

# Responding to urban disasters

## Learning from previous relief and recovery operations

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## RESPONDING TO URBAN DISASTERS

### Learning from previous relief and recovery operations

Disaster response in an urban environment presents a wide variety of challenges. Humanitarian organisations often have more experience of disaster response in rural settings, and local authorities and community organisations may have little experience of planning and executing large-scale activities in response and recovery.

This paper draws on experience from the responses to number of urban disasters, including earthquake responses in Bam (Iran); Bhuj (India), Izmit (Turkey), and Kobe (Japan); storm and hurricane in Gonaïves (Haiti) and New Orleans (United States), and conflict responses in Angola and Mostar (Bosnia-Herzegovina). The paper highlights key lessons to guide local authorities, national governments, international agencies, the private sector, learning centres and community organisations in approaching the specific challenges of addressing and responding to disaster risks in urban environments.



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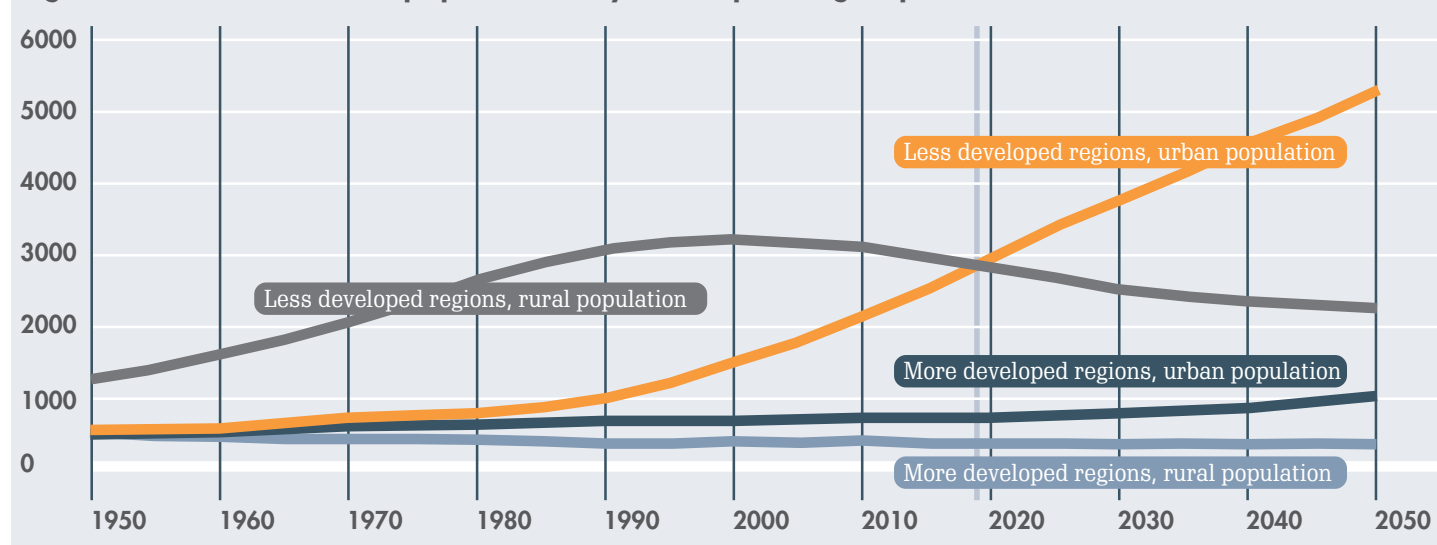
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## INTRODUCTION

According to the United Nations, the world's population first became more urban than rural between 2007 and 2008 – with more than 50% of the world's people now living in urban areas.

As Figure 1 illustrates, much of the increase in urban populations over the coming years will be in less developed regions<sup>4</sup>, because of natural population growth and rural-to-urban migration.

**Figure 1. Urban and rural populations, by development group, 1950–2050**



This shift is more than a transmission of population from one place to another – it is also involves a transformation of lives and livelihoods. Cities and urban centres are highly diverse in terms of the forms they take, the social and political structures that emerge within them, and the range of needs and interests of their constituent communities. This variety is as marked within as across different urban centres: there may be as much variety *within* Dhaka and Delhi respectively as there is *between* them.

Urban centres are typically strongly interconnected with peri-urban and rural areas within nations and regions, through common markets or trade links, and with wider globalised communities through remittances. Urban populations are very dynamic, with high rates of migration in and out of urban centres. Urban economies reflect this interconnectedness and diversity, and often making a vital contribution to the national economy.

As a result of all of this diversity, interconnectedness and size, urban governance often requires sophisticated social and political mechanisms. Effective urban governance draws on both formal and informal processes, and requires engagement of a broad range of stakeholders from local to national levels.

Of particular interest to the constituencies of ALNAP and Provention is how these shifts impacts on the need for and context of humanitarian response and disaster risk reduction work. As urban growth continues unabated in many parts of the world, the vulnerability of those living in urban areas is also increasing. This is for two main reasons: failure to address

<sup>4</sup> The UN Population Division categorises less developed regions as all regions of Africa, Asia (excluding Japan), Latin America and the Caribbean plus Melanesia, Micronesia and Polynesia.

safety and sustainability adequately in current growth patterns; and changing hazard patterns, especially those beyond the experience of local coping mechanisms.

Poorly built urban environments, and the low incomes of many urban dwellers, significantly increase vulnerability to natural hazards. In many poor urban communities, homes, businesses and community facilities are sited on hazard-prone land, with un-regulated and unsafe construction and inadequate or non-existent services. The poor communities living in these conditions cannot afford insurance, savings or asset accumulation, and their vulnerability is immense. This increases the risk that disasters will devastate both the built environment and the social economy, resulting in longer-term and more extensive setbacks to development.

Changes in climate risk in particular imply that urban areas may face hazards in the future which are outside their past experience. But while disaster events are often triggered by natural hazards, the real driver of urban disaster risk is weak governance and systems that fail to manage risks in the course of development processes. Recovery and reconstruction provide an opportunity to redress these failings, but only if prevention is made an explicit priority (Dind 2006). Experience has shown that the failure to incorporate disaster-risk reduction into all stages of a disaster response increases the likely impact of future disasters. Any disaster response should reduce future vulnerability by improving both the urban built environment and the resilience of urban social and governance systems. The concept of 'building back better' connects risk reduction, mitigation, equity, human rights, gender, housing and land and property rights by enabling smooth transitions from relief and recovery into long-term development (UN-HABITAT 2006).

On the positive side, most urban environments have considerable strengths in terms of economic production and distribution, human resources, social capital and civil society. 'Cities by definition are resource-rich' – the wealth of human and social capital in cities is part of what draws people to them, and should be used to support humanitarian response, recovery and development throughout disaster-response efforts (ALNAP interview with David Sanderson, 19 November 2008).

Increasing urban vulnerability means an increasing role for efforts in urban humanitarian responses and urban risk management. This role is distinct from that required in rural settings (see Box 1). When urban disasters do occur, a robust, coordinated, multi-hazard approach is crucial to ensure quick recovery, sustained development and reduced risk. Response agencies need planning and service-delivery solutions which are distinct from those used in rural areas, and which are appropriate to the wider governance systems and processes alluded to above. And approaches to disaster risk in urban centres need to move beyond a technical focus and the assumption that issues and problems can be addressed through straightforward planning.

### Box 1. What is an urban disaster and how is it distinctive from the rural?

An urban disaster is unique in that it occurs in a dense and highly complex (physical and non-physical) environment that has adapted, formally and informally, to absorb large populations and a range of economic activities, leading to distinctive features of:

- scale
- density
- economic systems and livelihood strategies
- resource availability
- governance and public expectations
- large informal settlements
- likelihood for compound and complex disasters
- potential for secondary impacts on rural or regional producers

The work undertaken for this paper highlights the need for much greater effort to understand the distinctive nature and potential of urban response and risk reduction. Issues related to urban risk, preparedness and response are typically debated and addressed within particular specialisations and silos – development planning, emergency management, humanitarian response, environmental management or climate change – with little cross-disciplinary dialogue

This paper represents an initial attempt by ALNAP and Provention to help to bridge some of these divides by relating issues of urban risk and response to longer-term development, providing eight evidence-based lessons on what has worked in previous efforts. Together, these lessons present a synthesis of what is currently ‘out there’, and it is hoped that they will prove useful both for informing ongoing and new efforts, but also for generating and focusing dialogue on this increasingly important area of work.

As such, the paper raises a challenge to the international community. If the overarching goals of humanitarian response and risk reduction work are to save lives and protect livelihoods, then much more work is needed to ensure these goals can be achieved in a rapidly urbanising world. At the present time, in the words of one senior leader, ‘neither the NGO community nor the donor community has co-evolved in the direction of facing urban poverty as rapidly as urban poverty has occurred’ (IRIN, 2007).

In order to address this in the context of disaster response and risk reduction, we would strongly advocate for partnerships to be forged between operational agencies, academic groups and think tanks to do more applied research to understand what works well in urban disaster contexts. Real-time analysis and learning in urban responses may be especially useful for strengthening collective understanding. Donors should prioritise the support of such work in their research and capacity development agendas. This collective effort needs to be practically focused, and help to develop new innovative tools and techniques that are relevant for undertaking disaster-related work in urban settings.

If, as the 2006 UN State of the World Cities reports concluded, “living in an overcrowded and unsanitary slum is now more life-threatening than living in a poor rural village”, this may be one of the most important tasks the international humanitarian community faces today.

