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Environment and Urbanization 2000 12: 93

DOI: 10.1177/095624780001200208

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Cities, disasters and livelihoods

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1. Office for the Coordination of Humanitarian Affairs (OCHA) (2000), Situation Report, January 2000, Geneva.

2. Walter, J (editor) (1998), *World Disasters Report 1999*, International Federation of Red Cross and Red Crescent Societies, Switzerland, page 19.

SUMMARY: *This paper describes the impacts of recent disasters in urban areas and their contribution to poverty, and highlights how little attention urban development planning and disaster relief organizations give to disaster mitigation. It also describes CARE International's Household Livelihood Security (HLS) model and how this allows an urban livelihoods approach to integrating measures for reducing poverty with measures for reducing risks from disasters. It pays particular attention to supporting low-income groups and community organizations in building and diversifying their asset bases. A focus on reducing household vulnerability to shocks and stresses (including disasters) also reveals the supporting actions needed from municipal authorities and disaster relief organizations.*

I. INTRODUCTION

SHORTLY AFTER LAST December's floods in Venezuela which killed 30,000 people,⁽¹⁾ the country's President Chavez publicly blamed his predecessors for allowing shelters to be built on dangerous land in the capital city, Caracas. He was right: building in these places had led to unnecessary death and destruction from mudslides and flooding. So was he about to stop such developments himself? It seems unlikely. Furthermore, had there been much serious action before the disaster to mitigate the floods' devastating effects? Not really, since those worst affected were amongst the city's poorest.

If disasters are the consequence of a natural hazard such as flooding affecting a vulnerable group such as Caracas's urban poor, then the rapidly urbanizing cities and towns in Africa, Asia and Latin America represent the greatest concentration of vulnerable people there has ever been. Urbanization today is extraordinary. The facts are often stated but mean little in their enormity. The latest UN estimates state that by 2007, half the world's population will live in cities, and that by 2025, this figure will probably have doubled to 5 billion. This represents a phenomenal growth of an urban environment where "...up to half the populations of the largest cities of the developing world are in unplanned and often illegal squatter colonies."⁽²⁾

For those born into poverty in urban areas and for newly arriving poor migrants from the countryside, cities are dangerous places. Many poor urban dwellers live on the worst quality land on the edges of ravines, on flood-prone embankments, on slopes liable to mudslide or collapse, in

densely packed areas where fires easily start, on roundabouts at busy intersections. The Red Cross describes this unwanted demarcation as the “social geography” of many towns and cities which “...reflects the vulnerability of different zones to natural hazards – often with disastrous consequences for the poor.”⁽³⁾

II. THE SCALE OF THE PROBLEM

LARGE-SCALE DISASTERS between June 1999 and March 2000 alone highlight the terrible convergence of urbanization and natural hazards. These include two earthquakes in Turkey’s heavily urbanized north-eastern region in August and November 1999. The official death toll for the first, larger earthquake was more than 17,000; 44,000 people were injured and nearly 300,000 homes either damaged or collapsed.⁽⁴⁾ Venezuela’s floods destroyed more than 23,000 houses and damaged a further 64,000.⁽⁵⁾ The two cyclones that hit India’s state of Orissa in October killed well over 10,000 people and made 8 million homeless. The second cyclone devastated the state’s administrative capital, Bhubaneswar, the commercial capital, Cuttack, and the port town of Paradip before moving on to smaller towns and villages.

Heavy rains and cyclones in February and March this year in Mozambique led to the worst flooding in 50 years, and brought widespread

3. See reference 2.

4. See ReliefWeb (2000), *Earthquakes Situation Report No 36*, period covered is 21-28 January 2000.

5. US Agency for International Development (USAID) (2000), *Venezuela Floods Fact Sheet No 11* (FY 2000), press release 4 February 2000, Washington DC.



