption, in terms of its depth, commonly understood in terms of the distance below the poverty line at which different groups of households find themselves, or in terms of its duration, which distinguishes between the transitory poor (those who temporarily move in and out of poverty) and the chronically poor (those who are permanently below the poverty line).*

*.....the term economic poverty (is) used generically to refer to income or consumption poverty. Economic poverty however, only expresses one dimension of what is normally a much broader picture. Poverty has many manifestations but is rarely restricted to economic poverty, where people are unable to satisfy their minimum consumption needs. With enormous variations from context to context, economic poverty is usually accompanied by any number and combination of other attributes. Poverty can also be expressed in terms of a wider set of basic needs, in which case lack of access to health, education and other services become attributes of poverty. Beyond basic needs a lack of capacities,, powerlessness and isolation, gender relations, social exclusion, illiteracy, poor sanitation, livelihood unsustainability, poor health and discrimination have all emerged as attributes of poverty in different contexts. The World Bank<sup>2</sup> documented a range of attributes which poor people identify as part of poverty. These include: precarious livelihoods; excluded locations; physical limitations; gender relationships; problems in social relationships; lack of security; abuse by those in power; disempowering institutions; limited capabilities and weak community organizations. Similar lists of attributes have been developed to describe well-being, human development and other concepts which expand the concept of poverty beyond economic poverty and into the social domain. .... The key point is that poverty is not just economic but has a wide range of other attributes in the social domain.*

*Insecurity and vulnerability have now long been recognised as important poverty attributes. The (Copenhagen) World Summit for Social Development mentioned unsafe environment as a poverty attribute and explicitly stressed that people living in poverty are particularly vulnerable to the consequences of disasters and conflicts. Recent reports, such as the 2008 WESS and the 2007 HDR have stressed how poverty is increasingly characterised by multiple insecurities: to natural hazards, to climate change, to economic shocks, to conflict and to food and energy insecurity”.*

Seen from the angle of the suggested causes of poverty and deprivation which, in principle, disaster risk management instruments and approaches may contribute to alleviate or prevent, a non exhaustive list would include: environmental degradation including erosion, desertification, deforestation and climate change; lack of geographical resources, drought and water crisis; unemployment and income deficit, capital flight, introduction of bio-fuels; unequal distribution and difficulty of access to land; limits to private property and titles; poor health access and care, disease, clinical depression, substance abuse; governance limitations, including lack of democracy, lack of rule of law, abuse by those in power, lack of security, disempowering institutions, weak community organization, lack of access to

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<sup>2</sup> World Bank, Voices of the Poor

infrastructure, educational deficiency, crime, religion; overpopulation and demographic imbalance due to selective death of males.

#### **4. Agency Approaches to the Disaster Risk Reduction-Poverty Alleviation Relations: An Overview.**

The disaster risk reduction management process and its local and community based components are subject to elaboration and instrumentation following the objectives, visions and ideologies of the particular organizations and institutions that promote it. Nowadays, these types of organization are numerous and come from numerous different backgrounds, including the humanitarian, environmental and natural resource fields, through to the more integral sectoral and territorial development areas.

Amongst the more prevalent or conspicuous international organizations and agencies that implement or support local level initiatives the following are particularly well known:

**International and Government Agencies:** the Caribbean Disaster and Emergency Response Agency –CDERA-; the Central American Coordinating Agency for Natural Disaster Prevention –CEPREDENAC-; the PREDECAN-CAPRADE programme for support to Disaster Risk Reduction in the Andean counties; the EU-DIPECHO programme world-wide; the International Federation of Red Cross and Red Crescent Societies –IFRC-; USAID/OFDA; GTZ, DFID, COSUDE and the Spanish Agency for Development Cooperation-AECID-; the Asian Disaster Preparedness Centre -ADPC-, the Asian Disaster Reduction Centre –ADRC- and the International Institution for Disaster Risk Management –IIDRM-.

**International NGOs and Civil Society Networks:** OXFAM; CARE, World Vision; Tear Fund; CARITAS; German AgroAction; Action Aid; Action against Hunger; Christian Aid; Mercy Corps; Practical Solutions-ITDG; CORDAID, Catholic Relief Services; CISP-Italy; OIKOS; Trocaire; Goal; the Latin American Network for the Social Study of Disaster Prevention- La Red; Peri-Peri – Southern Africa; and Duryog Nivaram-SE Asia.

At the national level the organizations involved in this type of work are impossible to list here due to their numbers, but must reach into the hundreds if not thousands, worldwide. Such organizations will many times become the local project partners of the larger international organizations.

Many of these larger organizations generate and manage their own finance. Others rely more on subventions from international and government aid and development agencies. Some develop their own intervention methodologies and frameworks. Others adopt or adapt those produced by specialised agencies or follow precepts developed by them. As may well be expected, the form and priority given to relations such as that between poverty alleviation and disaster risk management will vary enormously. Part of this variability we hope to highlight further on in this report, when using examples from individual projects and schemes to substantiate generic affirmations or conclusions.

In the present section an attempt is made to summarily and selectively review and comment the ways in which the poverty-risk interface and the needs to confront it are dealt with in government policy frameworks and in the methodological guidelines produced by a number of influential disaster risk management promotion agencies. Given that the governmental agencies that produce policy papers do in fact finance independent risk management and development organizations, and those developing methodologies influence ongoing practice, both may in fact colour or influence overall development in the topic.

Both disaster risk and poverty reduction have been the objective of policy papers and statements from a range of government and international agencies over the last few years (see, for example, DFID, 1997; UNESCO, 2002; Bonfiglioli, 2003; BMZ, 2004; JICA, 2006). In general where one or the other of these refers to the complimentary theme this is done in a very generic and general way with no major breaking down of the topic or specification of particular relations and intervention needs in order to remedy existing situations. It is in fact more probable that disaster risk reduction policy statements talk of poverty than the other way around. Such a conclusion can also be arrived at for policy statements developed around complimentary relevant themes for risk reduction (and poverty alleviation) such as environmental and natural resource interventions, where almost no mention can be found on disaster risk and disaster risk management although both topics are obviously important. Poverty is more thoroughly treated in such documents and in fact may be the starting point for discussion. (see DFID et al, 2002; Treue and Nathan, 2007). In the case of environmental and natural resource management, the somewhat generalized notion that disaster risk reduction is essentially about **vulnerability** reduction ( few talk about the reduction of socio-natural , technological and even natural hazard reduction or reduction in exposure as being essential aspects of the problem) possibly does not help in stimulating greater participation and consideration on the part of environmental and natural resource policy makers.

From this general statement it is possible to reach a first major conclusion or hypothesis. Evidence would suggest that the links between the topics of risk and poverty reduction at the government policy level are not strong, even if alludes to. A preliminary revision of the specialized literature relating to poverty and to disaster risk reduction, taken as separate themes, reveals, in general, an almost complete lack of cross referring to literature from specialists in the other theme. This type of omission or specialization also occurs when one revises literature relating to what has been called social risk management, including asset based approaches (see Siegel and Alwag, 1999,) which has occupied itself with the topic of social risk in general and where the disaster risk topic is generally mentioned as one factor but little detail is afforded and almost no specialised literature mentioned, and, also, where the links between chronic (poverty related) and disaster risk are rarely highlighted

This thematic specialization and lack of cross referencing suggests that the educational process promoting integration of common themes and the ability to think holistically are extremely limited. Disaster risk specialists in fact, in general, know little about poverty and its complexities and the reverse is probably even truer. The result is that while recognition is made that the other topic is “relevant” and “obviously” linked, lack of detailed knowledge and arguments as to the real constitution of the problem makes for the inclusion of general statements and notions as opposed to the provision of more detailed



programming bases for joint, complimentary intervention. Relevance can only be established where a detailed understanding of the complexities of complimentary topics is available and knowledge of interrelationships is detailed. A perusal of many risk management initiatives that mention and pretend to intervene in the poverty reduction field, limit their considerations to the notion of economic poverty. The other diverse defining aspects of poverty will rarely be considered or mentioned.