## Further information

Satterthwaite, D (2007) ‘Tomorrow’s crises today: The humanitarian impact of urbanization’, <http://www.irinnews.org>

## LESSON 1 COMPREHENSIVE ASSESSMENT OF NEEDS, CAPACITIES AND VULNERABILITIES IS ESSENTIAL FOR APPROPRIATE TARGETING

Disasters have a wide range of impacts on different groups of people. This is especially the case for disasters affecting the diverse and fluid populations typical of cities and towns. **To meet the different needs of these groups, it is necessary to understand the vulnerability of children, men, women, the elderly, recent migrants and any other groups that may have special needs after a disaster.** Response organisations can track ongoing needs and gaps in services across all groups by using extensive assessment and by collecting disaggregated data - for example, by gender, age, ethnicity and income group.

### Assessing urban needs

The challenge of identifying the affected population in a large disaster is complicated by several factors characteristic of urban settings (Kelly 2003).

- Cities are demographically fluid and therefore hard to represent in a static picture
- Cities can absorb large numbers of people unnoticed, and often without formal registration. This is in contrast to refugee camps, where the arrival of people into camps is more readily apparent.
- Geographic segmentation of poverty and food security – and therefore targeting of response – can be difficult given that urban areas often include a wide range of people from very wealthy to very poor living in close proximity.
- Wealth ranking is often complicated by the higher costs of living in urban areas compared with rural settings, affecting typical ratios such as income relative to costs of food and other necessities.
- Informality in the recording of land and property rights, or destruction of records, can also cause difficulties in identifying the social distribution of loss and rights claims.

Cities are usually host to a wide variety of inhabitants who inhabit and use the city in different ways, at different times of the day or in different seasons. Many may live outside the city but commute in for work. Others may live and work in the city but depend on trade with those on the periphery for food and other basic commodities. Still others depend on the urban economy through remittances but live at great distance.

Some people can be overlooked, particularly after a disaster when humanitarian aid is being delivered to as wide a section of the population as possible. In particular, the needs of households with chronically ill, elderly and/or disabled members are often forgotten, or temporarily put on hold during disaster recovery and response (Box 2).

## Further information

USAID (2008) *Emergencies in Urban Settings: A Technical Review of Food-Based Program Options*, <http://www.aed.org>

Feinstein International Famine Center (2008) 'Profiling Studies of Urban IDPs in Khartoum–Sudan, Abidjan–Cote d'Ivoire and Santa Marta–Colombia'

UNHCR (1997) *Urban Policy on Refugees in Urban Areas* – critique of this policy has also resulted in the Obi and Crisp (2001) UNHCR Policy Development and Evaluation Service Unit report, 'Ignored displaced persons: The plight of IDPs in urban areas'

Landau, L (2004) *FMO Research Guide: Urban Refugees*, Forced Migration Online, [www.forcedmigration.org](http://www.forcedmigration.org)

## Targeting assistance

Guidelines from the World Food Programme (WFP) and US Agency for International Development (USAID) on targeting urban populations with food aid suggest the value of self-targeting programmes, in which people choose to participate or not in particular programmes. This can save costs – financial and time – related to data collection and selection, and if done effectively avoids the risk of excluding certain vulnerable groups. However, such programmes are feasible only if benefits are set low enough to attract only the poorest among those who have been affected by the disaster (Kelly 2003; WFP 2002), which does call for a degree of contextual understanding and local knowledge.

The advantages and disadvantages of other targeting approaches presented in the USAID guidelines are outlined in Table 1. Considerations in selecting a targeting approach include (USAID 2008):

- proportion of beneficiaries within the wider population
- type of distribution programme
- balance between the affordability of a programme and accuracy in reaching the affected population
- feasibility, depending on scale, of a targeting approach.

Community-based targeting, often used in the rural delivery of humanitarian aid, may not work as well in urban areas because poverty and malnutrition may be widely dispersed in pockets across the city. Geographic targeting may also be



## Box 2. Tips for addressing needs of vulnerable groups during disaster response

**Chronically ill** Assessing the disaster's impact on behaviour, family structures and access to treatment will highlight potential changes in the patterns of transmission and treatment. After Hurricane Katrina many of those with HIV who were dispersed to new areas had trouble accessing comparable health benefits and experienced disruption to their anti-retroviral treatments. The care of those who stayed or returned rapidly was also affected as many healthcare workers left the area (IFRC 2008).

In addition to priority medical interventions after a disaster, it is also important to maintain ongoing health programmes, such as HIV/AIDS prevention programmes to supply condoms, provide counselling and testing, and organise school and media campaigns.

Involving the chronically ill and support organisations in emergency and response planning will ensure needs are articulated and addressed effectively in the response.

**Elderly and disabled** The response to the Kobe earthquake highlighted the need to assess existing community support networks. This will improve understanding of the support lost to the elderly and disabled from the deaths of family members or others in their social networks, and how these social communities can best be supported (Nakagawa and Shaw 2005; Shaw and Goda 2004).

**Street children** Orphans and street children in urban areas may be invisible to agencies focusing on damaged houses and displaced households. Coordination with local community-based organisations already working with orphaned and street children will ensure that these children are included in relief programmes (WFP 2002).

**Recent migrants** Assistance to recent migrants (including urban refugees) targeting long-run integration and sustainability strengthens their livelihoods and resilience in robust ways that will serve them in their current communities or their areas of origin should they return (Feinstein International Famine Center 2008; Obi and Crisp 2004). 'People-orientated' planning principles will allow migrants themselves, as well as community-based organisations and development agencies, to contribute their own detailed knowledge of their population to programme planning.

**IDPs** Internally displaced people (IDPs) and refugees in urban areas often receive less support than their rural counterparts from international and domestic IDP and refugee aid systems. The ongoing perception of local authorities of IDPs as a temporary phenomenon has meant that there has been little incentive to extend infrastructure support and services or social protection to IDPs (Hamid 1992).

Research shows that a range of individuals and families are displaced in urban areas and often need dedicated community support. As Hurricane Katrina in the U.S. demonstrated, survivors from urban centres may also be displaced back to rural areas or other towns.

The rights and livelihoods of refugees can also be promoted, but this must be done without compromising the perceived well-being of the host population (Jacobsen and Landau 2005). Organisations can play a strong role in this by advocating for refugees' right to work, the opening of labour markets and the reduction or relaxation of administrative barriers (such as identification requirements) alongside advocating for the rights of the poor and any host populations into which survivors are relocated so as not to add new dimensions to inequality, dependency and social tension in local communities.

**Table 1. Advantages and disadvantages of various targeting approaches in urban emergencies**

| Targeting approach        | Definition                                                                                                                       | Advantages                                                                                                                                                                            | Disadvantages                                                                                                                                                                      | Programme examples                                                                                                                                                                     |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Geographic targeting      | Beneficiaries are selected on basis of geographic location by poorest or most vulnerable districts.                              | <ul style="list-style-type: none"> <li>Easy and quick</li> </ul>                                                                                                                      | <ul style="list-style-type: none"> <li>Low targeting accuracy if vulnerable households are widely dispersed</li> </ul>                                                             | <ul style="list-style-type: none"> <li>Targeted household distribution</li> </ul>                                                                                                      |
| Self-targeting            | Beneficiaries 'self-select' to participate. Aspects of programme design encourage target group to participate and others not to. | <ul style="list-style-type: none"> <li>Avoids time and resource expenses</li> </ul>                                                                                                   | <ul style="list-style-type: none"> <li>Risk of significant leakage of resources to those who are less vulnerable</li> </ul>                                                        | <ul style="list-style-type: none"> <li>Food for work</li> <li>Wet feeding (e.g. soup kitchens)</li> <li>Market assistance programmes</li> </ul>                                        |
| Administrative targeting  | Beneficiaries are selected from a population list; the criteria used for selection differ by programme.                          | <ul style="list-style-type: none"> <li>Simple to use when accurate lists are available</li> </ul>                                                                                     | <ul style="list-style-type: none"> <li>Risk of exclusion if lists are incomplete or out of date (marginalised/new arrivals)</li> </ul>                                             | <ul style="list-style-type: none"> <li>Targeted household distribution</li> </ul>                                                                                                      |
| Community-based targeting | Distribution list is identified through community leaders' knowledge and criteria pre-determined by community.                   | <ul style="list-style-type: none"> <li>Community engagement</li> <li>Not restricted to a small number of proxy targeting criteria</li> </ul>                                          | <ul style="list-style-type: none"> <li>Prone to exclusion if community leaders favour one group over another</li> </ul>                                                            | <ul style="list-style-type: none"> <li>Targeted household distribution</li> </ul>                                                                                                      |
| Proxy targeting           | Beneficiaries are selected on basis of observable characteristics (e.g. gender of household head, unemployed, adolescent).       | <ul style="list-style-type: none"> <li>Easy to use if selection traits are obvious</li> <li>Multi-proxy targeting increases accuracy but may be costlier than single proxy</li> </ul> | <ul style="list-style-type: none"> <li>Risk of exclusion and inclusion error when using single proxy targeting</li> <li>Proxies may be difficult to observe objectively</li> </ul> | <ul style="list-style-type: none"> <li>Targeted household distribution</li> <li>Market assistance programmes</li> <li>Community-based management</li> <li>Supplementary aid</li> </ul> |
| Means-testing             | Beneficiaries are selected on basis of income, expenditures, wealth, or assets.                                                  | <ul style="list-style-type: none"> <li>High potential targeting accuracy</li> </ul>                                                                                                   | <ul style="list-style-type: none"> <li>Time-/resource-intensive, requires census of all potential beneficiaries</li> </ul>                                                         | <ul style="list-style-type: none"> <li>Targeted household distribution</li> <li>Food for training</li> </ul>                                                                           |
| Institutional targeting   | Beneficiaries are selected based on affiliation with a selected institution.                                                     | <ul style="list-style-type: none"> <li>Relatively easy –beneficiaries already attend selected institutions</li> </ul>                                                                 | <ul style="list-style-type: none"> <li>Excludes people who would be eligible but are not registered with targeted institutions</li> </ul>                                          | <ul style="list-style-type: none"> <li>School feeding and aid distribution</li> </ul>                                                                                                  |

Source: Adapted from USAID 2008



of limited use, as communities in cities may be defined by family and social networks rather than geographic proximity (WFP 2002).

