

This policy briefing is an output of a scoping study on disaster risk reduction and development, commissioned by DFID in 2004. Focusing on so-called 'natural disasters', it examines:

- the growing burden of disasters on the poor;
- their adverse effects on development and on progress towards the Millennium Development Goals;
- their roots in past development failures;
- why development tends to overlook disasters; and
- how disaster risk reduction can be better integrated into development policy and practice.

Disaster risk reduction: a development concern

Action to reduce risks from natural disasters must be at the centre of development policy

Disasters are a growing burden on the world's poor

The number and seriousness of disasters is increasing, disproportionately affecting poor countries and poor communities. The recorded number of disasters, the number of people they affect and the property losses they cause, have risen dramatically each decade since reliable records began in around 1960. An average year will see disasters kill over 60,000 people and affect at least a quarter of a billion. Numbers fluctuate; in 2003 almost 90,000 disaster deaths were recorded.

More than half of disaster deaths occur in low human development countries, even though only 11% of people exposed to hazards live there. These countries suffer far greater economic losses relative to their GDP than richer countries. Their capacity to reduce risk is also much more limited. For example, without external assistance Ethiopia lacks the means to end famines through investment in water management, marketing and transport infrastructure, industrial development and social protection.

Humanitarian responses to disaster impacts now cost Development Assistance Committee (DAC) donors an annual US\$ 6 billion or seven percent of total official development assistance (ODA) flows, and this proportion is rising. Yet disaster-related costs to development run much deeper than this.



Reducing the risk: woman working on reforestation project

Malawi

What makes a disaster?

Disasters and disaster risk reduction

A disaster is a severe disruption to a community's survival and livelihood systems, resulting from people's vulnerability to hazard impacts and involving loss of life and/or property on a scale which overwhelms their capacity to cope unaided.

This means that disasters – even so-called 'natural disasters' – are not exogenous and uncontrollable events, temporarily departing from normality, though they are often seen as such. Disasters can be reduced, and in some instances even prevented, by supporting people's ability to resist hazard impacts, for example by promoting seismic resistance in building design or construction of cyclone shelters. To achieve this, human vulnerability and its longer-term societal origins need to be centre-stage in our approaches to disasters.

Disaster risk reduction entails measures to curb disaster losses by addressing hazards and people's vulnerability to them. Good disaster risk reduction happens well before disasters strike, but also continues after a disaster, building resilience to future hazards.

A diversity of hazards

Hazards come in all shapes and sizes. This briefing focuses on 'natural' hazards – those that are weather-related or geophysical in origin. Yet some 'natural' hazards are partly human-induced, such as storms or droughts influenced by global warming or landslides caused by deforestation. The disasters associated with them reflect a complex interplay between these hazards and factors leading to human vulnerability, and are anything but 'natural'.

Moreover 'natural' hazards cannot be considered in isolation from other hazard types. Their interactions with epidemics (especially HIV/AIDS), human impacts on the environment, including 'technological' hazards, and conflict are also of critical importance.

Vulnerability and poverty

Vulnerability results from people's *exposure* to hazards and their *susceptibility* to hazard impacts. It reflects social, economic, political, psychological and environmental variables, shaped by dynamic pressures (such as urbanisation) that are linked to the national and international political economy.

The converse of vulnerability is *capacity* to anticipate, cope with, resist and recover from hazard impacts. People's capacities can be realised through collective action within a favourable institutional environment

(local, national and international) to establish societal *resilience*. Resilience at the community level, often highly evolved, may be challenged by new pressures such as climate change and globalisation or limited by fatalistic belief systems, but can be boosted by appropriate action on a wider scale.

Poverty and vulnerability go hand-in-hand, but do not completely overlap. Not all disasters affect the poorest most, yet poorer people tend to be both more exposed and more susceptible to hazards, suffer greater relative loss of assets, and have a lower capacity to cope and recover. Furthermore, disasters can induce poverty, making better-off people poorer and the poor destitute despite programmes aimed at fighting poverty.

In policy terms this means that poverty reduction can help reduce disaster risk, but this requires an in-built, proactive focus on addressing such risk rather than seeing it as just another constraint to work within. At the same time risk reduction efforts can promote poverty reduction by helping people avoid the impoverishing effects of disasters.