Over the last five years, complimentary to the production of policy statements on the poverty, disaster risk, environmental or natural resource themes as such, a number of agencies have in fact produced policy statements on the disaster reduction-poverty reduction link (see GTZ, 2005; DFID, 2006). Such documents have been produced by the disaster risk sections of the relevant agencies, but there are no examples we can find of specific policy statements on DRR coming from the poverty side. These DRR-poverty policy statements although clearly establishing the links between the themes and the need for joint action whereby disaster risk programmes take deliberate note of poverty implications and vice versa, the level of debate and discourse is still at a very general level. That is to say, the relationship between both is established at a high level of abstraction but the specifics of the relationship and what this signifies in terms of types of intervention is not at all well developed. Such detail could be seen to not be of relevance for policy statements as such. However, neither is it possible to find methodological documents deriving from such policy statements that detail the ways of programming and relating one topic to another. It is perhaps due to the now pervading incidence of the sustainable livelihoods framework promoted by DIFID that the most agile mechanism for linking the two topics exists, given its emphasis on a range of factors that accrue to poverty and risk at the same time.

Once more one comes back to the fact that poverty is an extremely diverse and complex situation and without specialised knowledge it is difficult to get to details such as to be able to fully think through and make concrete the ways the two themes can mutually support each other. The GTZ, 2005, statement does in fact support such a conclusion and points out that restricted advances in linking the two themes may in part be explained by the existence of doubts as to the benefits to be gained from linking; the complexity of the relations between disaster risk and poverty; and insufficient knowledge as to options and advantages.

The second macro level aspect which could be expected to influence the ways community and local level risk management (and risk management in general) is put on the ground relates to the production of methodologies for LLDRM and CBDRM. Here, there have been numerous attempts to develop such methodologies, dating back to LA RED in Latin America between 1997 and 1998 ( see Wilches-Chaux, 1997; Zilberth, 1998). Again, if one analyses a sample of some of the more important publications produced for external or internal agency consumption, little explicit attention is given in general to the risk –poverty interface. Reference to the relationship will be made, many times couched in the sustainable development argument, but in none of the documents consulted is the topic detailed, broken down and methods for developing it made explicit (see, for example, Zilberth, 1998; Abarquez and Murshed (ADPC), 2004; Christian Aid, 2007; Davis and

Murshed, 2006; Foro Ciudades para la Vida, 2002; Lavell et al, 2004; IFRC, n.d.; ISDR, 2006; ITDG, 2004; Venton and Hansford, 2006).

The overall conclusion from the inevitably brief analysis presented here, based on a possible non representative selection of written materials, is that at the policy and methodological level the theme of disaster risk and poverty reduction is present but the level of development achieved in the arguments and details is clearly ephemeral and insufficient to clearly support and guide intervention. In general, therefore, one would tend to conclude that the experiences gained in this area will depend more on individual agency or organization decisions, philosophy, method and goals than on any guiding influence from financing and methodological development agencies. Such philosophies, concepts and goals are clearly subject to the flow of the topic as developed today internationally such that an osmosis effect clearly works whereby the move from strictly disaster based, “disaster reduction” interventions in favour of development based interventions is clear

## **5. Community and Local level Disaster Risk Management: the Defining Structural and Instrumental Elements.**

### **5.1. Community Based (CBDRM) and Local Level (LLDRM) Disaster Risk Management: Definition, Differences and Scope.**

CBDRM and LLDRM refer to risk and disaster management processes and procedures promoted at sub national/sub regional levels. The primary objective of both is the reduction, prevision and control of disaster risk factors and levels within the spatial confines of the jurisdiction considered and the identification of, and influence over risk generating processes from outside of those jurisdictions.

As regards the scale and goals of intervention, CBDRM and LLDRM processes and projects are not restricted to aspects relating to small and medium scale, recurrent events—the central objective of research with the present ISDR promoted project. Areas affected by small and medium scale disasters are generally also affected by large scale, intermittent events. And, in fact, experience with smaller scale events can be seen to be a “training ground” for dealing with future exceptional, larger scale events and also for identifying hazard and vulnerability contexts that should be resolved whether future events are large or small. The stitch in time saves nine principle works here. Furthermore, it is now a well known precept that large scale, large area disasters are in fact in many ways best depicted or analyzed as a multiplicity of small scale local disasters, where damage and loss are defined and determined according to the particular interaction of local hazard, exposure and vulnerability factors, under the stress associated with a single large scale physical event. The use of local knowledge, practice, participation etc is equally relevant in the case of disaster risk reduction relating to large or small scale events.

Local, as opposed to strictly community based approaches have possibly been most developed and discussed in Latin America, as opposed to Africa and Asia. At times they have erroneously, but maybe understandably, been taken to be synonymous (see Bolin, 2003). Notwithstanding, one way or another LLRDM is partially constructed on the basis

of community level processes and interventions, whilst community based schemes require support and input from the more comprehensive local ( and regional and national levels). Relating this distinction to the poverty alleviation scene, an inevitable question arises as to the pertinence and efficiency of efforts taken at a strictly community level as opposed to the local ( or even sub national and national levels ) in affecting poverty and its causal factors.

Community based management has been broadly defined as “ *the process of disaster risk management in which communities at risk are actively engaged in the identification, analysis, treatment, monitoring, and evaluation of disaster risks in order to reduce their vulnerabilities and enhance their capacities. This means that people are at the centre of decision making and implementation. The involvement of the most vulnerable is paramount and the support of the least vulnerable necessary. Local and national government are involved and supportive*” (Abarquez and Murshed, ADPC, 2004).

Local level risk management also involves communities, but the spatial frame of reference is of a higher scale of resolution and the nature and number of involved and relevant social actors is greater, including municipal and district level authorities, private sector interests and civil society community based groups. In general, there has been a restrictive tendency to associate the local level with the municipality or district level given their importance for local government, and in the sponsoring of collaboration and conflict resolution amongst different population groups and sectors from civil and political society. However, in principle, municipality is not an exclusive definition of the local level and this level can and has been used to refer to sub municipal jurisdictions, defined in economic, social or even political terms. Sub divisions of river basins and municipal federations have also been delimited as being equivalent to “local”. Local always refers to something that is more extensive than a community or area and smaller than a region or zone. But, no matter what the final spatial delimitation, the role of local government in local level management is and should always be important as a mediator and arbitrator of different interests and as a key factor in local development, environmental, territorial planning and sectoral planning procedures-it is in this “political and planning “role that part of the relevance for risk and poverty reduction may be seen. This function is not so easily perceived or implemented at community levels.

Given the larger social and territorial scale accounted for by local jurisdictions, the range of aspects—economic, infrastructural, social, political, cultural etc that may be taken directly into account is greater than at the more restricted and tightly knit community level (the nature of social conflict and resolution is commensurately very different at these two levels). As with community based schemes and processes, higher level spatial jurisdictions and actors ( regional, national) will and should collaborate in the achievement of goals at the local levels, given that neither community nor locality are structurally, politically or functionally autonomous, nor control the resources necessary to achieve all established objectives. The fact that risk (and poverty) is generated in non community and local spaces means that dealing with it inevitably many times needs collaboration with external actors.

This type of extra local collaboration and negotiation has been attempted in the Lower Lempa Valley risk reduction project promoted by the Ministry of Environment and Natural Resources in El Salvador, through a local development committee that can negotiate with

upper valley actors and others nationwide; and with an inter-municipal scheme for risk management in the framework of local development instituted in the area of Ayabaca, Peru where the interlinking of common problems demands collaboration and coordination with regards to natural resource management, infrastructure provision etc. Many years ago, Maskrey (1988) established that politically articulated demands from the local level were more likely to have impact at the regional or national levels where highly participative and locally appropriated schemes were present.