CARE's Kabul Shelter and Settlements (KASS) programme demonstrates good practice in relation to these challenges. The programme began with a land-usage survey to identify shelter opportunities, and then established community councils to select beneficiaries in clusters rather than individually. The selection was done through a participatory process with trained community mobilisers conducting door-to-door surveys to assess needs, which helped to build trust and strengthen local governance. The programme emphasised the role of women as critical mobilisers in this process (CARE 2007).

## Further information

ProVention's Community Risk Assessment Toolkit – <http://www.proventionconsortium.org>

USAID (2008) *Emergencies in Urban Settings: A Technical Review of Food-Based Program Options*, <http://www.aed.org>

## LESSON 2 ENSURE SAFETY OF AFFECTED POPULATION AND OPERATIONAL STAFF IN THE IMMEDIATE AFTERMATH

The high density of urban environments, and lack of effective policing during disasters, can increase safety risks to the disaster-affected population and operational staff following a disaster. A Red Cross Red Crescent evaluation of the humanitarian response to the 2004 earthquake in Bam, Iran, highlighted the importance of quickly restoring law and order. Many people moved into Bam from rural areas during the earthquake response, and the looting of supplies from relief trucks during the first three days demonstrated that effective distribution was highly dependent on existing law and order (IFRC and Iranian RCS 2004). The looting of property of those affected by the disaster also presents a threat to the coping and recovery of communities.

However, there have also been many instances where crime and looting did not emerge in post-disaster situations, despite pessimistic predictions. **Good communication and community outreach by local authorities and community organisations in the post-disaster setting are critical to maintaining a stable environment and enabling progress in relief and recovery.**

Evacuation to shelters away from the most damaged areas of the city may also be necessary. The chaotic and congested evacuation during Hurricane Katrina shows the need to plan for orderly evacuations and to give special consideration to the needs of patients in hospitals, residents without their own means of transportation, and others who may have difficulty evacuating (Gray and Herbert 2006). In Santo Domingo after Hurricane George, a community group in the Los Manguitos 'barrio' (municipality) helped vulnerable people go to local shelters and organised security. The police and Red Cross were not able to offer assistance a week or more after the disaster despite the affected area being just a few miles from the city centre. The key to the successful community intervention was strong and networked social capital: youth-led, locally independent and legitimate in the eyes of the community (Pelling 2003).

Even in the most built-up urban environments, most life-saving search-and-rescue (SAR) activities are undertaken by affected communities themselves, or by neighbouring national SAR teams. The process of search and rescue is often virtually finished by the time that international SAR teams arrive, despite their high-profile media coverage. International teams may provide experience and equipment to assist in specific, highly demanding rescue situations. However, damage in narrow streets may also limit access for emergency-response equipment, and effective use of low-tech transport options

can be more important. The relative costs and benefits of using international SAR teams in urban settings need careful consideration, and such teams must be quickly deployed if they are to contribute significantly. One ALNAP member – the Swiss Development Cooperation agency, has had its SAR function subjected to ISO9000 standards, and may be a useful good practice example for others to draw upon<sup>2</sup>.

One of the main lessons from the earthquake in Kobe, Japan in 1995 was that:

Even the most affluent and sophisticated of societies has difficulty coping with major disasters. Reliance on costly technology rather than people, machines rather than people's capacities, can leave developed societies – especially their crowded cities – vulnerable to catastrophe. After Kobe's earthquake, it was the resilience and initiatives of the affected families in the face of cold weather, water shortages and poor communications that provided the basis for the initial response, not the pre-planned emergency systems (IFRC 1996).

### Further information

RedR safety and security materials – <http://www.redr.org.uk/>

FEMA (2003) Urban Search and Rescue Field Operations Guide, <http://www.fema.gov/emergency/usr/resources.shtm>

International Search and Rescue Advisory Group (INSARAG), <http://ochaonline.un.org/?TabId=1436>

## LESSON 3

### RESPONSE AND RECOVERY EFFORTS SHOULD START ON DAY ONE, AND EFFECTIVE COORDINATION, PARTNERSHIPS AND COMMUNICATIONS ARE PARAMOUNT

Because of the urgency and scale of efforts, and the invisibility of vulnerable urban groups, response and recovery activities in urban environments are difficult to manage. Numerous and diverse teams are typically working at a scale and speed beyond the day-to-day experience of local authorities and civil society organisations. Many humanitarian organisations face considerable challenges, primarily due to staff turnover and the difficulty in maintaining institutional capacities between large disaster responses (Ozcevik et al 2008).

Effective coordination and project management among responders is therefore especially critical in the early stages and in urban environments where damage to buildings and infrastructure may hamper communication.

Individual agencies might have good internal systems and planning, but overall unified coordination between agencies tends to be lacking. Effective recovery requires the coordination of initiatives to support livelihoods/employment, shelter/housing, and urban services such as water and sanitation systems, power, communications and transport. Links to environmental planning are necessary to assess the impacts of reconstruction, and wider impacts from the disaster (and primary impacts in the case of a technological or industrial disaster). Environmental impacts are quite common in urban areas with industrial sites that may have been damaged by the disaster. **An effective coordination mechanism can help to ensure that all relevant needs are considered across both departmental divides and diverse stakeholder interests.**

Such coordination and collective decision making can be strengthened by the use of community liaison officers and cross-organisational 'operational response' systems, such as those mobilised in Mozambique after Cyclone Favio in 2007:

<sup>2</sup> For more details visit [http://www.sdc.admin.ch/en/Home/News/Close\\_up?itemID=161263](http://www.sdc.admin.ch/en/Home/News/Close_up?itemID=161263)

"...the most technically impressive of Mozambique's innovations was a series of 'operation rooms' the government opened in the disaster zones... During the emergency, these rooms were occupied by all participating agencies, significantly improving communications and coordination... The idea for these centres was taken from Guatemala, which was badly damaged by hurricanes Stan and Mitch ..." (Foley, 2008, p. 199.)

In the response to the 2004 tsunami in Aceh, Indonesia, the Indonesian government developed a dedicated agency to oversee the recovery and coordinate government ministries. Donors supported this initiative by seconding staff to the agency to strengthen capacities quickly.

Reflecting on the response to Tropical Storm Jeanne in Haiti, a CARE evaluation identified the need for an accepted and enforced code of conduct among NGOs for information sharing, coordination and collaboration. The sharing of a regularly updated emergency organisational chart was also recommended for the agencies active in the response. The evaluation highlighted the potential for CARE's ongoing partnerships and relationships with key government agencies responsible for health, water and public works, as well as with other development organisations in the area, to serve as the foundation for efforts to mitigate future disaster risks (CARE 2005).

The response in Bam was the first test of a new government disaster-response programme, and resulted in overlap as well as competition between aid agencies and government ministries. Some needs, such as for hospital beds, were oversupplied, while others went unaddressed. The Iranian Red Crescent Society (IRCS) was also faced with a difficult challenge in facilitating coordination among both Red Cross Red Crescent partners and other aid organisations. The sheer volume of relief and response activity was beyond the capacity of the IRCS, and probably of any single organisation (IFRC and Iranian RCS 2004). By enabling more intensive partner engagement in problem-solving, multi-partner initiatives are often better suited to ensuring sufficient capacity to manage the response and to support clear communication, partnership and coordination between responding agencies.

**Response organisations also benefited from partnership with private-sector businesses and reaching beyond their typical recruiting pools to access individuals with relevant experience managing large-scale and complex projects of construction and urban development.** In India, the Gujarat Urban Development Company (GUDC) is a special development authority established by the government before the 2001 Bhuj earthquake to conceptualise and implement urban development projects. After the earthquake, the Gujarat state government designated the GUDC as the implementing agency for overseeing recovery plans. The state government also outsourced significant tasks to planning consultants. These tasks included infrastructure planning and review of building-permit applications (Balachandran 2006).

**Public-private development authorities can also play a critical role.** The Bhuj Development Council brought a 'broad vision and long-term stake in the city's development' and was a strong advocate 'on behalf of citizens to the government and vice versa' (Balachandran 2006). Development authorities may also be able to use tools such as betterment charges. This is a common method for funding development investments in non-disaster times by taxing improvements in the value of private property arising from public investment. This can facilitate investments in infrastructure and services as part of the recovery process.

## Communication

There is a profound need in post-disaster responses for clear communications that can convey complex scientific and technical knowledge simply, and reach the affected population through local channels. **In urban environments, local advertising and marketing firms can help to convey key messages and reach target groups** (D Sanderson, ALNAP interview, 19 November 2008).

- After the 1995 Kobe earthquake, the failure of information systems resulted in delayed relief. Many people evacuated to whatever shelter they thought fit or went to stay with relatives, and did not go to the 'officially' planned shelters.

This led to difficulty in registering beneficiaries, demonstrating the reliance of relief delivery on timely and accurate information (IFRC 1996).

- Following Tropical Storm Jeanne in 2004 in Haiti, there were huge lines and considerable tension at relief-distribution points. CARE used radio to broadcast public information to dispel rumours and reduce the tension and queuing at distribution points (CARE 2005).
- Radio was used quite successfully in Aceh after the Indian Ocean tsunami to update affected communities on reconstruction progress and to enable community members to ask questions. A variety of call-in programmes focused on both reconstruction assistance and psycho-social support. A key lesson here is the value of using familiar and established media outlets (CCP-I 2009).