Disasters should be a core development concern

Disasters hold back development and progress towards achieving the Millennium Development Goals (MDGs). Yet disasters are rooted in development failures. This is the core rationale for integrating disaster risk reduction into development.

Disasters hold back development

Many countries are not on course to meet MDG1, the prime goal of halving extreme poverty and hunger by 2015. Country progress reports on MDGs frequently note progress on MDG1 being affected by disasters. In many cases, increases in numbers below poverty thresholds appear in aggregate national statistics following a disaster.

Disasters – including the everyday small-scale ones that go unnoticed by the outside world – affect poverty reduction in several ways. They have macroeconomic impacts, directly through physical damage to infrastructure, productive capital and stocks, but also indirectly and in the longer term by affecting productivity, growth and macroeconomic performance. These hit the poor hardest for several reasons. Loss of tax revenue and diversion of resources into disaster response has fiscal impacts affecting state provision of social services, while food prices often increase.

Moreover recent studies suggest that both governments and donors tend to fund disaster relief and rehabilitation by reallocating resources from development programmes. Although the impact of any such reallocation is difficult to measure as it is unrecognised in official figures, it can be expected to affect the poor disproportionately through adverse effects on poverty reduction efforts.

Locally, impacts on poverty and food security can be much more severe and may not appear in national statistics. Disasters stretch coping strategies to breaking point and have long-term effects on livelihoods. High frequency hazards such as drought trigger immediate food crises, but can also have longer-term 'ratchet' effects which impede recovery in interim periods, especially when combined with other pressures such as HIV/AIDS, poor governance and conflict.



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Development gains washed away: community displaced by flooding
Bangladesh

Disasters also slow down progress towards the remaining MDGs. For example:

- Disaster-hit families often fail to send children to school, while schools may be closed down by earthquakes or floods (MDG2).
- Disasters leave women and girls – including mothers – with heavier responsibilities and workloads and often poorer health. Disasters have also been associated with increased domestic violence and sexual harassment (MDG3&5).
- Children are in greater danger in floods and drought, through drowning, starvation and disease (MDG4).
- Disasters directly cause disease and damage to health infrastructure, while indirectly lowering disease resistance by heightening poverty and malnutrition. They may also lead women and girls to resort to sex work and risk HIV infection (MDG4&6).
- Disasters can increase rural-urban migration, and in cities disproportionately affect slum dwellers (MDG7).
- Storms and tidal surges set back gains from partnerships with small island states (MDG8).

Such diverse consequences tend to go far beyond the immediate impacts which make media headlines and international disaster statistics. This is one reason why their role in holding back development may be much underestimated.

Disasters are rooted in development failure

Disasters do not just happen – to a large extent, they result from failures of development which increase vulnerability to hazard events. Failure of institutions governing development can be found at all levels, from local and national institutions weakened by skills shortages or corruption, to institutions of global governance influenced by powerful countries and powerful interests within them.

The global context influences disaster frequency and severity in many indirect ways. For example, the mushrooming of 'new wars' is a feature of the post-Cold War global political economy, but also a significant issue for disaster risk reduction because of the many ways violent conflict and instability interact with natural and biological hazards.

Development processes may increase exposure or susceptibility to hazard more directly. Increased exposure can result from global level climate change exacerbating extreme weather events, or local level destruction of mangrove stands which protect coasts from tidal storm surges to make way for shrimp farms. Rapid urban growth may increase exposure to landslides, earthquakes or fires.

Increased susceptibility results from development measures which erode capacity to cope with and recover from hazard impacts. These effects can result from the rapid liberalisation of agricultural markets, the running down of state-run social protection schemes, or the decline of informal safety net mechanisms associated with some development projects. Poor quality and poorly maintained infrastructure, such as hospitals and flood barriers, may even lead to higher casualties when they fail than if they had not been constructed.

Disaster responses can exacerbate risk

Responses to disasters can themselves prolong crises or create new risk. Humanitarian programmes are indispensable in saving lives and relieving suffering in emergency situations, but may sideline local leadership, governance and technical capabilities which are needed for long-term resilience. Patterns of donor resourcing – poorly matched to needs, often unpredictable and sometimes politically motivated – can be detrimental. There tends to be an inappropriate emphasis on food assistance relative to other short- and longer-term needs for sustaining both lives and livelihoods.