Despite the ever needed collaboration with external actors, in both the case of community and local based processes, one defining aspect of these is “ownership” by the relevant community and local actors and the “subordinate” collaboration that should be played by external actors. The principles of real local or community participation and ownership are seen to be greater guarantees of sustainability and appropriation of the process than when such processes are controlled externally.

Where the process or project is controlled or appropriated by external actors, even if community and local participation are fostered, some authors (Lavell, 2004; [Pluut, 2005](#)) have couched the term “risk management at the community or local levels” to depict this process, as opposed to “community based and local level risk management” where the process is controlled locally, with the consequent projected benefits in terms of appropriation and sustainability. The distinction may be found in the level and type of participation and appropriation of the process. In this regard, Maskrey (op. cit.) early established the efficacy of the local approach indicating that this relates, amongst other things, to the nature of the political relations established with regional and national actors, the cultural tone of intervention whereby local needs and perceptions were primarily taken into account, and where autonomous local economic commitments were greater guarantees of sustainability than where schemes are controlled from outside. Here the evidence would suggest that the use of participatory diagnoses of risk conditions that are articulated to development concerns at the local level are better guarantees of the linking of development and risk concerns than where non participatory agency led diagnoses are followed. The priority given to development objectives by local populations and their more obvious ability to link into poverty reduction and development objectives in general signifies that projects that build on these factors and relations at the local and community levels are more likely to be successful. Many examples of this can be found in the consulted case studies and in the cases of diagnostic techniques and experiences systematized in the Provention Consortium project and web page.

As with community based management, local level management refers to a process by means of which policy, strategy, mechanisms and instruments for disaster risk reduction and control are established. The notion of **process** serves to establish that the terms LLDRM and CBDRM can not legitimately be used to refer to a single project or programme or a series of individual projects and programmes, but rather to the superstructure within which projects and programmes are formulated. Thus, the projects and programmes, initiatives and actions one normally analyses (and which we will predominantly consider in this document) in order to gain insights into relations, goals, methods etc are in fact instruments of the risk management process, but don't define it as such. Risk management seen as a process requires a permanent organizational and

institutional structure, independent of the organizations that implement particular projects. However, it must be recognised that in many instances such a permanent structure does not exist and risk management experience is mostly typified by a series of individual, many times, non-coordinated, non continuous projects and programmes.

With regard to the disaster risk management–poverty alleviation link, an important question may be raised as regards the importance of this link being established at the level of the management process as opposed to predominantly at the project level. In the first instance it would be a permanent and legitimized organizational structure that establishes the links and priorities and in the second it will be predominantly the project promoting organization. Where the process is locally or community controlled or where individual projects promoted by local or external actors are thought out and modelled according to local dictates and necessities, it may be postulated that poverty reduction goals and mechanisms would be far more feasibly and consistently introduced.

Examples of existing local structures that permit integration of risk reduction aspects with local planning structures and instruments can be found in the region of Piura in Perú, the city of Manizales, Colombia, in the town of Peñipe in Ecuador. The latter example illustrates how following an emergency situation related to volcanic eruption the local municipality decides to modernize its structures and vision and amongst other things incorporate the risk reduction theme in local development objectives and institutional schemes. Permanence in operations and processes can also be found in the livelihood strengthening micro credit and insurance schemes promoted by AIDMI in Gujarat and Bihar, India.

## **5.2 Risk Reduction (Corrective Management) and Risk Control (Prospective Management): Two Central Concerns of Risk Management.**

Disaster risk, understood as probable future damage and loss related to the existence of potential physical events, exposure to these and social vulnerability (including lack of resistance and resilience) may be seen in two major dimensions.

Firstly, **existing risk**, associated with already existing population, livelihoods, infrastructure etc. Where such risk exists, **“corrective” or “compensatory”** risk management techniques may be instrumented in order to reduce or mitigate existing levels. According to Lavell (2004), such corrective management may be promoted in a “conservative” or more “progressive” mode. It may be postulated that the type of corrective-conservative intervention is what has typified disaster reduction efforts historically.

In the case of corrective-conservative management, intervention is limited almost exclusively to resolving the external manifestations and signs of disaster risk—communities in unsafe locations, unstable slopes due to deforestation, unsafe buildings, lack of knowledge of local environment, etc., but it does not intervene in the fundamental root causes that lead to such risk contexts or factors. The result will be decreased disaster risk and impacts, with the commensurate benefits this has in stabilizing existing incomes, livelihoods and living conditions and saving of life; in guaranteeing infrastructure; and in

helping avoid loss of wage earners through death or migration in search of employment opportunities outside of the affected area ( and with this at times “importing” HIV back into the origin communities—see the case of Malawi and migrants from drought prone zones to Mozambique). Moreover, lower risk levels may encourage investment and improvement at the family or community levels. All of these factors can be expected to help in stabilizing poverty levels, but will not, we postulate, contribute in a major way to any effective and significant reduction in these. The type of solution employed may include structural engineering techniques, relocation of housing, environmental recuperation, early warning systems and emergency plans.

This type of approach is well illustrated with the D.G.-ECHO-DIPECHO promoted humanitarian based, preparedness projects where emergency plans and early warning systems and other preparedness aspects are complimented with small scale mitigation schemes that may range from dykes and slope shoring schemes, to bridge construction and environmental recuperation. The successful nature of many of these interventions, that have to date counted for over 80 million euros of investment worldwide, have undoubtedly reduced loss of human life and created more secure conditions for planning the future, aspects that undoubtedly impact to some degree in poverty factors. However, early warning in function of livelihood protection has not to date been of great concern to projects—saving of animals, work instruments etc. The D.G.-ECHO-DIPECHO programme is probably the most long lasting, permanent source of consistent funding for local and community level interventions and has a type of iconic role amongst organizations in the different continents. It also typifies the type of intervention that flows from the reduction of disaster impact, humanitarian based response mechanisms, as opposed to the development based approaches that comprise the second major influence in risk reduction paradigms today and which, within the European Union, would have to be and are channelled through other Directorates such as DG-RELEX and DG-DEV (the Andean prevention project PREDECAN and the Central American environmental management and risk reduction project-PREVDA- are examples of this).

The “progressive” mode of corrective management could combine the reduction of existing visible disaster risk factors using traditional methods with more development based actions (including poverty alleviation) whereby the reduction of existing external risk factors or contexts is accompanied by the promotion of development activities and increased opportunities for reducing disaster risk through individual or collective self protection mechanisms. Or, it could simply be based on progressive new development opportunities. One way or another, the implications for poverty alleviation are commensurately greater than with the conservative mode.

The use of one or the other modes will very much reflect differing thought on the risk reduction theme as developed over time. “Traditional” (but not because of this, irrelevant) 80s and 90s type work would be more likely to follow the conservative approach where the objective of intervention is disaster risk itself and its external manifestations, and thus the avoidance or reduction of disaster losses. More “modern” thought, post 2000, based on more complex and integral views of disaster risk and its relations to chronic or every day risk tend to push towards development based risk reduction strategies that increasingly privilege the role of increased incomes and opportunities, livelihood strengthening, the

development of social capital, participation and decentralization, micro credit and risk transfer etc. as strategies for reducing disaster risk. Although working in the context of existing disaster risk such mechanisms get closer to the root causes of this risk than does the conservative mode. In fact, as the development based component increases and the disaster risk aspect becomes an associated development problem as opposed to a problem on its own account, we tend to move away from what is commonly known as disaster risk management and get closer to development promotion and management. This also serves to show that in the long run the only real way of getting on top of the risk reduction-poverty reduction problem is by merging of themes in a single planning framework informed by the need for sustainable development.