## Further information

UN-HABITAT (2007a) 'Sustainable relief and reconstruction – Synopsis from World Urban Forum II & III', Rethinking Emergencies, UN Human Settlements Programme, Nairobi, Kenya, <http://www.unhabitat.org>

Leitmann, Joseph (2007) 'Cities and calamities: Learning from post-disaster response in Indonesia', Journal of Urban Health 84 (Supplement): 144-153, <http://www.pubmedcentral.nih.gov>

## LESSON 4

### EFFECTIVE MULTI-STAKEHOLDER PLANNING IS ESSENTIAL BOTH BEFORE AND DURING DISASTERS, AND REQUIRES INVESTMENT OF TIME AND RESOURCES

Experiences in recent disasters have highlighted the importance of shifting the focus of response from relief to recovery at the earliest feasible point. A Harvard University study of 30 efforts in disaster relief and recovery concluded that 'initial actions were never neutral – they either support longer-term development or undermine it' (Anderson and Woodrow 1989; UN-HABITAT 2007b).

Recovery after a disaster is often seen as an opportunity to rebuild in safer, more secure ways. One example often mentioned is the re-plotting of urban centres to allow for wider roads accessible by emergency vehicles. Yet the complexity of urban environments can make 'building back better' a significant challenge. **Having effective plans in place before a disaster makes a difference in speeding up recovery and minimising risks after a disaster.** However, the reality is that many local governments give little attention to disaster recovery and mitigation planning in local development plans (Berke and Campanella 2006).

Even if disaster scenarios and potential recovery options have not been developed before a disaster, a disaster-recovery plan is an important resource afterwards. A recovery plan can enable consideration of long-range resiliency in short-term recovery actions, to promote redevelopment that is socially just, economically viable, environmentally compatible, less vulnerable to hazards, complemented by adequate infrastructure investment, and aligned to long-term urban development plans (Berke and Campanella 2006). The plan needs to be realistic about the timing and resource requirements for reconstruction, but the critical step is to start planning early – with the engagement of all important stakeholders in the community. Experience in New Orleans following Hurricane Katrina shows engagement in the planning process is more important than the presence of plans themselves. Involvement of local residents, public officials, business people and all relevant agencies in local government were most important in quickly considering the range of recovery options, and guiding the development of a broader multi-stakeholder recovery plan.

As part of such plans, national regulatory frameworks and information systems often require drastic improvements and reforms – each of these areas is looked at below.

## Updating national regulatory frameworks

National policy can be critical in mandating, enabling and resourcing proactive planning at local levels to avoid and reduce risks. However, in many cases national planning standards are not adequate to guide recovery. In addition political processes and corruption can delay or impede effective recovery efforts. In such situations **it can be useful for all stakeholders to advocate with and support national and local governments to establish specific recovery standards.**

After the Bhuj earthquake, the Gujarat state government found itself searching for an appropriate regulatory framework that could respond quickly to the earthquake and the complex challenges of reconstruction. Balachandran (2006) has suggested that the national Town Planning Act 'could have been amended to introduce special provisions for disaster-affected areas, changing laws, rules, procedures and conventions to increase speed and flexibility'. Similarly, reconstruction after the 1999 earthquakes in Turkey was often characterised by the lack of coordination with city housing and development plans (Akinci 2004).

In contrast, after the Kobe earthquake in Japan in 1995, the Japanese government enacted a 'Special Act for Disaster Afflicted Urban Areas' with special provisions for urban planning. These included designation of specific roles for neighbourhood committees called *machizukuri*, for land-readjustment projects. *Machizukuri* planners led micro-level planning with residents and public agencies as neutral advocates to promote neighbourhood planning and restoration (Balachandran 2006; Supporters Network for Community Development 'Machizukuri'). In many cases there is also room to adapt existing regulations and integrate performance standards to catalyse reconstruction in innovative ways. Special development districts and local development authorities have been used this way in the Bhuj response (as described below in this section).

In conflict contexts the governance structure itself may be a victim of the crisis. At the end of the Bosnian conflict in the mid-1990s, the European Union Administration of Mostar (EUAM) attempted to establish a transitional administration towards joint governance of the city. This effort failed to galvanise short-term transition to effective governance. By focusing on restoring the pre-conflict social and political balance, EUAM failed to acknowledge the demographic change in Mostar caused by in-migration from surrounding towns and villages. Seeking to isolate the transitional administration from the factions in the conflict, EUAM also missed opportunities to build on pre-existing planning systems and capacities to ensure the continuation of the reconstruction agenda beyond its own mandate (Narang-Suri 2008).

Through its International Disaster Response Law programme, the IFRC is currently promoting common regulatory measures to support all aspects of disaster management. This is intended as a resource for national governments (see under Further information, at the end of this section).

## Collecting and sharing information

In rapidly developing cities, effective relief and recovery can be hindered by a lack of up-to-date city maps and low levels of information on the unplanned areas of the city. One of the first steps in the reconstruction in Bhuj, India after the 2001 earthquake was the creation of an Atlas for Post-Disaster Reconstruction. The atlas was shared publicly and formed the basis for reconstruction planning and broader public awareness campaigns on disaster risk. Making the maps publicly available also proved helpful in improving them, because members of the public were able to point out mistakes and shortcomings. These maps were then matched with damage-survey data as the basis for drafting a development plan to guide reconstruction and ongoing development (Balachandran 2006).

The development of a common information clearinghouse for redevelopment and recovery is another critical step. By combining information from different local government agencies to create a unified 'base map', investments in additional



surveying and analysis can be streamlined and shared among all organisations, avoiding problems of both duplication and under-investment in information gathering. In the response to the Yogyakarta earthquake in Indonesia in 2006, the World Bank and IFRC worked with the national government to collect summary information from a variety of response organisations. This information was combined with pre-existing data on poverty and population, to provide an early but detailed view of the broader social and livelihoods impacts of the earthquake.

In Kabul, Afghanistan during a post-conflict shelter project, CARE worked with the local community to combine hand-drawn maps made by community members with global positioning system (GPS) maps. This created an up-to-date city map that was shared with the Kabul Municipality and community members, and enabled the selection of reference points for shelters, drainage, road improvement and well locations. The maps also provided a spatial analysis of the programme beneficiaries and surrounding areas, and were used by beneficiaries to advocate with the Kabul municipality for land tenure (CARE 2007).

### Further information

IFRC's site on international disaster response law – <http://www.ifrc.org/what/disasters/idrl>

UN-HABITAT (2006) 'A new start: The paradox of crisis', Habitat Debate, UN Human Settlements Program, <http://www.unhabitat.org/pmss>

## LESSON 5 ENGAGEMENT AND PARTICIPATION OF LOCAL ACTORS ARE ESSENTIAL FOR A RELEVANT AND EFFECTIVE RESPONSE

Responsibilities for urban planning and development are often shared across a wide range of municipal departments. In addition, civil society organisations and the private sector are significant players in development decision-making. However, there is often a gap in coordination between civil society (non-governmental and community-based organisations) and municipal governance in cities. This hinders the understanding of vulnerable urban groups and of ways to protect those groups from urban disasters (Wisner, in World Bank 2003). It also hinders the sense of ownership by the community that is necessary for the sustainability, resilience and long-term effectiveness of recovery activities. Many urban residents, especially those living in informal settlements, are largely excluded from formal governance processes and services. Many communities also have a distrust of public–private partnership, fearing the influence of private-sector actors on public planning and priorities. By seeking to close these gaps and deal with these issues of power and trust, **participatory approaches to recovery can tap the wealth of knowledge and experience in civil society organisations to design and implement disaster-response programmes that both meet current needs and effectively reduce future risks.**

However, many recovery strategies are based on a strategy of 'assistance' rather than 'participation'. Dind (2006) contrasts examples of these two models in the response to Hurricane Stan which heavily damaged the town of Tapachula in Chiapas, Mexico in 2005. A government-backed rebuilding programme used construction companies from outside the region, and focused on reconstructing houses at a large scale with centralised decision-making and limited opportunities for affected households to influence the reconstruction. Caritas-Mexico, in contrast, undertook several smaller projects that put the residents in charge of managing the reconstruction of their homes and strengthened community networks and solidarity in addition to rebuilding houses. Such participatory approaches can help to balance the challenges of scale and quality, using a broader set of community resources and enhancing capacities and resilience.

The following strategies can help to use civil society capacities to strengthen participation in disaster response (World Bank 2003):

- develop stakeholder partnerships, clearly outlining roles and responsibilities and exit strategies
- assess and remove obstacles to collaboration between vulnerable community groups and local governance
- provide incentives for increased cooperation and participation by the local community.

## Community consultation and ownership

Early and ongoing consultation with community groups and local development organisations throughout the recovery process is an important factor in influencing better outcomes. **Public consultation is an important element of local governance and is especially critical in post-disaster decision-making to ensure public ownership of the recovery plan and to anticipate and raise critical issues before decisions are agreed.** 'The greater the range of participants, the greater the opportunity for public officials to educate a wider array of stakeholders about poorly understood problems and potential solutions' (Berke and Campanella 2006).

Consultation also gives community members an opportunity to contribute their local knowledge and capacities, and can help to address governance weaknesses. Ongoing community feedback ensures a better fit between recovery plans and community decision-making, helping communities to avoid the cycles of complacency and weak governance. Community involvement can also directly address the differences in interests among community groups that often trap poor and vulnerable residents in risk-prone environments.