Photo: Clive Shirley

devastation to the capital city, Maputo, as well as to Matola city. Upwards of 1 million people were directly affected. Water and sanitation services were disrupted, causing outbreaks of dysentery and cholera. Newspaper reports described the disaster as destroying the rehabilitation efforts of what had been, until only a few years ago, the world's poorest country.

These instances date from only ten months ago. They all caused large-scale loss and catastrophic damage to cities, towns and villages. But it is no surprise that increasing urbanization correlates with increased risk, as unplanned growth rarely takes account of physical hazards. Many of the world's largest, and some of its fastest growing cities are in earthquake zones. Yet disasters come in different sizes and over longer time periods. For millions of poor urban dwellers, managing disaster is an everyday occurrence, less noticed by outsiders but just as insidious. This may include the fires that wipe out squatter neighbourhoods, the devastation brought by HIV, the cumulative health problems resulting from poorly ventilated shelter or the long-term effects on children of pollution. Such less noticeable disasters erode livelihoods and cost lives; for example, Bangladesh's 1991 infant mortality rate amongst slum and squatter settlements was more than twice the rural rate.⁽⁶⁾

6. See reference 4.

Figure 2: Squatter Camp at Yemuna Pushta, Delhi



III. URBAN POVERTY AND DISASTER – TWO SEPARATE ISSUES?

DISASTERS TURN BACK the development clock, destroying years of effort and labour and perpetuating poverty for those already poor. On a city and national level, they destroy investments and infrastructure and drain national budgets and international development funds. Yet disasters are rarely, if ever, included within urban development strategies. Governments of urbanizing countries may have entirely different ministries responsible for emergency management and urban development, with little knowledge of each other's activities. India's Ministry of Urban Affairs' 1999 Draft National Slum Policy makes no reference at all to the vulnerability of slum dwellers to natural disaster. Yet the same

ministry estimates that each year 1 per cent of India's total housing stock is destroyed by natural disasters.⁽⁷⁾

Conversely, national disaster management strategies often omit urban settlements. In many parts of Africa, disaster management is synonymous with rural food security needs. Ghana's National Disaster Management Office (NADMO) and Ethiopia's Disaster Prevention and Preparedness Centre (DPPC) are almost exclusively rural in focus. India's National Centre for Disaster Management (NCDM) and all national disaster response activities – including those in cities – are the responsibility of the Ministry of Agriculture. An underlying problem is that many official disaster management organizations remain seriously under-resourced, with little political or legislative support and almost no funds. In his study of national early warning systems, Andrew Maskrey concludes that "...even when national disaster management systems have been formally created, good coordination between different government and other organizations does not necessarily exist, leading to confusion, contradictions, overlapping functions and gaps in responsibility."⁽⁸⁾ Whilst the separation between city and disaster management continues, and the latter remains weak, valuable opportunities for reducing urban risk will be lost. The inevitable consequences of authorities' allowing building on unsafe hillsides or in flood-prone areas will remain largely ignored until disaster strikes.

However, some recent initiatives by inter-governmental agencies and donors are beginning to address the need. Paragraphs 170-176 of the 1996 Habitat Agenda, "Disaster Prevention, Mitigation and Preparedness, and Post-disaster Rehabilitation Capabilities", describe the need for measures to reduce vulnerability in urban settlements. The World Bank's Disaster Management Facility, formed in 1998, aims to "mainstream mitigation" of natural disaster. And whilst India's draft urban policy does not describe natural disaster, other statements indicate the need for action: "...time has come that the elements of disaster mitigation and prevention should be included in the Government [of India's] policies and strategies developed for implementation of disaster prevention and mitigation."⁽⁹⁾