Examples of this type of approach are numerous and a good number of those projects systematized in the Global Network of NGOs/ISDR compilations on disaster risk reduction and resilience and poverty impact follow this mode, as do those systematized in the Andean countries through the PREDECAN programme process. Sustainable livelihoods support and livelihood strengthening, employment generation based projects, alternative production processes, increased environmental productivity schemes all follow the corrective-progressive mode of intervention. This type of intervention tends to have increased rapidly over the last 5 to 8 years. More specific details of these types of project and their particular instruments can be found later in this document when discussing the relations between particular instruments and poverty reduction. Cases from Malawi, Mozambique, Kenya, South Africa, Indonesia, India, Nepal Philippines, Ecuador, Colombia, Peru and Central America can be found listed in annexes 2 and 3.

Existing risk is not the only risk management concern, however, although it has tended to dominate concerns and perhaps typifies in the mind of the public in general what risk reduction (or disaster prevention and mitigation) is all about. There are risks that are not as yet “on the ground” but that may develop in the future. The **anticipation of future risk**, the control of future risk factors, the incorporation of risk control aspects in future development and project planning, increasingly goes under the nomenclature of “**prospective**” risk management. The avoidance of future disaster risks establishes a different challenge in terms of the consideration of poverty alleviation impacts. Unlike corrective management where effects and impacts may be measured in real time, prospective measures, that avoid future risk, can only be seen in the light of projected poverty alleviation or control effects. Assumptions would need to be made as to the ways in which risk avoidance (through control of hazard, exposure and vulnerability factors) influences poverty causation variables, and only after some time has passed could one hope to subject the relations between risk avoidance and poverty alleviation to any type of substantive scientific analysis.

It is not easy to find many examples of prospective management promoted through local level project interventions or processes which are a key in not putting new risk on the ground. The majority of those known appear to derive from Latin American experience, maybe because of the more pervasive influence of local as opposed to community based schemes. This probably reflects the greater importance assigned to local government inspired risk management as opposed to more strictly based community level schemes that seem to predominate in Africa and Asia to a lesser extent.

The Swiss COSUDE inspired hazard mapping exercises promoted in over 60 municipalities in Nicaragua during the first five years of this century and similar schemes promoted by World Bank financed, municipal based projects in Nicaragua and Honduras this decade constituted a mechanism providing fundamental instruments for future land use and territorial organization planning with risk in mind. The permanent process of local risk management instituted in Manizales in Colombia allows risk aspects to be permanently introduced in local development and land use planning exercises and building code specifications. Ministry of Finance promoted risk analysis in public investment obligations in Peru have filtered into local planning processes in such areas as Piura and Arequipa in the framework of GTZ inspired schemes for risk reduction in the framework of rural development. And, the use of environmental and resource management exercises as the basis for land use planning with risk considerations incorporated have recently been promoted in the Piura and Soritor regions of Peru.

Whether we are dealing with corrective or prospective management at the local levels, the instruments that are employed either serve to control the occurrence or magnitude of hazardous physical events and the levels of exposure to these, or serve to reduce or control social vulnerability and vulnerability levels. The ways in which poverty alleviation goals are expressed and enacted will inevitably be conditioned by the goals and types of intervention promoted and depicted in the prospective-corrective typology.

Taking the argument a step further, a detailing of the notions of corrective risk reduction or prospective risk control suggests that these differential types of intervention and goals are possible along a good part of the spectrum of disaster risk management goals and procedures.

Prior to the impact of damaging events, existing risk levels of may be reduced by relevant interventions, including building retrofitting, changed cropping patterns in the search for increased resilience and resistance, recovery of degraded natural environments, the establishment of early warning systems etc, whilst new risk may be prevented by adequate risk analysis and control procedures introduced into project and programme planning processes. Once disaster occurs, risk reduction and control activities are implemented in order to guarantee that the existing situation does not deteriorate or spiral due to the absence of elements that guarantee human security and livelihood support for affected surviving populations. Thus, when guaranteeing adequate shelter, potable water, food stuffs and health conditions, one is in fact managing new or potential risk, risks that arise out of the new disaster conditions. And, when pulling down existing unsafe buildings, felling dangerous damaged trees, eliminating sources of possible infection and disease, treating ill or injured persons, one is in fact mitigating or reducing existing risk factors.

Finally, when promoting recovery and reconstruction activities, work on infrastructure, livelihoods, social organization, economic transformation etc. this should adopt a prospective risk attitude in order to guarantee that risk is not reconstructed and society returned to its previously existing disaster risk context or status.



Local and community based risk management processes or schemes have been developed in both pre impact and post impact circumstances, following corrective or prospective principles and guidelines and using multiple instruments and approaches. The relations and opportunities for incorporating and achieving poverty alleviation goals vary according to emphasis, goals and moments. In our next section we will consider the range of alternatives and types of intervention in risk reduction and their posited relations with poverty alleviation goals.

All of these types of intervention may be considered in the light of the ways in which they are sensitive to gender, ethnicity, race, age, physical impediment and other relevant aspects of so-called more vulnerable groups.

## **6. Establishing the Links between Local and Community Level Disaster Risk Management Instruments and Poverty Alleviation.**

Firstly, it must be made clear that in establishing links between types of intervention and poverty reduction, we must accept that it is not local level or community level risk management as such that have an impact on poverty, but rather the particular actions that are implemented through such processes and the ways in which these are programmed and conceived in the different schemes implemented. Therefore, it is impossible to analyse as such the relation between poverty reduction and CBDRM or LLDRM. Rather what one can analyse is the impact of different types of risk reduction actions and instruments, the role of methodological and process aspects, and the way conceptual frameworks are put together and establish or not the links between risk reduction and poverty alleviation and the manner in which the project will promote this. It is the former of these aspects that will concern us here.

Analysis of different community based and local-level risk management schemes can only be undertaken recognizing that these cover a broad range of experiences where it is the combination of types of action that is important in understanding the differential impacts on poverty or poverty generating factors. Also it is important to point out that risk reduction practice when seen from a development angle and not simply from a reduction of disaster risk angle does in fact take up on well established “independent sectoral” strategies. Here we refer, for example, to environment and natural resource management, land use planning and territorial organization, livelihood strengthening schemes. That is to say risk management as such can be based on these approaches or a combination of them, but at the same time these constitute stand alone strategies and mechanisms for broaching the development problem. In this sense risk management may be seen as the condenser of multiple different approaches to risk prevention and control, where losses due to hazard impacts are the defining factor. But, where these strategies or approaches stand alone, the central objective is rarely disaster risk reduction but rather it has a wider connotation in terms of promoting overall sustainable development.

Finally, it is also important to note that the range of options for risk management at the local level is in good part paralleled at the regional or national levels. The level of resolution changes but the type of action is essentially the same. This means that national level risk management is also potentially a tool for poverty reduction or control of poverty

generating factors. The discussion of local and community based schemes should then optimally contribute to understanding what new or innovative exists as regards poverty impacts when the scale of intervention is local and not national or regional. Do appropriation and participation at the local level offer more sustainability and development impact? Is local level management of environmental degradation more conducive to poverty reduction impacts than national level approaches? Are local level efforts at increased production resilience more successful than nationally promoted local impact actions? Does the process of organizational consolidation and development at the local level provide an improved milieu for poverty reduction policy making and enactment?

Each of the types of intervention considered below, which alone or in combination could form part of local or community based management schemes, have a potential impact on poverty or deprivation processes and indicators, either because they can influence the levels of disaster loss or reduce the possibilities that disaster risk develop. No matter what the scheme or approach, this impact must relate to the effects on any one of the three major components of risk itself-physical events and hazards; exposure to physical events and social vulnerability factors.

Given this factor in the present discussion we will take hazards, exposure and vulnerability as the central points of analysis, disaggregating these from an intervention perspective and relating them to the poverty, deprivation and exclusion notions. Clearly the instruments discussed will form part of what we have called corrective and prospective risk management and discussed above. Moreover such actions may be reclassified according to the 5 types of strategic intervention identified in the Hyogo Framework. This latter aspect we will consider later.