- In the response to the 1999 earthquakes in Turkey, limited consultation with affected communities led to housing reconstruction being based on a common standard applied to different cities affected by the earthquake. This resulted in lost uniqueness and character in the different cities, and limited fit to the full needs and expectations of residents, affecting long-term sustainability (Akinci 2004).
- After the Bam earthquake, Iran's Housing Foundation led the rebuilding of damaged homes based on a process of consultation between firms and households, emphasising household preferences and community involvement in all phases of reconstruction. Community consultation led the programme to recognise the importance of land and date trees for city residents, and to preserve land-ownership as part of heritage, rather than simply maximising physical housing solutions. One lesson from this programme was the need for consultation to be enabled with streamlined decision-making processes to avoid the greatest cause of delay in reconstruction – the considerable paperwork required (Fallahi 2007).
- In the reconstruction in Bhuj, more than 150 public consultation meetings were held to ensure broader participation on a variety of aspects of the recovery. An important lesson from the Bhuj response was that public consultation should focus on effective consensus-building and not just opinion-seeking (Balachandran 2006).
- CARE's Kabul Shelter and Settlements (KASS) programme developed a memorandum of understanding with the Kabul Municipality, which established mechanisms for regular communication between the community and the municipality and linked housing to broader issues of land tenure, occupancy rights and housing security. An additional agreement with each beneficiary outlined the location, type of shelter and roles and responsibilities of all parties during construction and post-construction phases. This created accountability in both directions – to donors and also to project participants – and dignified participants (CARE 2007).

## Expanding the capacity of communities to manage disaster risks

One priority of disaster response should be to expand community capacity to respond to future disasters and protect livelihoods. In examining the recovery experience from the 1995 Kobe earthquake, Nakagawa and Shaw (2004) found that community volunteers and community organisations played the most important roles at every stage of the disaster response. While natural disasters can create social divisions between communities, **social capital is crucial for**



**mobilising individual members of the community in collective recovery action and in advocating effectively for sustained governmental investment in risk reduction.** In urban environments, social capital is often based less on location than on dispersed social networks. This can present challenges for local preparedness and response which benefit from strong social links within neighbourhoods.

Strengthening social capital in cities can be seen as a political process and may threaten the status quo – locally and nationally. Aid organisations need to assess and understand the strengths and weaknesses of local governance processes in order to balance both engaging local government and assisting affected communities to advocate strongly and act on their own behalf. Recovery plans need to recognise the roles of diverse actors and multi-faceted aspects of local and national governance systems.

Experience from Kobe shows that community social capital and leadership are the most effective elements in supporting collective action and disaster recovery. Communities with existing social capital and a history of community activities are well positioned to participate proactively in reconstruction (Nakagawa and Shaw 2004). Damage from the Kobe earthquake was concentrated in low-income inner-city communities with large concentrations of elderly people. Shaw and Goda (2004) found that the Kobe earthquake – and specifically the civil society response to the earthquake – engendered an increase in volunteering and enhanced cooperation between local governance and residents' associations. This led to both an 'emerging sense of self-governance' and a 'stronger sense of community solidarity'. Pre-existing community-based organisations (CBOs) helped fill the gap between government support and people's immediate and long-term needs. Consequences of this included stronger civil society, better relationships between communities and local government, and a more efficient post-disaster response (Shaw and Goda 2004).

However, the People's Rehabilitation Plan (PRP 1998) found that recovery in Kobe had stagnated after several years – while infrastructure had fully recovered, victims' lives and livelihoods had not. Moving out of communities into separated temporary shelters had shattered important community links. This weakened the community assistance which was such an important coping strategy, particularly for the elderly (Shaw and Goda 2004). The Kobe Action Plan (KAP) was created in 2001, six years after the earthquake, in response to this gap in recovery. KAP focused on bringing communities into the decision-making process through the active participation of residents' associations and other community organisations. The aim was to reach collective decisions and enable the community collectively to keep pace with and manage unseen factors during the reconstruction (Shaw and Goda 2004).

The response to the earthquake in Bhuj highlighted the poor as investors in their own coping and recovery, with slum dwellers making quick cash investments in homes and restoring livelihoods. A survey by the All India Disaster Mitigation Institute of 9,800 families found that in the two years following the earthquake these families invested 13 million rupees (US\$289,000) in recovery, with half spent on shelter improvements and the rest on livelihoods. In addition, residents of 14 surveyed slums were also willing to pool resources for community infrastructure recovery. Residents of Bhuj didn't want aid in the narrow sense – they wanted to rebuild their businesses and livelihoods. These family-level initiatives demonstrate that, even in the midst of a disaster, communities retain the ability to target investments, helping to alleviate long-term poverty and stimulate the local economy (Nakagawa and Shaw 2004; IFRC 2004). Any incoming humanitarian and development assistance should seek to build on these capacities, and not to replace them.

## Further information

Sphere standards and Humanitarian Charter – <http://www.sphereproject.org>

Humanitarian Accountability Partnership – <http://www.hapinternational.org>

UN-HABITAT (2007b) Enhancing Urban Safety and Security: Global Report on Human Settlements 2007 – <http://www.unhabitat.org/content.asp?typeid=19&catid=555&cid=5359>

## LESSON 6

### RE-ESTABLISHING LOCAL ECONOMIES AND LIVELIHOODS IS FUNDAMENTAL FOR RECOVERY EFFORTS

Livelihood analysis has traditionally been applied to rural areas, and has been increasingly adapted to explain and understand the livelihoods of urban households and the connection between urban poverty and urban disasters. **The dynamism of urban livelihoods provides an opportunity for innovative humanitarian and development work for aid delivery, recovery and reconstruction, potentially with lower costs and wider benefits.** However, this would require efforts to establish a good understanding of urban economic and livelihoods systems is necessary to inform the design of such urban-livelihoods initiatives.

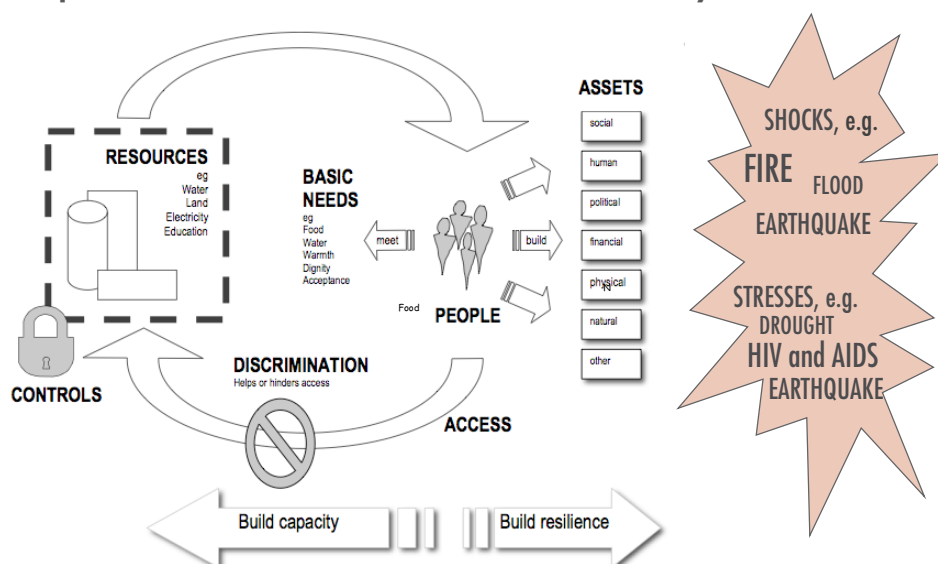
It is also important to recognise the livelihood links between urban and peri-urban areas. Disruptions to urban economies due to disasters may (positively or negatively) affect the demand for goods and services from peri-urban areas and reduce the flow of remittances to rural areas. On the other hand, disasters in peri-urban and rural areas may stimulate an increased influx into urban areas (including small urban centres), as rural people who were already experiencing livelihood stress chose to rebuild where they see better prospects for their children.

The livelihoods framework emphasises household-level assets as the basis of coping and recovery of the poor. This view also focuses on the impact of disaster on former livelihoods. By connecting livelihoods with urban disaster response, humanitarian aid supports households in rebuilding their livelihoods and in developing protection against future disaster risks for long-term livelihood sustainability. CARE's model of household livelihood security, adapted by Sanderson as a model for urban livelihoods, is a good method of understanding these relationships (Figure 2).

Methods of incorporating a livelihoods approach into a humanitarian response include:

- working with or through organisations of long standing in the area, which already have an understanding of livelihoods and the measures needed to protect and support them post-disaster – in the response to Tropical Storm Jeanne in Haiti,

Figure 2. Adaptation of CARE household livelihood security model for urban settlements



for example, CARE's relationship with the government and community institutions in Gonaives was critical to the success of relief and recovery programmes there (CARE 2005)

- supporting aid delivery that uses and builds on local capacities, thereby limiting the use of external personnel, and reducing costs
- taking time to understand how the urban poor are coping, and designing aid programmes to support these household initiatives to build ownership
- using participatory approaches in all stages of programming assessment, design, implementation, and monitoring and evaluation
- recognising the importance of rural–urban linkages in providing opportunities to deal with disasters in either locale.

## Further information

CARE (2002) Household Livelihood Security Assessments, [http://www.proventionconsortium.org/themes/default/pdfs/CRA/HLSA2002\\_meth.pdf](http://www.proventionconsortium.org/themes/default/pdfs/CRA/HLSA2002_meth.pdf)

Seaman, J (2000) The Household Economy Approach: A Resource for Practitioners, Save the Children, <http://www.savethechildren.org.uk/foodsecurity/publications/manual.htm>

## Local economic development

**Local livelihoods are reliant on the local labour market and local economic dynamism.** In addition most local development is driven by decision-making within economic spheres by households and private- and public-sector businesses. Yet these basic facts are often forgotten in the rush to assist after a disaster. UN-HABITAT recommends that pro-poor market recovery – making markets work for the poor – should be a standard aspect of disaster relief and recovery efforts. Suggestions on how to implement a pro-poor response include rapidly assessing pre-existing markets, supply and value chains, re-establishing 'foundation markets' which deliver products and services that underpin the development and participation of crisis-affected populations, and buying locally whenever possible (UN-HABITAT 2006).