Gains from ‘disaster-proofing’ development

‘Disaster-proofing’ development has the capacity to transform ‘vicious spirals’ of failed development, risk accumulation and disaster losses (Figure 1) into ‘virtuous spirals’ of development, risk reduction and

effective disaster response (Figure 2). This is not an additional burden to be added to that of meeting the MDGs – it is an essential part of the same task, strongly justifiable on humanitarian, economic, political and human development grounds.

Gains include positive impacts for each of the MDGs. There are also many cases where cost-effectiveness appears to have been convincingly demonstrated. During the 1998 floods in Bangladesh, for example, the value of cattle saved on a 4-acre flood shelter exceeded the shelter’s construction cost by a factor of seventeen. Reconstruction costs for a new deepwater port in Dominica hit by Hurricane David were equivalent to 41% of the original investment, compared with about 12% extra for building the port to a standard that could resist such a hurricane. Yet a more systematic approach to appraising costs and benefits of risk reduction activities is urgently required.

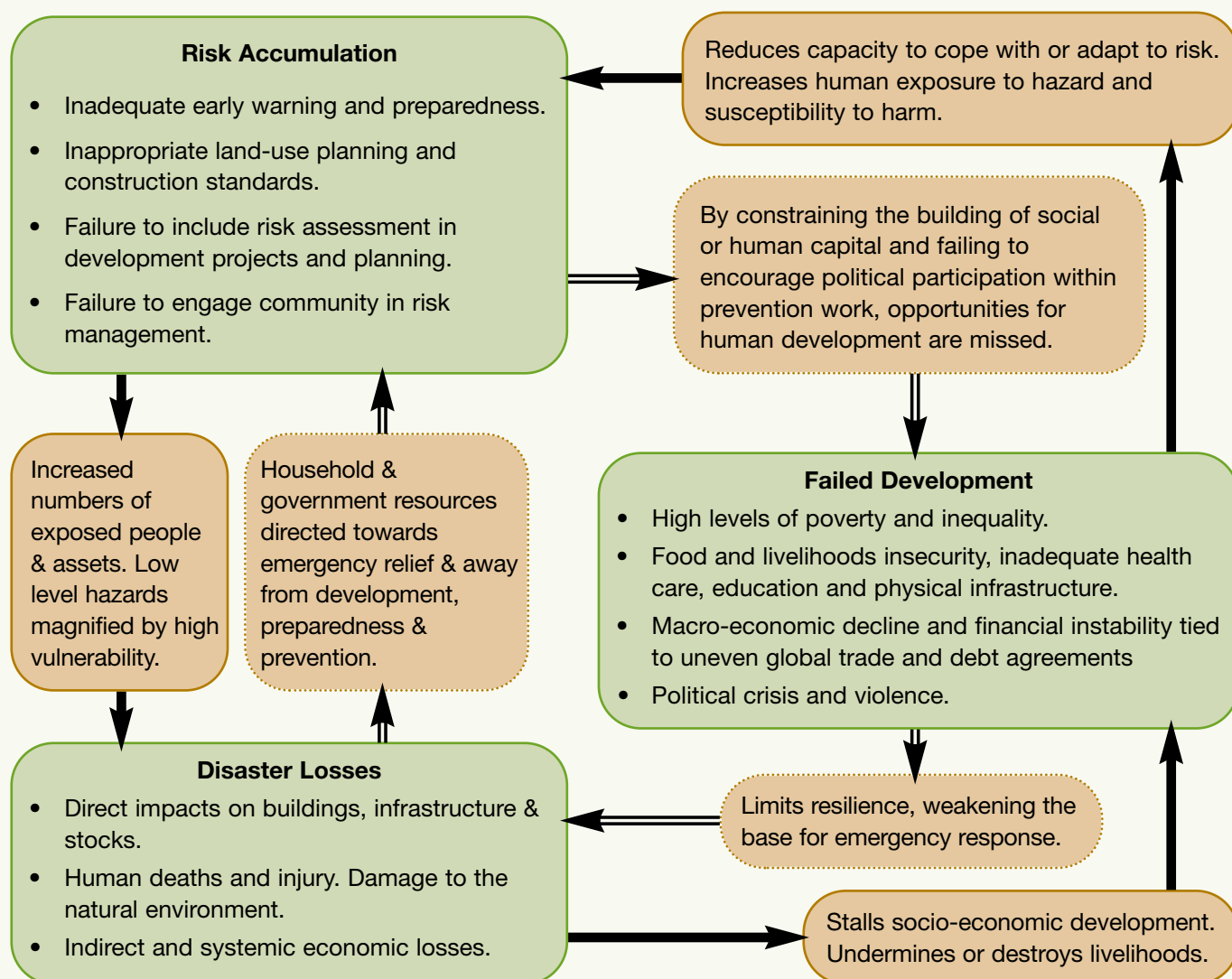


Figure 1: ‘Vicious spirals’ of disaster risk and development failure

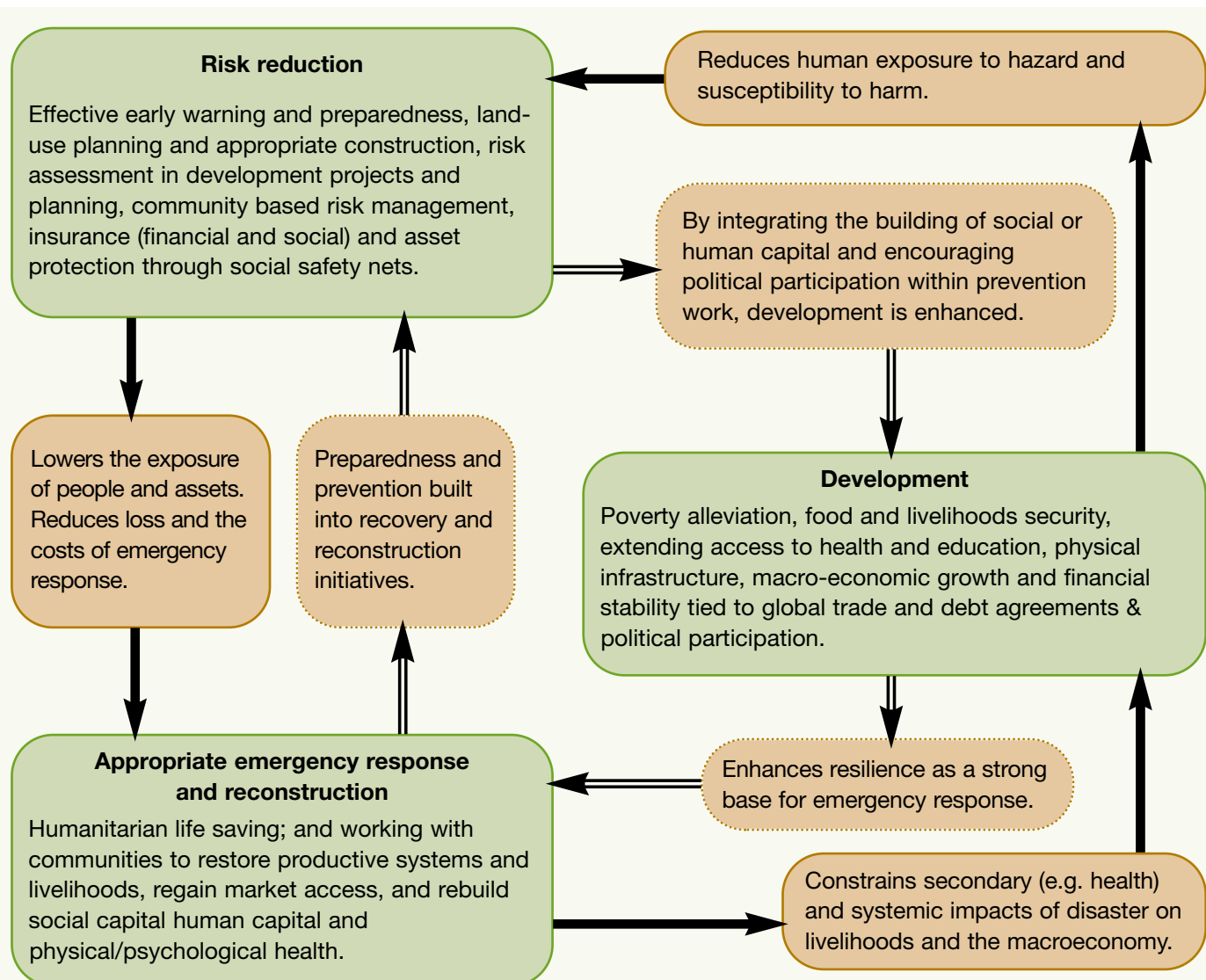


Figure 2: 'Virtuous spirals' of risk reduction

Why development tends to overlook disaster risk

Given these links between disasters, development and poverty, the question remains as to why development policy and programming tends to overlook disaster risk. Reasons relate to incentive, institutional and funding structures, assumptions about the risk-reducing capacity of pro-poor development, and inadequate exposure to and information on disaster issues.