### **6.1 Community and local based actions and influences on physical events (potential hazards).**

- **Risk Management Action:** Mapping and monitoring of potentially dangerous physical events, their probable spatial coverage and intensity levels, using scientific and traditional knowledge and techniques

**Poverty Impact:** Provides a source of information for land use planning and reduction of exposure of persons, production and infrastructure and for the development of early warning systems. Participatory techniques and use of traditional knowledge serve to increase awareness and consciousness, increasing options that remedial or reactive mechanisms will be put in place saving investments and life and decreasing investment risks.

COSUDE, World Bank and DIPECHO promotion of hazard mapping schemes of this type have been commented previously. The CARE-CAMI, OFDA-AID inspired Central American projects used this type of instrument extensively. Use of indigenous bio-indicator techniques for climate prediction has been systematized in Bolivia with COSUDE support. In Indonesia in the Nusa Tenggara region indigenous knowledge has been used to construct food early warning systems

- **Risk Management Action:** Elimination or attenuation of the potentially damaging natural physical event using structural, civil engineering and scientific solutions and management techniques (dykes, slope shoring and lahar diversion schemes, river dragging, wind breaks, frost control, plague control or rainfall inducing mechanisms, water provision in drought prone areas, fire control mechanisms etc.)

**Poverty Impact:** Reduction of direct economic and human losses in “protected” areas; protection of livelihoods and support infrastructure and maintenance of existing income and welfare levels. A reduction in the continuous erosion of livelihood opportunities is achieved. Dangers include the over-reliance on structural solutions and their failure with even greater loss of life and livelihood than if other non structural methods were also used. This direct event approach is basically conservative in that it deals with the event, assuming that the economic and social structure protected is static. That is to say, if the population protected by the structural scheme is poor, the action will only maintain their existing levels of poverty but not help to reduce it directly, although in reducing continuous loss, this helps potentially to provide a milieu for small scale capital accumulation and also, more easy access to credit and finance for development.

This type of intervention is probably the most represented in local level schemes. DIPECHO promoted small scale mitigation works have been commented previously as have the Manizales city use of structural engineering techniques. Fire control in New Delhi and in forest areas in South Africa; flood control in Liberia and water provision in Malawi or Kenya to avoid drought conditions; control of slope movements in Peru by ITDG and PREDES inspired work in the context of huacos; dyke construction and river dragging in the Lower Lempa Valley, all constitute examples of this type of intervention. Multiple other examples abound, typifying what up to recent times was the dominant approach to risk reduction or disaster prevention and mitigation.

- **Risk Management Intervention:** Interventions in processes by which resources are transformed into potentially dangerous events—socio natural hazards. This includes reduction in the rates and types of environmental degradation including deforestation, felling of mangroves, river basin destruction, mono cultivation in tropical areas (soy, sugar cane etc). Such processes lead potentially to increases in such events as flooding, land-sliding, drought. Climate change and its local impacts due to the creation of new, or the accentuation of damaging events, is the most serious of such socio-natural transformations. Such a socio-natural categorization also includes inadequate urban infrastructure provision and urban rubbish management which can lead to increases and perpetuation of flooding due to insufficient drainage infrastructure or blocked systems.

**Poverty Impacts:** Maintenance of ecosystems, their resource base and balance contributes to production and income opportunities based on natural resource availability for local populations, as well as a reduction of losses in productivity. Reduction in numbers and incidence of events has an automatic impact in reduction

of economic and human losses and damage-given that socio-natural events tend to be associated more with small and medium scale disasters, this relationship is very important.

This type of approach, promoted as a central or complimentary theme, can be seen in the Lower Lempa Valley project where recovery of river side forests was postulated as a mechanism for flood control and generation of new employment and income opportunities; in the Tajikistan Endowment and Natural Resource Management project where a fourth stage of the project projected natural resource management as a mechanism for risk reduction. Local level land use planning instruments based on environmental zoning implemented in Soritor and Piura in Peru go down this pathway. Many schemes of this type are increasingly promoted by environmental organizations where it is widely accepted that environmental maintenance offers a natural protection when faced with adverse events at the same time as maintaining environmental productivity and thus opportunities for sustainable production

- **Risk Management Intervention:** Controls on technological or anthropogenic hazards such as fire, explosion, oil spills, contamination of water sources etc. And, planning considerations as regards potential synergies and concatenations between natural and technological events- earthquakes causing fire; landslides leading to fracturing of pipelines, etc

**Poverty Impacts:** Reduction of loss of assets, production, income options and days of work. Fire hazards are particularly important as regards the poor given the dominant incidence of this type of event in urban areas and the large scale loss of housing and artisan production facilities when urban fire occurs. Relocation of affected populations can seriously impact on employment opportunities and access. Contamination of water sources, land and air may lead to decreases in productivity or loss of fishing, farming opportunities. Explosions and contamination are more prevalent in the surrounds of factories, where lower income population tend to live.

The previously mentioned SEEDS inspired New Delhi fire control process amongst recent migrants and the South African Veld and forest fire control project fit into this category, along with initiatives promoted in South African cities by the University of Cape Town through its Sustainable Livelihood risk management facility.

## 6.2 Exposure or Location.

- **Risk Management Intervention:** Land use ordinances and planning principles or territorial organization schemes based on physical event and hazard mapping schemes and decisions on optimum use of land, including ordinances and norms as to required building and operational standards per zone.

**Poverty Impacts:** Should reduce overall losses given optimum use of space and optimum adjusted building practices. Closer relations between residential areas and work place, thus reducing travel costs. Greater incentives for housing and infrastructural improvements, given the lower possibilities of future loss.

COSUDE, Piura, Manizales and Soritor schemes have already been mentioned. Bogota risk management authorities have also developed territorial planning schemes and regulations to avoid location in unsafe areas and to relocate unsafe communities.

- **Risk Management Intervention:** Land banks and land reserves for lower class residential use and land reserves in hazardous locations to be used for recreational and agricultural use.

**Poverty Impacts:** Greater protection and guarantee of non disaster losses. The possible use of agricultural and recreational land by poorer sectors to increase non monetary incomes may ensue. Greater location incentives for improving housing quality and local services and infrastructure are likely.

### 6.3. Vulnerability Factors.

Consideration of vulnerability and capacities as factors influencing relative and absolute risk levels has been extensive in disaster literature. Various schemes have been designed to produce typologies or typify vulnerability factors. Gustavo Wilches-Chaux in Latin America put forward IN 1988 an 11 component system including economic, social, organizational, cultural, institutional, educational and other factors. This has and is still widely used to depict and conceptualize the problem. Anderson and Woodrow, 1989, put forward a more succinct three fold division, including the consideration of capabilities. More recently Cannon, in collaboration with Wisner, Blaikie and Davis have suggested that vulnerability should only be defined in terms of the propensity of persons and livelihoods to suffer damage due to social conditioning factors and have identified five types of factor or condition that negatively or positively influence vulnerability levels. These in turn are clear areas for intervention, through community, local or even national level risk management schemes. Their classification takes account of: 1. Existing social conditions prior to event impact; 2. Resilience levels of livelihoods and production processes; 3. Levels of self protection afforded; 4. Levels of social protection afforded; 5. Governance factors.

The range of conditioning factors considers traditional development aspects and actions that operate on disaster risk conditions in an indirect or direct form, through to more traditional and conservative risk reduction and control factors that operate on risk variables directly. We will use this latter Cannon inspired classification to establish potential relations between risk management actions and poverty reduction. Clearly these categories or approaches are not independent and links and dependencies exist between them.

- **Vulnerability and Capacities Analysis: An Entrance Point to Reduction of Vulnerability:**

During the last 10 years and based on methodological developments at the end of the 80s and during the early 90s ( see Chambers and rural participatory analysis; Anderson and Woodrow, vulnerability and capacities analysis; Wilches-Chaux, scenario analysis), most organizations participating in local level risk management now instrument some type of participatory vulnerability and capacities analysis that provides a medium for increased consciousness, cultural sensitivity to local needs, identification of problems and links between these and options for participation in decision making. An essential element that colours the role and utility of such analyses in terms of the poverty reduction theme is the extent to which such analyses remit primarily to hazard, exposure and vulnerability to related strictly to disaster risk as opposed to more comprehensive analyses that see these conditions as part of the overall context of factors that offer opportunities and limitations for development. Generally it would seem that the former prevails still whilst it can be posited that the greater the effort to place disaster risk in the overall context of social risk and development limitations, the more success we may have in identifying and limiting poverty factors in relation to disaster risk.