In the response to the Bam earthquake in 2003, local authorities and aid agencies collaborated to establish a 'construction bazaar' in the centre of Bam. This served as a source of local building materials for reconstruction efforts and also provided some employment opportunities. The programme sought to involve local capacities more substantially in the rebuilding process. While this programme was successful in making beneficiaries more aware of safe rebuilding techniques, local residents were ultimately less involved in the physical reconstruction of Bam than anticipated, and generally did not develop new skills on a broad scale (Fallahi 2007; Ghafory-Ashtiany and Hosseini 2008).

Urban growth in many areas is built around the development of a core of large-scale enterprises and integrated market activity, even if many of the citizens are employed in small enterprises or in the informal economy. In the conflict recovery in Mostar, efforts to redevelop the economy focused primarily on piecemeal small-business approaches, ignoring the industrial sector which had been the base for many jobs before the conflict. Without an economic development strategy, there was little economic activity driving other aspects of the recovery plan (Narang-Suri 2008).

The impact of disaster damage and losses on municipal revenues is another important consideration, as these revenues often fund essential services. This was a tremendous challenge in the response to Hurricane Katrina in the USA. Losses from the initial damage and slow recovery reduced tax revenues necessary to operate school, police and fire-protection services, further threatening a downward spiral in economic recovery (Popkin, Austin Turner and Burt 2006; Hill and Hannaway 2006).

Local recovery can also be negatively affected by the flow of reconstruction funding out of the local economy through over-reliance on national and international contractors. For aid agencies, working within existing economic systems by locally sourcing aid delivery, aid supplies, reconstruction labour, and information collection and distribution can have a number

of benefits. For humanitarian agencies, approaches that leverage local markets can reduce costs, streamline logistics requirements and enable greater autonomy for beneficiaries in decision-making for their own recovery. Communities benefit as well, from the increased support to local livelihoods, greater community ownership of disaster relief and recovery assistance, and increased support for generating and sustaining new market activity.

## Further information

UN-HABITAT (2006) 'A new start: The paradox of crisis', Habitat Debate, UN Human Settlements Program, Nairobi, Kenya (includes articles by Mark Pelling, Gabrielle Iglesias, Ian Davis, Charles Setchell, Scott Leckie, Chris Huggins, Kevin Billing, Heinz Kull and Eric Schwartz), <http://www.unhabitat.org/pmss>

## Food security in urban environments

Food insecurity has often been seen as a rural issue but the recent food-price crises have also highlighted the vulnerability of urban communities, which often rely on domestically or internationally imported foods such as maize and rice. Food may remain readily available in cities after a disaster, but the urban poor often cannot afford to buy it. In addition, when food stocks run low, people on the urban periphery often flood cities in search of work, adding to the strain. This also affects rural populations, who can no longer depend on urban relatives or on finding work in urban areas in difficult times (CARE 2008).

Cities, unlike rural areas, depend on the urban periphery for food and therefore have constrained food-supply systems with limited urban stocks (Kelly 2003). **Most urban populations, particularly the poorest, survive by buying and cooking food daily with limited storage for maintaining longer-term food supplies.** Given the constraints on urban food systems, any disruption to supply or distribution from a disaster causes immediate consumer shortages. There is also the possibility that a food shortage in a city will disrupt food supplies to surrounding rural areas, as demand and prices of food increase in the city.

### Box 3. Key differences between urban and rural food insecurity

- Urban households often rely on a more varied diet.
- Urban households pay more for food in both time and financial costs, particularly the urban poor for whom food is their largest expense.
- The dependence of urban livelihoods on insecure employment (often informal) decreases the ability to protect against future food insecurities.
- Urban social networks can be important in meeting basic food needs, and may be positively or negatively impacted by geographic positioning in a city.
- Urban households are smaller in average size, but have higher proportions of children to adults and higher proportions of non-family members.
- Urban women's participation is greater in income-generating activities.
- Food insecurity is enhanced by inadequate infrastructure and social services in urban areas.

Distribution methods commonly used in disaster response include family rations, school feeding programmes and food-for-work programmes. Such programmes often need to be combined with other activities – such as health, nutrition and sanitation interventions – to ensure consistency in outcomes (WFP 2002). For example, WFP cites examples of food-for-work programmes that improved the environment of low-income urban communities but which also led landlords to raise the rents of housing in the area. A WFP programme in Addis Ababa took steps to protect against rental increases by

negotiating with local landlords and the government before the start of the programme (WFP 2002). Similarly with food-for-work programmes targeting women, it is important that the programme is coupled with child care so that women with young children can participate.

Market-based methods such as aid-backed food stamps or price subsidies are less common because of perceived fears about their impact on markets and in causing aid dependency, and because of a general lack of capacity or experience among NGOs in implementing large-scale food programmes in urban areas. However, these methods can provide a cost-effective and accurate way of targeting low-income populations, as the case study below demonstrates.

In Jakarta, Indonesia, as food security came under pressure from drought and reduced rice production during the 1997/98 El Niño event, a novel programme was established to use commercial markets for aid delivery. Imported wheat was milled into flour by Indonesian flour mills, and Indonesian companies produced pre-packaged noodles, providing jobs for some of those recently made unemployed in the city. In addition the noodles could also be used by street-side cafes as well as households, ensuring that small food traders and vendors were not adversely affected by the provision of food aid. By using existing commercial networks to deliver the noodles, the programme avoided the costs of establishing parallel logistics systems. The programme also used commercial marketing firms to identify clients and provide advice on targeting and prices that would appeal most to the target beneficiaries and less to others who might have more discretionary income.

A key element was allowing each level in the production/delivery chain to make a profit while maintaining incentives and penalties based on performance. However 'while the Jakarta noodle project addressed the difficulties of moving food into the mega-city market, it did not overcome the delays inherent in moving food to a mega-city from a distant source'. Ultimately it was the delays in getting the wheat from international suppliers that proved to be the main challenge to success (Kelly 2003) – and which represented the only link in the programme not managed by private-sector businesses.

## Further information

Kelly, Charles (2003) Acute Food Insecurity in Mega-Cities: Issues and Assistance Options, Benfield UCL Hazard Research Centre, Disaster Studies Working Paper 7, <http://www.benfieldhrc.org>

USAID (2008) Emergencies in Urban Settings: A Technical Review of Food-Based Program Options, <http://www.aed.org>

WFP (2002) 'Urban Food Insecurity: Strategies for WFP – Assistance to Urban Areas', <http://www.wfp.org/policies/introduction/policy>

## Innovative methods of delivery

A number of innovative approaches have been developed to strengthen livelihoods in vulnerable communities. These include initiatives to increase access to credit and financing and to utilise existing markets in ways that recognise that livelihoods are often multi-faceted and both depend on and help create robust local economic activity. In many ways **strengthening urban livelihoods often depends as much on social capital as on financial assets for poor families** (Cain 2007).

Over the past 30 years microfinance has emerged as an effective means of increasing access to credit, savings and other financial services in poor and vulnerable communities. It has also changed perceptions of the poor, and women in particular, as 'unbankable' (Chatterjee 2005). Microfinance can strengthen coping and increase resilience to disasters by **providing access to credit and other financial services to enable investment in higher-yield livelihood strategies, to diversify livelihood strategies, and to enable investment in risk-reduction measures**. Solidarity group lending programmes can enhance social capital by encouraging mentoring and joint problem-solving among borrowers.

Housing microfinance has emerged as a logical development of microenterprise lending. However, microenterprise loans are usually relatively small and quite short term, are so not well suited to housing expenditures. Because investments in housing do not produce immediate returns, loan repayment needs to be over a longer period to allow the borrower time to raise the necessary income to repay the loan. However, microlending can fill a gap here, as banks are usually reluctant to lend for owner-driven housing projects phased over the long periods needed by poorer people.

An NGO called Development Workshop initiated a programme of housing loans in post-conflict Angola where less than 2 per cent of households' investment in housing comes from banks. Banks rejected 82 per cent of housing-loan applications because insecurity in land tenure interfered with application of the mortgage models used for housing loans elsewhere. Development Workshop's solution through its KixiCasa programme was to ensure that there were no major redevelopment plans for the land in question, and then to make small phased loans (less than US\$ 2,500) with relatively short repayment periods of 10 to 12 months (Cain 2007).

Social funds provide block grants for projects to build up community assets such as community facilities, infrastructure or improved services, including microfinance and microinsurance services to build livelihood security and resilience for poor and vulnerable households. **While many humanitarian-assistance or disaster-recovery programmes target either individual households or national governments, there is also a need to provide assistance for physical, social and economic infrastructure at community levels.** Social funds represent an innovative approach to community-driven development, allowing local stakeholders to prioritise activities and guide decision-making. While typically coordinated by autonomous government agencies, in some cases supported by international donors, it is the community role that distinguishes social funds from other approaches. The communities themselves submit proposals and the localised administration allows quite specific geographic targeting and the potential for encouraging proposals from poor and vulnerable communities (ProVention Consortium 2009).

The use of local marketing and advertising firms to relay messages can also have multiple benefits in a disaster response. These include supporting local economies, reducing humanitarian aid costs, enhanced ability to reach target groups, and strengthening the sense of community ownership of recovery activities. Similarly, advocacy for rights claims and legislation can also be quite effective ways of supporting livelihoods, especially in addressing broader issues of poverty alleviation. 'Recognizing and enhancing the rights of individuals is a critical part of expanding the roles and responsibilities for [urban safety and] security beyond simply the state itself' (UN-HABITAT 2007b).