IV. DISASTERS AND LIVELIHOODS

IN PROGRAMMING TERMS, sustainable livelihoods methodologies provide a valuable opportunity for combining disaster reduction and development interventions in one unifying approach. Several agencies and donors are currently developing livelihoods-based approaches as bases for policy and practice formulation. These include DFID, the United Nations Development Programme (UNDP), non-governmental organizations (NGOs) including Oxfam and CARE, and research institutes including the Institute of Development Studies (IDS).⁽¹⁰⁾ A common understanding of livelihoods is given by Chambers and Conway: "A livelihood comprises the capabilities, assets (both natural and social) and activities required for a means of living; a livelihood is sustainable which can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, both now and in the future, while not undermining the natural resource base."⁽¹¹⁾ The key element of livelihoods approaches is that people are the starting point. A livelihoods approach describes how people obtain "assets", what they do with them, what gets in their way whilst obtaining them, and who controls the resources on which assets

7. Ministry of Urban Affairs and Employment (1999), *Agenda 21, Report on Promoting Sustainable Human Settlement Development*, 17th session of the UN Commission on Human Settlements, Nairobi, May 1999, Indian government publication, page 21.

8. Maskrey, A (1997), *Report on National and Local Capabilities for Early Warning*, LA RED, Network for Social Studies on Disaster Prevention in Latin America, Lima, page 41.

9. See reference 8.

10. Ashley, C and D Carney (1999), *Sustainable Livelihoods: Lessons From Early Experience*, Department for International Development Publication, London, page 5.

11. Chambers, R and G Conway (1992), "Sustainable rural livelihoods: practical concepts for the 21st century", IDS Discussion Paper 296, Brighton, page 7.

are based. Importantly, it includes the concept that assets “buffer” households against disasters (shocks) as well as stresses such as ill-health. Assets are not only physical, for example, land; they are also social, e.g. good relations with neighbours; human, e.g. good entrepreneurial skills; financial, e.g. savings; and arguably, political, e.g. having a say in democratic processes.

Livelihoods thinking emerges mostly from rural natural resources and food security methodologies, the latter relating in particular to drought-induced famine in Africa. Yet, a livelihoods perspective finds remarkable resonance in understanding the complexities of urban poverty and in linking poverty with disasters. In particular:

- Linking micro to macro issues. A livelihoods approach does not advocate community level or municipal interventions; rather, it describes the links between all levels that affect poor urban dwellers, from how households secure a means of living to the policies that control them.
- Highlighting the layering and complexity of controls by institutions and their regulations, which affect the poor’s access to resources. Whilst controls on the poor may be legal, for example, by municipalities, they may also be the result of illegal activity, for example, drug gangs that control neighbourhoods.
- Indicating access to resources as a key concept, including the ability of poor urban dwellers to access health care, food, employment, shelter or political power.
- Stating the importance of income as a means of accessing many of those resources, for example, food, clothing, building materials and education.
- Emphasizing the importance of household-level assets including social as well as physical assets.

In urban settlements, the livelihood strategies of the poor are complex. Contexts are changing and uncertain, with rapid urban growth, increasing crime, an ill-equipped public sector and intense competition for limited resources. Household members employ varied living strategies, often living on credit, surviving and competing in markets, undertaking seasonal work and earning incomes in the informal economy. As Hugh Stretton stated over 20 years ago: “The life of a modern city is very complicated. The citizens have intricate patterns of common and conflicting interests and tastes and beliefs, and individually and collectively they have very unequal capacities to get what they want for themselves or from one another. From that tangle of powers and purposes comes a social life so complicated and partly unpredictable that any understanding of it has to be incomplete.”⁽¹²⁾

Figure 3 presents CARE’s Household Livelihood Security (HLS) approach. HLS presents a tool for understanding how urban households live. Yet, it is not prescriptive in advocating interventions. Rather, it is a “route map” on which the main elements that concern living are marked, from micro-level household activities to macro-level control of resources. A key aspect of HLS and other livelihoods approaches is the role that assets play in strengthening households. Descriptions of assets vary; however, common to several interpretations are the following:

Financial assets. Most resource access in urban areas results from cash exchanges. For the urban poor, as with other city dwellers, the building of financial assets is almost always a key activity for greater livelihood security. Financial assets are often fragile; many urban poor live by arranging complex systems of loans and debt-servicing, borrowing small amounts and calling in debts from others to pay bills as they arise. A large propor-

12. Stretton, H (1978), *Urban Planning in Rich and Poor Countries*, Oxford University Press, Oxford, page 36.

tion of the urban poor are forced to work in the informal sector, earning low incomes for long hours of work. Competition for work is intense, usually making incomes very low. For such workers, insurance, health care or sick pay do not exist. Working in poor conditions serves to increase long-term vulnerability to disease and ill-health. Increasingly, this is the case with child labour, where many lifelong health problems can begin.

The informal economy allows for a diversity of ways to earn income to acquire resources. However, those resources can come at a high price, whereby the poorest often pay more than their better-off neighbours for basic services. Research in Lusaka, Zambia, found that water purchased by low-income groups was nearly ten times more expensive than that from a subsequently installed water supply system.⁽¹³⁾ Food can also come at a high cost despite the existence in some countries of "urban agriculture": "...food expenditures can make up as much as 60 to 80 per cent of total expenditure amongst low-income households."⁽¹⁴⁾ Yet recent studies in Ghana point to increasing malnutrition amongst the urban poor.⁽¹⁵⁾

Physical assets. Tenure is a key physical asset to acquire. Squatters and slum dwellers will endure dangerous conditions to be close to sources of income, whilst in the rental sector, many families may share crowded, poor quality, illegally divided tenements. In central Delhi, for instance, a large and notorious squatter settlement has existed within the designated flood plain of the Yemuna River for more than 25 years. The settlement is forced to evacuate at least once a year to the busy roadside whilst their shelters are flooded for upwards of one month. Yet the settlement is thriving, with small businesses, a school and a vibrant property market. The regular flooding is seen as the price to pay for living in the centre of the city at low cost.⁽¹⁶⁾ Having a degree of ownership of land, therefore, is often the starting point for households to consolidate shelters. A better building reduces vulnerability to sudden impact disasters, for example, an earthquake or fire.

Human assets. Cities provide a variety of opportunities for earning income. The benefits from different household members entering into a range of activities based on skills, knowledge and ability increases the chances of sustaining a household. However, some strategies serve to increase vulnerability and threaten household sustainability; for example, young children working in factories may miss out on an adequate education and childhood, and may suffer health damage.

Household Livelihood Security is described as "...sustainable and adequate access to income and other resources to meet basic needs and to build up assets to withstand shocks and stresses." This can be represented diagrammatically as shown in Figure 3.

The sequence followed by the diagram, beginning at the household and following the arrows, is as follows:

- Household members have basic needs: food, water, shelter, education, etc.
- To meet these needs, household members access resources or services, for example, water, food, shelter, health care, electricity. Most access is gained through payment. Payment is secured by undertaking productive activities, for example, selling labour to gain income to pay for necessary resources.
- There are barriers to accessing resources/services which, for the poor, usually prevent access to or reduce the quality and quantity of accessible resources. Two such barriers (of which there may be many) are:
 - position in society, for example, culture, gender, religion, status, being poor;