The Provention Consortium has been instrumental in systematizing the extent and depth of such processes across continents and between different organizations in the attempt to create a reference basis for future needs and demands for analysis and all major NGOs and international agencies, including CARE, Tear Fund, the International Red Cross, OXFAM and World Vision, amongst others have developed their own approaches to dimensioning risk at the local levels with participatory techniques. Some go from risk to development and fewer from development and sustainability to risk, a manner of seeing the problem that could auger more success in establishing links between risk and poverty and therefore stimulate or outline the types of intervention most adequate to deal with the link.

- **Existing social conditions (employment, health and nutritional status, levels of individual and social security, income levels, etc).**

Given that these factors have a significant influence on vulnerability levels and levels of post impact affectation, schemes that commence from the improvement of social variables, within a risk or development management framework must automatically have impacts on poverty and deprivation levels. From the management perspective this signifies that risk management schemes that build on improvements in social status and living conditions (corrective-progressive management) and are founded on development principles are more likely to have lasting effects when compared to more direct, simple, risk reduction schemes that directly control such things as hazards and exposure. Such improvements to welfare and economic well being can be achieved through a sustainable livelihoods approach as advocated by DIFID, GTZ and others ( see next section); or through simpler attention to the promotion of new production sectors and new employment

and income opportunities where these are geared up to existing potentially adverse environmental conditions.

Good examples of this can be seen across continents. In Latin America the AEDS promoted project in the river Ocoña valley in Peru was based on the development of alternative bio-businesses, adapted to changing climate conditions and adjusted to natural resource conditions, whilst an OXFAM supported RAIZ instrumented project in the Peruvian highlands promoted changes to production of local fodder for livestock to help stabilize production and reduce losses due to freezing conditions in winter. Employment generating risk reduction schemes have been promoted in Liberia by Mercy Corps related to flood mitigation and employing 26% women; the Guardians of the Slopes project in Manizales, Colombia, promoted by the local government, creates employment and income opportunities for numerous formerly unemployed women and a South African multi-institutional forest fire management project also creates employment in fire management and control activities. An Indonesian Community Association for Disaster Management project for clean water supply in the framework of flooding in East Nussa Tenggara Province guarantees more hygienic living conditions for local populations.

- **Increased resilience of livelihoods.**

Risk management schemes or development based efforts that take as a central point of concern the strengthening of livelihoods and their increased resilience will have direct effects on poverty outcomes and levels. Where this relates to increased resilience associated with external natural or socio natural hazard shocks, this is witnessed in changed cropping patterns, the creation of credit and financial reserves, the establishment of insurance and risk transfer schemes etc. Where resilience is enhanced when faced with social and economic shocks related to economic trends and changes, the effects on risk prone communities is more indirect but none the less still effective and measurable. The linking of issues related to hazard resilience and social and economic change resilience moves us towards more integral and holistic schemes of risk management where chronic and disaster hazard risk are dealt with in a common and integrated manner, following development led formats.

Increased resilience in any of its operational forms leads to poverty attenuation given reduction in economic losses, incomes and employment and reduced migration trends. Moreover trends favouring increased resilience prepare communities to think and act on such factors as climate change.

The sustainable livelihood approach to risk control and reduction probably constitutes the most rapidly growing emphasis in the risk reduction local and community based area, particularly in Africa and Asia, with a lesser incidence to date in Latin America where probably the most consistent promoter of these schemes and approaches is Practical Solutions ITDG. This may be explained perhaps by the international nature of this NGO and its presence also in Africa and Asia. The majority of the schemes systematized in the Global Network compilations

for ISDR on resilience and poverty reduction and DRR make some type of reference to livelihood resilience and strengthening or amplification. This may involve crop diversification and adjustments to drought; support to small scale businesses improved storage facilities for crops and new commercial arrangement for sales, micro credit and micro insurance schemes; water and food security aspects, natural resource management. Schemes promoted by CORDAID, Tear Fund, OXFAM, CARE, AIDMI, World Vision, ITDG and multiple other organizations increasingly take up on this theme, pushing the risk reduction topic nearer to the development inspired model. Such interventions have been generated in generally risk prone areas and under the impulse of recent large scale disasters—in Gujarat in India, for example.

- **Self protection mechanisms.**

Given that self protection is by nature an individual affair (individual in the sense of pertaining to a person, family, group, company, organization etc), relating to investment opportunity, knowledge and perception, desire and impetus, it does not as such directly relate to risk management schemes promoted on a community or local basis unless such schemes deliberately promote more individual awareness and consciousness that lead to individual investment in self security-it is in this case that such aspects are relevant to our analysis. Normally self protection refers to actions that reduce insecurity of location, site, production or structure; that promote risk transfer processes and that promote individuals to participate collectively in protection schemes. The option for self protection is clearly related to income availability, education and awareness.

Where self protection is an action promoted by local level risk management processes and organizations, the results in terms of poverty amelioration will differ according to the type of protection afforded—building security, insurance, site protection, family preparedness, saving schemes etc.

- **Social Protection.**

Social protection refers to the actions and investments made by corporate entities such as the State or large scale humanitarian or development organizations in lieu of the protection of population and livelihoods. Access to such protection is not uniform and implies differential levels of access and exclusion. Such protection may go from hazard reduction schemes through early warning systems to collective insurance against loss for poor groups; from credit access through to relocation of communities or collective protection using dykes and land shoring techniques. Once more, the poverty impact aspect will depend on the type of protection afforded through the risk management schemes.

Examples of this type of coverage and intervention have been commented in other sections of this analysis.



- **Governance factors.**

Governance aspects have come to be seen as being more and more important for risk management and its operational success. Success is more likely where democratic institutions, social participation, decentralization, organized social capital, free press, respect for human rights and other similar conditions of a free and democratic society are present. Vulnerability is likely to be inversely related to the existence or not of such aspects. And, the impact of the existence of such conditions on poverty will vary according to the condition achieved and promoted. Decentralization and active and real social participation as captured in the notion of local level risk management developed in this analysis are likely to be conducive to appropriation and sustainability, along with integration of risk concerns with wider development attributes, thus offering a more propitious medium for risk reduction in the framework of real social advances at the income and inclusion levels. Respect for human rights must by its very nature positively affect income and employment as these are integral aspects of economic and social rights. A free and well informed, progressive and prospective press should have positive impacts in the distribution of social protection and stimulation of assignment of social welfare aspects according to need.

Seen from the angle of experiences with strengthening governance aspects and their incidence in risk and poverty reduction the very notion of decentralized local and community based management is a manifestation of this, where locally inspired schemes are seen to have more relationship to every day community needs and risk and development more likely to be linked in programming procedures. Numerous examples can be found of institutional strengthening for risk reduction starting with the mid to late nineteen nineties GTZ inspired Central American programme that also promoted early warning schemes in the region. The whole process of municipal strengthening experienced in Peñipe in Ecuador, the Manizales institutionalization of risk management and efforts in Philippines to strengthen organization at the Barangay level are examples of the ways governance factors can positively affect risk and poverty reduction.

***The Hyogo Framework, Strategic Actions and the Nature of DRM at the local level.***

The above developed scheme for considering relationships can be complimented by an examination of the problem from the angle of the five strategic areas of intervention identified in the Hyogo Framework: governance factors and institutional commitment and strengthening; monitoring of risk factors and early warning; education and research and prevention culture; underlying causes of risk ; preparedness and response. Here the outstanding question is with regards to the ways the implemented schemes relate to these central objectives and thus differentially arrive at the poverty link. Clearly where attention is placed on early warning and preparedness and response concern is concentrated on the ways impacts may be reduced and poverty contained. Attention to underlying causes

clearly relates to the need to avoid risk and thus pre-empt loss and will have important repercussions on the poverty to risk relationship. Institutional strengthening schemes and support for education and research can have impacts on both sides of the equation, depending on emphasis and objectives.