## Further information

HPN (2008) *Community-Driven Reconstruction: A New Strategy for Recovery*, Lizanne McBride and Alyoscia D'Onofrio, <http://www.odihpn.org/report.asp?id=2909>

World Bank Social Protection and Labor Sector website – <http://www.worldbank.org/sp>

World Bank Community Driven Development toolkit – <http://www.worldbank.org/socialfunds>

MicroFinance Gateway – <http://www.microfinancegateway.org>

CGAP website – <http://www.cgap.org>



## LESSON 7

### FOCUS ON MOVING BEYOND THE PROVISION OF SHELTER TO THE CONSTRUCTION OF SETTLEMENTS

Successful recovery is ultimately about rebuilding settlements, complete with infrastructure and land tenure, through a participatory planning process that incorporates the demands of risk reduction and low-carbon development. With dense patterns of development, frequent use of multi-story buildings and often large slum areas with little access to infrastructure and services, urban environments typically require their own shelter solutions. Urban areas almost require solutions other than the simple application of rural shelter strategies in which so much past humanitarian experience has been concentrated.

Even basic emergency sheltering strategies like the use of temporary camps away from disaster-destroyed homes and land may fail to meet the needs of urban populations. This was the case after the Bam earthquake in Iran, where there was low occupancy of camps set up to house affected populations as households preferred to stay close to their homes (Fallahi 2007). Failure to consult with affected communities may also lead to reconstructed housing inadequate for beneficiaries' needs. In the housing response to the earthquake in Turkey a lack of initial consultation led to delays and distrust, and dissatisfaction with the location and infrastructure of new settlements (Akinci 2004).

#### Addressing land issues and displacement

Disasters almost always have a large impact on housing, land and property, particularly in cities and towns where there is high demand and competition for housing and land. Land-specific risks following conflict or disaster include:

- difficulty finding appropriate land for temporary living centres and long-term resettlement
- powerful individuals taking advantage, leading to land-grabbing
- displaced people unable to return to their former homes (especially renters, squatters and the landless)
- uncertainty of tenure and land rights because of a lack of records and failure to identify heirs in an authoritative manner (for example in the absence of wills).

These issues are further complicated in situations of sudden-onset disaster, where there can be more extreme shocks to land systems, and limited time to plan and prepare for displacement and resettlement. However, localised impacts may mean that there is sometimes surplus housing stock nearby to absorb the displaced (UN-HABITAT 2008).

A recent scoping study conducted by UN-HABITAT (2008) on land issues and responses following eight recent disasters[2] found a set of common challenges that apply to any disaster in which land issues and displacement are concerns. These include:

- **poor systems of land governance**, which national governments may need support in addressing
- establishment of the necessary **time for integrating robust community-based planning and consultation**, which can best reflect local needs and are most likely to produce quick responses, into formal planning processes
- **delays in assessment and planning**, which can lead to the exposure of vulnerable groups to rights violations, livelihood risks, over-dependence on humanitarian assistance and inhibited access to appropriate social services
- **lack of access to land and housing for landless groups** who may end up settling again in hazard-prone areas, especially in urban centres where access to affordable land may be severely limited

- **establishment of alternative dispute-resolution mechanisms** to help in particular to protect the housing, land and property rights of widows and orphans who may be denied access to these rights through inheritance mechanisms and land titling
- **protection of windows for measures to mitigate future risks**, especially through land-use and spatial planning, which are often complicated by the direct restoration of pre-disaster land and housing areas.

To address issues of land tenure in urban areas, flexible approaches to land-titling and land-pooling have been developed. Intermediate land-titling has been used in post-disaster contexts to enable rebuilding to start, as many land claims are ultimately recognised once a review process has been fully established. Another potential solution is land-pooling and reallocation, which has been used in a variety of contexts to accommodate changes in land use while recognising residents' land rights (Cain 2007). Land-pooling reorganises individual parcels of land while retaining a small portion of each parcel for infrastructure, open space or new housing. Based on experience in Kathmandu, land-pooling is particularly effective for improving urban infrastructure and services without requiring external investment: the costs of planning and providing infrastructure are covered from the land contributed by each landowner (Oli 2003).

## Further information

UN-HABITAT (2008) Scoping Report: Addressing Land Issues after Natural Disasters, <http://www.gltm.net>

UN-HABITAT (2007b) Enhancing Urban Safety and Security: Global Report on Human Settlements 2007 – <http://www.unhabitat.org/content.asp?typeid=19&catid=555&cid=5359>

## Avoiding relocation and resettlements

To mitigate against future disasters it may be necessary to relocate communities away from high-risk areas, but this should be only a last resort. Although the vulnerability of relocated families is almost always reduced, relocation sites are often unsuccessful because of the distance created between the original and new settlements (World Bank IEG 2006). Even in temporary housing programmes, beneficiaries prefer to stay near their own destroyed homes rather than in locations further away (see Fallahi 2007, on the Bam 2003 earthquake; Delap 2000 and Rashid 2000 on the Bangladesh 1998 cyclone).

In the long term, failure to recognise the importance of location results in families moving back to the same high-risk areas. In the urban context, this is especially critical with informal settlements, whose residents often value proximity to urban centres despite the increased risk of living in the hazard-prone areas which are often the only central areas available and affordable to them. Careful attention must also be paid in both temporary housing programmes and relocation programmes to maintaining existing community networks and social systems. As with work on livelihoods (discussed in Lesson 5 above), social capital is a critical resource for the urban poor, and particularly for potentially vulnerable groups such as those highlighted in Box 2.

When relocation is necessary, careful consideration should be given to providing compensation for land and housing that is lost. Without receipt of equivalent value for the property they are losing, many residents may refuse to leave. When the intent of the relocation is to evacuate high-risk areas, this leaves the situation in a stalemate, with the residents of those areas still vulnerable to the next hazard event. Resettlement is likely to become more prominent in the future, given projections of likely increased flooding in urban areas due to sea-level rise. Massive relocations may therefore be an unavoidable feature of urban recovery in the future, despite the risks.

## Further information

UN-HABITAT (2008) Scoping Report: Addressing Land Issues after Natural Disasters, <http://www.gltm.net>

## Rebuilding better homes

Where people are traditionally involved in building their own dwellings, owner-driven housing supported by government or NGOs has been shown to have a number of advantages over contractor-driven housing, and leads to higher levels of beneficiary satisfaction. **Given adequate financial and technical support, many households 'have the capacity to construct houses that are more likely to respond to their needs and preferences than houses provided by outside agencies'** (Duyne Barenstein 2006). Where self-build is common, immediate and long-term shelter needs can be linked by (Ian Davis, in UN-HABITAT 2006):

- emphasising the role of surviving community members in meeting their own shelter needs
- supporting the creation of transitional shelter using salvaged or reusable building materials
- preventing survivors and officials from destroying building rubble, especially timber, which can be reused
- giving families tools, materials and building expertise to rebuild their homes
- providing cash grants for rebuilding, where materials and tools can be purchased
- making skilled expertise available
- enabling a range of supportive interventions by assisting groups
- insisting that safety is a priority and promoting the 'right' to safe shelter and decent housing.

The **provision of technical assistance through one-stop centres or information kiosks** has also significantly aided owner-builders in drawing up plans, integrating risk-reduction features, estimating construction costs and supervising construction labour. One example of this (as mentioned above in Lesson 5), is the 'construction bazaars' supported in Bam after the earthquake in 2003. These bazaars also helped to support the local economy through reconstruction (Fallahi 2007; Ghafory-Ashtiany and Hosseini 2008).

While the above strategies are relevant in urban environments for single-family dwellings, apartment blocks require other types of joint development for reconstruction. The Flat Ownership Law in Turkey enables those living in jointly owned and occupied buildings to use a majority decision for building maintenance and upkeep. This law has been expanded to cover mitigation investments, and community organisations have explored the possibility of further expanding the scope of the law from single buildings to community districts to provide a broader mechanism for citizens' management of risk reduction and infrastructure development (Balamir 2006).

Delayed return of residents to crisis-affected areas can also bring challenges, especially when conflict or security concerns discourage return. For a self-help reconstruction programme for multi-unit apartments on the outskirts of Sarajevo, Caritas provided support for repairing individual apartments. If 75 per cent of the tenants/owners returned, Caritas also provided support for reconstructing common stairways and facades. Apartments that were not being renovated because their owners had not yet returned were 'sealed' with wooden sheets over the doors and windows. To maintain equity, the Caritas programme provided a family of two with all materials for two persons: bathroom, kitchen, and one room, although doors and windows were fitted for every room in the apartment (SIDA 2005).

Insurance protection is another service that can help households to improve their management of risks. More details are included in Lesson 8 below, under 'Risk transfer and insurance'.

## Further information

Shelter Centre (2008) Transitional Settlement and Reconstruction after Natural Disasters, <http://www.sheltercentre.org/library>

World Bank, (2009), Post-Disaster Housing and Community Reconstruction Handbook, <http://www.housingreconstruction.org>

## Linking infrastructure and services in settlement planning

The need for effective links between shelter and infrastructure services is well noted in evaluations of past urban disaster responses. **Especially in urban areas, successful reconstruction is based on solid settlement planning rather than simply the reconstruction of housing.** Lessons from development programming show the need to explore combinations of private, public and informal systems of service distribution to reconstruct and maintain infrastructure systems. Examples like the Orangi Pilot Project in Pakistan show that vulnerable communities working together have considerable skills and resources to contribute to local infrastructure development.

In reconstructing sanitation systems after a disaster, the focus should be on building systems that can survive future hazards. The ability to maintain proper operation of water and sanitation systems in the aftermath of a disaster is fundamental for the protection and recovery of health of the affected population (PAHO 2006). Maintenance of sanitation infrastructure is often even more critical in urban areas. Reconstruction projects therefore need to identify the failures in the damaged systems and design around those failures to reduce vulnerability. CARE's evaluation of its water and sanitation programme in the response to Tropical Storm Jeanne in Haiti in 2004 noted that more attention was needed to advocacy and community mobilisation regarding waste disposal, which is usually via drainage structures. This was a contributing factor to the flooding in the first place, as drainage systems and waterways were blocked with waste (CARE 2005).