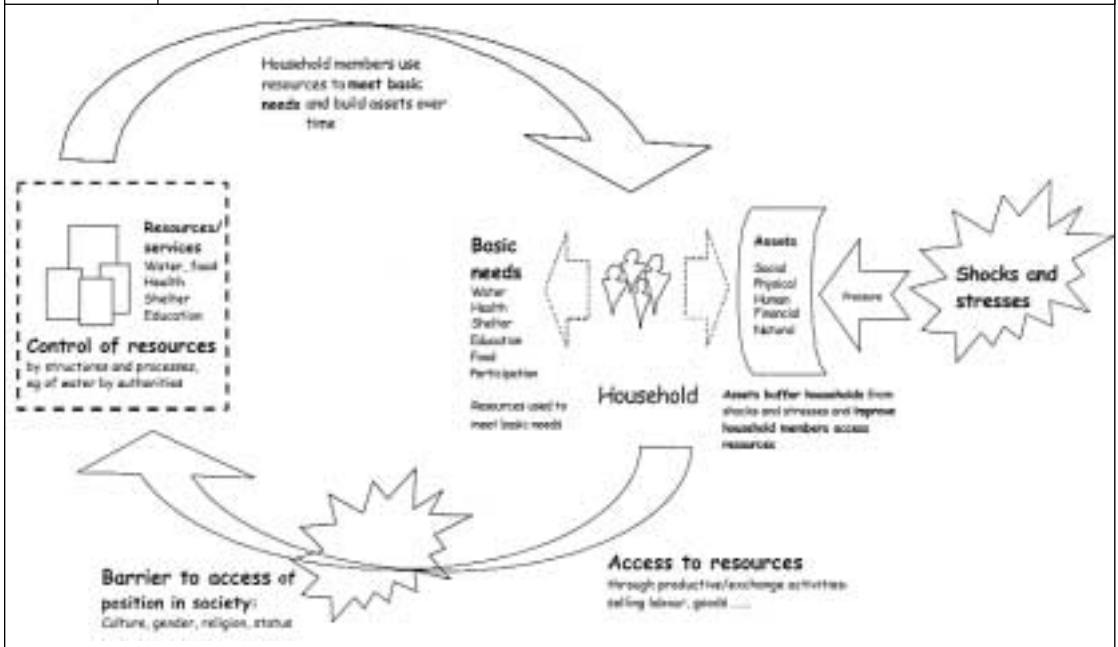
13. Osborne, N (1998), "A review of PUSH/PROSPECT", a CARE document.

14. Ruel, M, L Haddad and J Garrett (1999), "Some urban facts of life: implications for research and policy", *World Development* Vol 27, No 11, pages 1917-1938.

15. Garrett, J (1999), *Urban Challenges to Food and Nutrition Security*, International Food Policy Research Institute (IFPRI), New York.

16. Sharma, A and M Gupta (1998), "Reducing urban risk, India", TDR project progress report, SEEDS, Delhi.

Figure 3: Household Livelihood Security (HLS) Model applied to Urban Settlements



- control of resources by *structures*, for example, government and private sector employers; and processes, for example, laws and regulations. Regulations may discriminate in particular against the poor.
- Depending on the degree of success at overcoming barriers, resources/services secured by household members are used:
 - to meet immediate basic needs;
 - to build up assets (social, physical, financial and human) over time.
- Assets are used:
 - to buffer households against stresses and shocks, for example, sickness, fire, sudden unemployment;
 - to increase the ability to improve access, for example, improved education (human assets) may lead to better paid jobs.

Social assets. Low-income urban settlements are often characterized as having limited social assets, i.e. a lack of extended family structure, established networks of contacts or strong relationships of trust. However, for many newly urbanizing groups, which rely on mutual help and support, social assets can be strong. Many livelihoods project interventions concern the building of social assets. Focusing on the threat of disaster can be a key resource in developing sustainable risk reduction measures. In work carried out in Lima, Peru amongst low-income market traders,⁽¹⁷⁾ mutual distrust between the voluntary fire services and the market traders was cited as a major problem. The fire services were never called by traders when fires broke out and the fire services were frustrated at not being alerted. However, through organizing meetings and joint training events, misunderstandings between both parties were addressed. The firemen and women became accepted by the traders as professionals performing a useful job in protecting their livelihoods. In time, as the level of mutual trust improved, the local fire service organized mock evacua-

17. The NGO ECOCIUDAD, in particular Luiz Cortez and Liliana Miranda, with firemen from Caqueta fire station no.65; described in Sanderson D (1999), "Implementing action planning to reduce urban risk", *Open House International* Vol 24, No 3, Delhi, pages 33-39.

tions with traders and advised on fire reduction measures which the traders enacted. The fire station was also repainted with donations from the traders and became a forum for neighbourhood meetings.