Based on case studies collected and systematized for this study it is clear that the aspects of risk analysis and monitoring and scenario building, preparedness and response strengthening, educational development and structural mitigation are still promoted on a wide scale basis. And efforts to promote and strengthen local level institutional frameworks for risk management are not without their proponents. These aspects fall under HYOGO actions 1, 2, 3 and 5. With regard to Hyogo action 4, underlying causes of disaster risk the push to more development based schemes during the last few years, the increased role seen for land use and territorial planning, the importance conceded to sustainable livelihoods frameworks and the importance of environmental management, especially in the light of climate change and its hazard impacts, has led to a very important increase in locally promoted schemes based on these aspects or premises. Here then there is far more options for linking risk and poverty reduction than in traditional schemes that work towards reduction of disaster risk in order to reduce negative impacts of disaster loss and society

## **7. Some Central Conclusions and Recommendations.**

### **7.1 Conclusions.**

- The disaster risk and poverty themes, and reduction mechanisms for both, are extremely complex in their make up and consequently the mutual relations between them are also complex and need to be detailed. However, specialisation in the two topics has not frequently been accompanied by a thorough cross fertilisation and mutual understanding of these in part complimentary topics. The result is that disaster risk specialists and policy makers deal very guardedly and generally with poverty issues and poverty specialists almost completely ignore disaster risk issues or restrict observations and suggestion to very general notions. Due to this the relations established in policy and methodological documents are at best general and usually sparse. No visible attempt is made to detail relations and take note of the complexity of these such as to support ideas on intervention at a general or local level.
- CBDRM and LLDRM both take disaster risk reduction as their central concerns. This is in fact a complex and varied objective that can be achieved using different focuses or approaches and numerous different instruments. Corrective and prospective management approaches are instrumented using numerous types of development based, engineering, educational, environmental, land use planning and legal and normative instruments. Emphasis may be placed differentially on prevention and mitigation, preparedness and response or recovery aspects, or several of these at the same time. Thus the complexity of interventions may be simple or high. Instrumented schemes reflect this range of complexity. And, therefore the nature, range and complexity of relations with poverty alleviation

goals is also high. This is made even more complex given that poverty alleviation processes may work on many of the varied facets of poverty and its causation from income aspects to social capital and education.

- Given the above indicated complexity measuring or understanding the role of local and community level DRM in poverty alleviation is extremely difficult. At the same time such complexity indicates that there are numerous ways to link the two goals. But, as with the policy and methodological oversights referred to above, a large number of DRM interventions make very little reference to poverty alleviation goals and where these are incorporated this is done in a summary or cursory fashion. Little attempt is made to break the problem into manageable units for intervention with clear indicators of impact. Clearly any intervention that reduces disaster risk or disaster impacts will have a poverty effect. But, the real nature of this and the way the projects intentionally achieve it is not very often laid out or clear. Impacts are more implicit than explicit.
- Examined from the angle of the point of entry to the risk reduction problem the traditional emphasis on preparedness and response activities and corrective-conservative management goals has given way over time to more progressive and comprehensive schemes that take up on development themes and base themselves on economic improvement and sustainable livelihood frameworks. Humanitarian agency sources of financing and their greater permanence and continuity and the seen imperative of reducing disaster losses do however signify that more traditional approaches informed by such ideas as the linking of relief and development still prevail. The emergence of more development based schemes signifies as such an increase in efforts to reduce the underlying causes of disaster risk and thus alter the equation in favour of mitigating poverty through reducing disaster losses.
- Poverty reduction aspects and goals, along with other development based objectives are far more likely to be achieved where we move from development to risk as opposed to from risk to development. This will also require that such instruments as vulnerability and capacities analysis and other participatory analytical schemes take development as their central concern and analyse disaster risk factors in the light of development goals and not in themselves as such. This idea accepts the notion that disaster risk is one dimension of those problems that communities suffer but the best way to deal with it is making development the central concern and not disaster risk. In the end we must push to promote the development of local level or community based development management and not disaster risk management as such. Only in this way will the poverty dimension ever really get taken adequately into account
- Although a far more thorough analysis is required to substantiate conclusions, it would seem that local and community level interventions are still presently of the project and not process type, promoted by external agencies with local support but not deeply engrained amongst local actors. They do therefore more approximate the idea of risk management initiatives at the local level rather than local level risk management as such. Appropriation and sustainability are therefore in question and, consequently, the real role that can be played in poverty alleviation amongst the goals of such interventions. This does not of course mean that advances are not

made in dimensioning the poverty aspect and developing mechanisms and instruments that can serve to highlight it. The almost general use of vulnerability and capacities analysis in its distinct forms and shapes undoubtedly promotes a more comprehensive, community level view of risk and its causal factors. However it is interesting to note that participatory analysis is still organised from the perspective of disaster risk as such and not as part of an overall diagnosis of development needs and the factors that promote and impede local advance. That is to say, many times it is disaster risk that is in the centre of concern and not development in a more general sense. The significance of this for the risk –poverty link may be very important.

## **7.2. Some Preliminary Recommendations.**

- A significant and sustained attempt must be undertaken to promote ways in which poverty and disaster risk specialists can become more fully cognizant of the complexities and details of these complimentary topics such that the design of policy and methodological documents from both angles can more fully develop the notions and practices that link the two themes.
- Financing agencies and internal organizational financing requisites must insist on the full and detailed dimensioning of the ways that disaster risk reduction projects contribute to poverty reduction and the ways in which poverty reduction projects and programmes will contribute to risk reduction. The present generalised way of establishing the link and goals must give way to the detailing of relations and the establishment of clear indicators of advance and success.
- More emphasis must be placed on risk management as a process rather than a sum of projects. This will require far more consideration to local initiatives and ownership that can guarantee continuity and consolidation and a more full integration of disaster risk concerns with local development concerns and where local perceptions and needs are fully represented.
- A move from more traditional corrective-conservative risk reduction strategies and preparedness and response goals in favour of corrective-progressive and prospective risk management goals must be encouraged and the relations of these to poverty alleviation goals established. This will signify a widening of financial sources and far more involvement of development agencies as such in order to compliment the still predominantly humanitarian source of local level financing.
- The above mentioned recommendation must also be accompanied by a more assertive move to place disaster risk reduction in the development camp. Its as still present link to more humanitarian affairs severely limits the potential for the introduction of poverty reduction aspects and development aspects in general.

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### **Global Sources of Case Study Material**

Linking Disaster Risk Reduction and Poverty Reduction Good Practices & Lessons Learned” A publication of the “Global Network of NGOs for Disaster Risk Reduction”2008 International Strategy for Disaster Reduction.