Incentive, institutional & funding structures

Incentives are stacked against disaster risk reduction. It is a long-term, low-visibility process, with no guarantee of tangible rewards in the short term, either for politicians in affected countries or for donors. Both are influenced by media pressure, which is intense in the immediate aftermath of a disaster, but largely absent at other times.

Thus governments in developing countries have found donors more responsive to emergency appeals than to requests for aid for risk reduction. This often leaves them having to choose between basic social spending and risk reduction programmes. Yet where the political will exists, sometimes prompted by popular anger, results can be impressive. India has largely contained famine since Independence; Cuba kept deaths down to just five when Hurricane Michelle struck in 2001.

Within large international agencies, there is a long-standing institutional gulf between humanitarian and development wings, reflected in their separate funding instruments. While many agencies have made efforts to close the gap, uncertainty remains at the interface between these respective mandates, especially where questions of humanitarian ethics arise in protracted conflicts.

Pressure to focus on the MDGs may lead development specialists to see disasters as of largely tangential concern in all but the most hazard-prone countries. Disaster risk reduction therefore tends to be left to the humanitarian side – even though it is not primarily a humanitarian issue. Where crises are concerned, conflict and HIV/AIDS have tended to crowd out attention to ‘natural’ disasters.

Non-governmental organisations (NGOs), for their part, generally find it easier to span the humanitarian-development divide, yet naturally follow the priorities of bilateral donor agencies that fund them. This often means pressure to disburse and expend funds efficiently and within relatively short timespans. Disaster risk reduction, in contrast, is a longer-term, lower-cost but relatively staff-intensive process.

Assumptions about the risk-reducing capacity of pro-poor development

Sustainable poverty reduction is proving to be an elusive goal, and this is partly because disasters are not being properly factored into development. Poverty-focussed development efforts are sometimes assumed automatically to address vulnerability, with the danger that the role of risk reduction in achieving pro-poor development is overlooked. Breaking this impasse requires the design process for development interventions to include systematic assessment of, and explicit attention to options for addressing, exposure and susceptibility to hazards for different groups of people.

Where disasters are frequent and affect large sections of the population, risk reduction has begun to force itself onto the development agenda. Bangladesh has seen relative success in implementing flood risk reduction measures. In southern Africa and Ethiopia humanitarian and development agencies are collaborating with governments to find ways to move away from a short-term emergency mode of intervention in food crises to a longer-term development-oriented one.

Inadequate exposure to, and information on, disaster issues

Because disasters are seen as a humanitarian concern, development professionals are rarely exposed to disaster risk reduction issues. The UN International Decade for Natural Disaster Reduction (1990-1999) achieved only a modest profile and tended to focus narrowly on science and technology aspects of hazard management. More recent work has enhanced our understanding and knowledge of how to

design policies and programmes which tackle the governance and socio-economic aspects of disaster risk. There is also an international database on disasters (EM-DAT), though data quality and coverage remain major issues. (See Key Resources back page).

Tools for integration

There are many entry points whereby bilateral donors can promote disaster risk reduction in international and national development agendas.



Building resilience: community working together to reduce flood risk
North Korea

- Poverty Reduction Strategy Papers (PRSPs) offer an important opportunity for governments in the poorest countries to address risks to development, including disaster risk. Some PRSPs already deal with disaster management in some form, though the emphasis tends to be on early warning and response rather than preventive strategies. Once included in PRSPs, risk reduction activities will still need donor support for their effective implementation.
- Country-level UN Development Assistance Frameworks (UNDAFs) may help in channelling such support.
- Donor-government strategy formulation exercises, such as DFID's Country Assistance Plans, are a useful entry point for dialogue on support for specific disaster reduction efforts.
- National Adaptation Programmes of Action (NAPAs) for climate change are relevant as they are designed to specify adaptive measures which low-income countries can take to reduce risks related to climate change.