V. ASSETS AND MORE SUSTAINABLE LIVELIHOODS

ACCORDING TO CHAMBERS and Conway, a livelihood is sustainable when it "...can cope with and recover from stresses and shocks, maintain its capability and assets, and provide sustainable livelihood opportunities for the next generation."⁽¹⁸⁾ Within the livelihoods approach, the threat of disaster is implicit in everyday life. At a household level, assets buffer households against shocks and stresses. Conversely, a disaster occurs when assets are "swept away", directly affecting a household. Livelihood strategies concern the building of assets over time and, in so doing, disaster reduction at community level becomes a development activity.

Building social assets, in particular, can increase the chances of greater self-reliance amongst households and neighbourhoods. A recent example comes from the Venezuelan floods in Catuche, a neighbourhood of Caracas. According to Manuel Larreal from the organization Ecumenical Action-ACT:⁽¹⁹⁾ "...the organization of the neighbourhood and the solidarity of the people saved hundreds of lives." He states that on the night of December 15:

"...as the flooding progressed, community members mobilized to assist one another. Neighbours who knew each other and had worked together for years communicated swiftly the news of the rising water. Older residents were helped from their homes by younger neighbours. When a few were reluctant to leave because they didn't believe the threat or because they were afraid their few possessions could be stolen, neighbours broke down doors and carried people forcibly to safety."

"In one incident where we were trying, unsuccessfully, to kick down the heavy door of a woman who refused to leave her house, a young gang member came along, pulled out a pistol and fired into the lock, allowing the door to be opened. The gang member then pointed his gun at the woman and ordered her out of her house. Seconds after she left the dwelling, the house fell into the raging current."

In Catuche, "...perhaps as few as 15 people died, a very small figure compared to other similar neighbourhoods where hundreds lost their lives."⁽²⁰⁾

These life-saving actions only came about after several years of community activities which addressed development issues concerning shelter and sanitation. From a livelihoods perspective, the social assets built up over time resulted in preparedness actions that saved many lives.

Achieving this degree of neighbourhood-level self-reliance lies at the heart of many livelihoods-focused programmes. The Programme of Support for Poverty Elimination and Community Transformation (PROSPECT), managed by CARE in Zambia, seeks to achieve this through forming community groups around the installation and subsequent management of water supply. The project, initiated in 1998 and funded by DFID, is a continuation of two previous projects, Peri-Urban Self-Help (PUSH) I, begun in 1990, and its successor PUSH II. Working in 14 urban settlements with a combined population of more than 600,000, the purpose of this five-year programme is for community-led, area-based

18. See reference 11.

19. Jeffrey, P (2000), "Lives saved in Caracas slum", Source: ReliefWeb.

20. See reference 19.

organizations (ABOs) to develop, manage and maintain basic infrastructure and services. To achieve this, the programme combines ABO formation with infrastructure delivery, and making available savings and loans programmes with skills training. Whilst the programme is concerned with delivering services with community support, services are in fact the vehicle with which social assets are being built. This is being approached in several ways:

- through the promotion of income-generating activities and the development of savings and loans to improve financial status (financial assets);
- through personal empowerment and livelihood improvement training to increase knowledge and skills (human assets);
- through community participation in ABOs which builds community relationships for better group-based activities (social assets).

In practice, livelihoods programming belongs to the same family as Action Planning⁽²¹⁾ and Participatory Rapid Appraisal (PRA). The tools for enacting livelihoods approaches are based on participatory approaches that empower communities to identify, prioritize and act on problems and opportunities. The project Promoting Linkages for Urban Sustainability (PLUS), also managed by CARE and funded by DFID, is seeking to use these tools within a livelihoods approach. PLUS will use an iterative process of “action oriented learning” (AOL) amongst vulnerable communities in India’s capital city, Delhi. Through a participatory approach to the prioritization of vulnerabilities as well as capacities, the AOL process seeks to enable community groups to identify, plan and implement initiatives to address neighbourhood problems and, in so doing, mobilize action towards self-reliance. Issues are likely to include, in particular, water, sanitation and health. To achieve consensus, leading to the implementation of risk reduction measures, a series of neighbourhood action planning workshops is planned. The project aims to reduce the vulnerability of 35,000 participating slum dwellers over six years.