Service delivery is as important as physical infrastructure, and urban areas often have high population concentrations dependent on community service facilities such as hospitals, health clinics and schools. Experience after disasters has shown the value of efforts to support existing health infrastructure, and to protect and expand its capacity by ensuring the provision of sufficient relief and medical stocks, transport and communications. It is also important to meet the basic needs of health care professionals, so that they can continue working effectively (IFRC 2000). Dependent on modern supply chains and 'just in time' delivery and inventory practices, hospitals and health clinics in urban centres immediately after a disaster are particularly vulnerable to transportation disruptions which may threaten their abilities to resupply critical materials.

The availability of schools and health facilities also often determines the ease with which displaced residents can return after any immediate evacuation from a disaster. The response to Hurricane Katrina has shown the complex linkages in urban environments between the rebuilding of the economy and housing and the re-establishment of education and health services. Without sufficient services, people are unlikely to return to rebuild, and without sufficient reconstruction there will not be enough demand to operate the services. Coordinated planning and consistent communication of government commitment to re-establish key services are necessary to ensure these linkages for recovery (Hill and Hannaway 2006).

## Further information

PAHO (2006) The Challenge in Disaster Reduction for the Water and Sanitation Sector: Improving Quality of Life by Reducing Vulnerabilities, <http://www.helid.desastres.net>

WEDC (2007) Excreta Disposal in Emergencies, [http://www.unicef.org/eapro/activities\\_7081.html](http://www.unicef.org/eapro/activities_7081.html)

Oli (2003) 'Land Pooling: The Public Private Participatory Urban Development in Nepal', [http://www.fig.net/pub/morocco/proceedings/TS22/TS22\\_3\\_oli.pdf](http://www.fig.net/pub/morocco/proceedings/TS22/TS22_3_oli.pdf)

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The Urban Institute (2007) 'Shared Challenges for Rebuilding Communities', After Katrina, <http://www.urban.org/publications/311440.html>

## LESSON 8

### EFFECTIVE RISK REDUCTION IS THE KEY TO OVERCOMING PERSISTENT CYCLES OF VULNERABILITY

Risk reduction is a valuable and necessary investment in protecting local development gains, and not an expensive luxury that interferes with supporting a quick recovery. However, **disaster-risk management is often not adequately addressed before reconstruction starts**. It is vital to reinforce the importance of risk reduction throughout relief and recovery efforts. In some settings, this has happened effectively. For example, the response to the Bam earthquake in 2003 led to both physical and non-physical improvements in disaster-risk reduction. Improvements to the built environment included new housing that is more resistant to earthquakes and easier to maintain, because the quality of materials and construction standards were monitored throughout the recovery. Capacity improvements included the experience gained in the provision of cash programmes to enable those affected by disasters to guide their own recovery and sustain disaster resilience at the local level (IFRC 2004).

However, such progress does not always take place: since the 1999 earthquakes in Turkey, unregulated building there has continued, as it has in many other parts of the world. This has increased the stock of unsafe structures and threatens sustainable redevelopment by maintaining extremely high vulnerability to future disasters (Akinci 2004; Ozcevik et al. 2008).

#### **Sustainable cities and disaster-risk reduction**

Vulnerability can be a constant feature of urban life for low-income households, but disaster response can help to reduce vulnerability and to support the creation of sustainable cities. Response efforts can do this by focusing on livelihoods, building community resilience by strengthening civil society and participatory governance, and ensuring that ecological management and rights issues are proactively addressed in recovery.

Evaluating the reconstruction six years after Hurricane Mitch in Tegucigalpa, Honduras, Rhyner (in Wamsler 2006) concluded that housing had been redeveloped in the same high-risk areas and with same risky structures as before. This was largely as a result of the failure to address the underlying problems of poverty and the failure to provide suitable land away from hazard-prone areas. Suitable land was available for reconstruction in the Tegucigalpa area but it was controlled by 'vested interests' and therefore not used (World Bank 2004). Rhyner suggests that the **primary recovery strategy should therefore be to empower inhabitants of high-risk areas by improving their access to information, advice and appropriate low-cost construction materials**.

Coordination and advocacy with government to provide housing options needs to be prioritised quickly to keep people from returning to slum and squatter settlements in their old high-risk and devastated communities. Alternative housing in low-risk areas should include proactive environmental management and forward-looking climate proofing, with access to appropriate infrastructure and services, and close proximity to livelihoods opportunities. At the same time, a back-up plan is needed to address the constraints on land availability and political will that undermine most efforts to turn recovery into an opportunity for risk reduction. Often, the only way to achieve a real reduction in the vulnerability of poor households is by concentrating on the education, awareness, and advocacy skill sets of the poor themselves (Rhyner in Wamsler 2006).

The possibilities for effective risk reduction are well illustrated in the improvements in disaster preparedness made in Bangladesh between the 1970s and the late 1990s. The main reasons for this effective progress in risk reduction appear to be the growth of civil society and of the role of NGOs. As both service providers and advocates, Bangladeshi NGOs have

argued for a more democratic society, and for economic growth and reduced poverty. They have also contributed to the investment in evacuation planning, including the construction of cyclone shelters and protection of roads from flooding. While many of these improvements have taken place in rural areas, the increased awareness and vigilance in relation to disaster preparedness are also relevant in urban areas of Bangladesh, which are now exposed to the same cyclone and flood threats as rural areas, as climate risks continue to increase (World Bank 2005).

## Further information

UN-HABITAT (2007a) 'Sustainable relief and reconstruction – Synopsis from World Urban Forum II & III', Rethinking Emergencies, UN Human Settlements Programme, Nairobi, Kenya, <http://www.unhabitat.org>

ProVention's Community Risk Assessment Toolkit – <http://www.proventionconsortium.org/?pageid=39>

ADPC, Community-Based Disaster Risk Management, <http://www.adpc.net/projects/cbdrm.html>

## Risk transfer and insurance

While there are many ways to mitigate or prevent disaster risks, **some aspects of the risk are too costly or too difficult to mitigate effectively**. While the developed world has access to a range of mechanisms such as insurance to help manage these risks, **effective risk-transfer mechanisms are often not available to the poor in low-income nations**. Innovative risk-sharing mechanisms like catastrophe pools and microinsurance have emerged as ways of extending the benefits of insurance to groups otherwise underserved by insurance markets.

After the 1999 earthquakes in Turkey, the government established the Turkey Catastrophe Insurance Pool (TCIP) to provide affordable insurance to homeowners, especially those in urban areas, to share portions of the risk within the country and to transfer other portions of the risk to international reinsurance and capital markets. As of July 2008, TCIP covered 2.8 million households, approximately 24 per cent of the overall target market in Turkey and 31 per cent in the Marmara region surrounding Istanbul ([www.dask.gov.tr](http://www.dask.gov.tr)). While participation in the scheme has increased more slowly than expected, this example has shown that it is feasible for governments and development organisations to work proactively with the private sector to address market gaps in insurance coverage.

The government of Mexico's FONDEN programme includes a risk-sharing scheme set up to support the programme through the sale of catastrophe bonds on the commercial market. A lesser known feature of the programme is the provision of insurance to local and state governments to protect local infrastructure investments (de la Garza Reyna 2005).

At the community level, microinsurance has emerged as a potential solution for extending insurance coverage in poor communities. It can provide relatively fast, reliable and predictable access to post-disaster financial resources, allowing the poor to protect their assets and retain their financial gains in the face of disasters. Microinsurance increases access to finances after shocks, thus strengthening coping and reducing the likelihood of disastrous impacts. It can also provide greater discretion to households and small businesses in pursuing coping and recovery strategies, and serves as an incentive to reduce future disaster risk (ProVention 2009).



## KEY RESOURCES

### Shortlist of Key Lessons for Specific Audiences

#### Local authorities

- 1 Allow municipal agencies to lead in specialised activities where appropriate.
- 2 Increase awareness of disaster risks and preparation.
- 3 Integrate recovery planning into longer-term local development planning.
- 4 Upgrade building codes and enforcement practices as needed.
- 5 Provide incentives for private-sector engagement.
- 6 Engage community stakeholders in participatory governance processes.

(Leitmann 2007)

#### National governments

- 1 Establish systems to accept mutual assistance from other countries and international organisations.
- 2 Support temporary staff assignment from other parts of the country to help meet short- and medium-term professional staffing needs (e.g. for teachers, planners, police).
- 3 Update regulatory frameworks and ministerial roles to expedite recovery and redevelopment processes.
- 4 Support local authorities with additional competencies and resources.

#### International agencies

- 1 Provide support for capacity building to local authorities and community organisations.
- 2 Prioritise information sharing among actors.
- 3 Provide flexible funding to support longer-term recovery requirements and sustainable programming.

#### Private-sector

- 1 Ensure continuity of key services provided by the private sector.
- 2 Encourage establishment of local development councils, with participation from private-sector firms and local business associations.

#### Academic and learning centres

- 1 Partner with other stakeholders to extend assessment, research and planning capacity.
- 2 Explore opportunities to establish outreach and community education programmes.

#### Community organisations

- 1 Support community members to advocate and engage with local governance processes.
- 2 Establish partnerships with other stakeholders.
- 3 Lobby for the establishment of community resource centres.

## For additional resources see

UN ISDR, 'Linking Disaster Risk Reduction and Poverty Reduction', <http://www.unisdr.org>

World Bank, 'Global Good Practices in Earthquake Disaster Recovery and Reconstruction', <http://web.worldbank.org>

International Recovery Platform, <http://www.recoveryplatform.org/>

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