- Partnership agreements with multilateral agencies (e.g. DFID's Institutional Strategy Papers) and NGOs (e.g. DFID's Partnership Programme Agreements) are further routes by which donors can promote disaster risk reduction principles in the programmes and projects they fund, as well as to support agencies such as IFRC which work on disaster issues.
- Agreements with governments on programme and project level funding, and to some extent on direct budgetary support, offer potential entry points for promoting disaster risk reduction.
- There are also many relevant international initiatives and policy forums in which a commitment to disaster risk reduction can be demonstrated and priority actions agreed. These include the OECD-DAC, the Commission for Africa and the follow-up to the January 2005 World Conference on Disaster Reduction.

Recommendations

Bilateral donors should *establish time-bound strategies for making disaster risk reduction a central concern of development policy and programming*, as well as of humanitarian work. They should also promote and support a risk reduction agenda amongst development partners globally.

To this end, a number of actions are recommended:

- *Establish appropriate institutional arrangements* for promoting disaster risk reduction within donor organisations, improving cross-sectoral communication and understanding, and drawing up new ways of working at the humanitarian-development interface using a multi-hazard approach to assessing and addressing risk;
- *Operational guidelines and training*: amend guidelines for preparing strategy papers and funding agreements to require an up-to-date assessment of disaster risk for the country and its main regions, and of how assistance will mitigate that risk;
- *Promote risk reduction at national level*:
 - make maximum use of PRSPs and UNDAFs as key entry points for promotion of a disaster risk reduction agenda in the poorest countries;
 - ensure that donor-government consultations leading up to Country Assistance Plans are used as an opportunity to design programmes of support for enhancing risk awareness and, where necessary, proactive efforts to tackle disaster risk at national and sub-national levels;
- promote greater political will for disaster risk reduction within partner countries;
- include 'weak and failing states' in assistance for disaster risk reduction, recognising that special considerations will apply;
- explore the scope for promoting financial instruments for risk management, for example affordable insurance schemes, with possible private-sector involvement;
- *...within international and regional organisations and forums*: promote, and expand support for, disaster risk reduction work in international and regional organisations and forums;
- *...in the media*: encourage national and international media to take a greater interest in and help raise awareness of risk reduction issues;
- *...and in research and education*: expand support for research on key issues in disaster risk reduction, including on the improvement of systems for the collection and analysis of information on disasters and their immediate and longer-term impacts, on links with climate change, health, livelihoods and governance, on approaches to cost-benefit analysis and on options for minimising hazards;
- *Evaluate progress in mainstreaming disaster risk reduction*: develop performance targets and indicators to assess progress in integrating disaster risk reduction into both humanitarian and development policies and programming.



Photo: Howard Davies, Exile Images

Capacity building: Identifying risks, and how to address them, with the community
Kenya

Some key resources

Benson, C and E.J. Clay (2004) *Understanding the Economic and Financial Impacts of Natural Disasters*, Disaster Risk Management Series paper # 4, World Bank, Washington DC

Benson, C. and J. Twigg (forthcoming) *'Measuring Mitigation': Methodologies for Assessing Natural Hazard Risks and the Net Benefits of Mitigation – A Scoping Study*, Phase 1 report, ProVention Consortium Secretariat, Geneva

EM-DAT Emergency Database, Centre for Research on the Epidemiology of Disasters, University of Louvaine, Belgium. <http://www.cred.be/>

IFRC (2002) *World Disasters Report 2002: Focus on Reducing Risk*, International Federation of the Red Cross and Red Crescent, Geneva

Tearfund (2003), *Natural Disaster Risk Reduction: The policy and practice of selected institutional donors*, Tearfund Research Report, July

Tearfund (forthcoming), *Mainstreaming disaster risk reduction within institutional donors: performance targets and indicators*

Twigg, J. (2004) *Disaster Risk Reduction: mitigation and preparedness in development and emergency programming*. Good Practice Review # 9, Overseas Development Institute, London

UNDP (2004) *Reducing Disaster Risk: a challenge for development*, UNDP, Geneva.

UN-ISDR (2004) *Living with Risk: A global review of disaster reduction initiatives*, International Strategy for Disaster Reduction, United Nations Inter-Agency Secretariat, Geneva

Wisner, B; P. Blaikie; T. Cannon; I. Davis (2004) *At Risk: natural hazards, people's vulnerability and disasters* (2nd ed.), Routledge, London & New York

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