21. See, for instance, Hamdi, N (1997), *Action Planning for Cities*, John Wiley and Sons, London.

VI. MAKING CITIES SUSTAINABLE FOR ALL

THE EXAMPLES ABOVE describe what are, primarily, community-level interventions. At a city management and policy level, actions leading to reduced risk need to be taken. In livelihoods parlance, the structures and processes that control the poor’s access to income and resources need to take account of the risks that poor urban dwellers face, and take steps to reduce these. To this end, most good urban programming works at both neighbourhood and policy formulation levels. Much urban legislation, however, still results, if sometimes unintentionally, in increased vulnerability of the poor: the prevention of permanent services to illegal settlements can increase ill-health, whilst the withholding of tenure inhibits consolidation of buildings, resulting in poorly-built shelters that easily collapse, catch fire or harbour disease.

If the poor’s increasing vulnerability to disasters is not addressed by policy, management or implementation then, simply put, urban living for them cannot be sustainable. At policy level, gaps between disasters and urban planning need to be closed. Proactive measures to reduce the threat of disaster need to be an integral aspect of urban planning. Maskrey concludes that “...the overall emphasis of national disaster management agencies needs to shift from one of emergency response towards an emphasis on risk reduction.”⁽²²⁾ Yet many efforts continue to be misguided: “In

22. See reference 8.

most countries it is extremely rare to find risk analysis to take account of the social, economic, institutional and cultural aspects of vulnerability.”⁽²³⁾

The development of building regulations in earthquake prone cities provides a good example of integrating risk reduction considerations into mainstream city planning. Collapsing buildings followed by fire are the main cause of death in earthquakes.⁽²⁴⁾ Yet as the earthquakes in Turkey in 1999 demonstrated, regulations can be ignored, leading to tragic consequences. After the earthquake, builders of high-rise buildings went into hiding, fearing the revenge of angry mobs who blamed them for building inadequately. Reasons for a lack of enforcement may include corruption, a lack of political will for enactment or a weak legislature. But for most of the growing number of urban poor who, by definition, live illegally, the enforcement of building regulations is a non-issue.

If formal controls, therefore, are outside the remit of those most vulnerable, new approaches need to be developed to reduce their vulnerability. Greater emphasis must be placed on proactive community-led risk reduction measures. At the neighbourhood level, the building of self-reliance and, crucially, “ownership” of the problem are critical. Programmes which focus on the building of assets at household level leave families and neighbourhoods less vulnerable, i.e. better able to withstand shocks and stresses. It is this approach which is at the core of the urban programmes currently being implemented by CARE in Angola, Mozambique, Zambia, India, Bangladesh and Madagascar.

In programming terms, risk reduction must become an indispensable component of urban development programmes. As the World Bank’s Disaster Management Facility states, disaster mitigation needs to be mainstreamed into development practice. Livelihoods approaches to urban poverty problems provide a way of seeing vulnerability to shocks and stresses as an integral part of the development picture. Whilst livelihoods programming is at a comparatively early stage of development, and has a rurally-focused origin, it appears that it has much to offer in understanding the dynamics of urban poverty and the role that disasters play. Such approaches place the vulnerable at the centre and, in so doing, aim to make city dwelling by the poor sustainable.

23. See reference 8, page 47.

24. Blaikie P, T Cannon, I Davis and B Wisner (1994), *At Risk: Natural Hazards, People’s Vulnerability and Disasters*, Routledge, London.