Building Disaster Resilient Communities Good Practices and Lessons Learned  
A Publication of the “Global Network of NGOs” for Disaster Risk Reduction. ISDR.  
2007

### **FROM PROVENTION WEB SITE**

#### **Africa**

- Lesotho - Vulnerability and Capacity Assessment in Maqoala, Malebanye, Ha Sankatana and Ha Mapotsane  
[Case study](#) (PDF, 2.5 MB) / [explanatory note](#)
- Madagascar - Community Risk Assessments, Disaster Preparedness and Mitigation Plan (DPMP)  
[case study](#) (PDF, 1 MB) / [guidance note](#)

- Mozambique - Assessing the Role of Local Institutions in Reducing the Vulnerability of At-Risk Communities in Búzi, Central Mozambique  
[case study](#) / [explanatory note](#)
- Rwanda - Using the vulnerability and capacity assessment tool in Rwanda  
[Case study](#) (PDF, 1.6 MB) / [explanatory note](#)
- Sierra Leone - Vulnerability and Capacity Assessment (VAC) Report for 19 Communities in Kono and Tonkolili Districts  
[case study](#) (PDF, 0.5 MB) / [guidance note](#)
- South Africa - Fire Hazard and Vulnerability in Imizamo Yethu Informal Settlement  
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- Zambia - Vulnerability Capacity Assessment: Sinazongwe District  
[case study](#) (PDF, 0.6 MB) / [guidance note](#)
- Zimbabwe - Beating Hunger: The Chivi Experience  
[case study](#) (PDF, 3.9 MB) / [guidance note](#)
- \*East Africa - Participatory Risk Mapping for Targeting Research and Assistance: With an Example for East African Pastoralists  
[case study](#) (PDF, 0.2 MB)

## Asia

- Bangladesh - Hazard Mapping and Vulnerability Assessment for Flood Mitigation  
[case study](#) (PDF, 0.5 MB) / [guidance note](#)
- Cambodia - Cambodian community based flood mitigation and preparedness project  
[case study](#) (PDF, 0.1 MB) / [guidance note](#)
- India - Development & risk reduction in hazard-prone communities of Andhra Pradesh in India  
[case study](#) (PDF, 0.6 MB) / [guidance note](#)
- India - Community-based disaster risk reduction in the Indian State of Bihar  
[case study](#) (PDF, 0.6 MB) / [guidance note](#)
- Lao PDR - Community-Based Disaster Management Project in Champasack District  
[case study](#) (PDF, 0.2 MB) / [guidance note](#)
- Nepal - Flood Disaster Impacts and Responses in Nepal Tarai's Marginalised Basins  
[case study](#) (PDF, 4 MB) / [guidance note](#)
- Nepal - The Snake and the River Don't Run Straight: Local knowledge on disaster preparedness in the Eastern Terai of Nepal  
[case study](#) (PDF, 0.8 MB) / [guidance note](#)
- Pakistan - Becoming a Model: Community Managed Flood Preparedness Project  
[case study](#) (PDF, 0.6 MB) / [guidance note](#)
- Pakistan - Navigating the Contours of the Pakistani Hazardscapes: Disaster Experience versus Policy  
[case study](#) (PDF, 2.6 MB) / [guidance note](#)
- Pakistan - Herders of Chitral: The Lost Messengers? Local Knowledge on Disaster Preparedness in Chitral District  
[case study](#) (PDF, 0.6 MB) / [guidance note](#)

- Philippines - Enhancing Local Government Unit Capacities in Disaster Preparedness, Prevention & Mitigation  
[case study](#) (PDF, 0.6 MB) / [guidance note](#)
- Sri Lanka - Matara Vulnerability and Capacity Assessment Report  
[case study](#) (PDF, 0.2 MB) / [guidance note](#)
- Turkey - Umraniye Women's Outreach Community Disaster Preparedness Project  
[case study](#) (PDF, 1.1 MB) / [guidance note](#)
- Turkey - Vulnerability and Capacity Assessment, Faik Pasa and Mirali Neighbourhood Project  
[case study](#) (PDF, 2.1 MB) / [guidance note](#)

## Latin America

- Belize - Belize Red Cross Vulnerability and Capacity Assessment Workshop  
[case study](#) (PDF, 0.4 MB) / [guidance note](#)
- Belize - Vulnerability and Capacity Assessment in Ladyville and Caledonia  
[case studies](#) (PDF, 2 MB) / [guidance note](#)
- Costa Rica - Vulnerability and Capacity Assessment in Linda Vista (La Unión) and El Meco (Ciudad Quesada)  
[case studies](#) (PDF, 6.6 MB) / guidance note [\[English\]](#) [\[Spanish\]](#)
- El Salvador - Program for Prevention and Mitigation of Flood Disasters in the Lower Lempa River Basin  
[case study](#) (PDF, 0.3 MB) / [guidance note](#)
- Guatemala - Communities Vulnerable to Disasters in the Metropolitan Area of Guatemala City  
[case study](#) (PDF, 0.7 MB) / [guidance note](#)
- Guatemala - Vulnerability and Capacity Assessments in the communities of Nuestra Señora del Carmen zona 12 and Anexo Forestal zona 13  
[case studies](#) (PDF, 7.4 MB) / [guidance note](#)
- Guatemala - Participatory Disaster Risk Reduction Model Guatemala Pilot  
[case studies](#) (PDF, 0.7 MB) / [guidance note](#)
- Honduras - Vulnerability and Capacity Assessment in Colonia Nueva Esperanza, Tegucigalpa, and El Zamorano community, Jamastrán, El Paraíso  
[case study](#) (PDF, 6 MB) / [guidance note](#)
- Peru - Capacity Building Workshop in Disaster Prevention and Risk Management for Communities of Caylloma District affected by the 2004 Cold Wave  
[case study](#) (PDF, 1.8 MB) / [guidance note](#)
- Trinidad & Tobago - Vulnerability Capacity Assessment, Speyside Community, Tobago  
[case study](#) (PDF, 7.3 MB) / [guidance note](#)
- Venezuela - Pilot Study of Community Based Disaster Management Strategy for Earthquakes  
[case study](#) (PDF, 0.7 MB) / [guidance note](#)
- \*Bolivia (in Spanish) - Contribución al análisis de riesgo de desastres en la Cuenca Alta del Río San Pedro  
[case study](#) (PDF, 2.3 MB)

## Small island developing states

- Cuba - Weathering the Storm: Lessons in Risk Reduction from Cuba [case study](#) (PDF, 1 MB) / [guidance note](#)
- Jamaica - Community Led Risk Assessment and Action Planning in White Horses [case study](#) (PDF, 0.4 MB) / [guidance note](#)
- Solomon Islands - Solomon Islands: from risk assessment to community actions [case study](#) (PDF, 1.2 MB) / [guidance note](#)
- Vanuatu - Participatory methods of incorporating scientific with traditional knowledge for volcanic hazard management on Ambae Island [case study](#) (PDF, 0.8 MB) / [guidance note](#)
- Maldives - Findings of the Vulnerability and Capacity Assessment in Maduvvaree and Meedhoo [case study](#) (PDF, 3.1 MB) / [guidance note](#)

## Other countries

- Country X - Vulnerability Capacity Assessment Community: Village A [case study](#) (PDF, 0.2 MB) / [guidance note](#)

## Other compendia of case studies

- ELDIS - [Community Based Adaptation case studies](#)
- Vulnerability Assessment Techniques and Applications (VATA) - [A Collection of Case Studies from the Americas](#)
- Action Aid Participatory Vulnerability Assessment - [A Collection of Case Studies from Africa and Asia](#) (PDF, 0.8 MB)

## UNDP SYSTEMATIZED STUDIES (see Pluut, 2005)

### *India:*

- Disaster Management Programme;
- Community-Based Rainwater Harvesting in Drought affected areas in the Districts of Bolangir and Nuadpa, Orissa

### *Nepal:*

- Participatory Disaster Management Programme (PDMP) (NEP 99/014/A/31);
- Total Disaster Risk Management (District level action planning)
- Strengthening Disaster Management Capacity (DesInventar)

### *Sri Lanka:*

- Transitional Recovery Support to Flood Disaster in South and South West Sri Lanka
- United Nations Volunteers and Disaster Risk Management

*Bolivia:*

- Structuring and undertaking a strategy for integrated risk management in the city of La Paz

*Colombia:*

- Creation of a Municipal System for Disaster Prevention and Assistance / SIMPAD in Medellín

*Jamaica:*

- Radar Project – Radar-Supported Early Warning Systems for weather related Natural Hazards in the Insular Caribbean

*Nicaragua:*

- Support for Local Risk Management in six Municipal Committees in the framework of the National System for Disaster Prevention, Mitigation and Awareness (Assistance?)

*Yucatán*

- Contingency Response in the Peninsula of Yucatan

*Albania*

- Disaster Risk Management



