

Introduction

Risk reduction is everyone's business

This year marks the tenth anniversary of the *World Disasters Report*. On the positive side, the past decade has seen a drop in the numbers of people killed by disasters. In the 1970s, natural disasters alone claimed nearly 2 million lives – by the 1990s this had fallen to under 800,000. But this is still a terrible and premature loss of life. Meanwhile, those affected – whether left injured, homeless or hungry – tripled to 2 billion during the past decade. Direct economic losses multiplied five times over the same period, to US\$ 629 billion in the 1990s.

Our tenth report looks at how to reduce the risks which natural disasters pose to vulnerable communities around the world. The first report, in 1993, argued that the effectiveness of disaster response and the sound use of donors' money are "primarily dependent upon good disaster preparedness. All disasters are first tackled at the local level by local organizations. International response is built upon those local efforts."

This remains just as true a decade later. Disaster preparedness pays. When the most powerful hurricane for half a century hit Cuba in November last year, effective disaster planning and preparedness ensured that 700,000 people were evacuated to safety. When two years of record floods inundated Mozambique, well-prepared local and national resources saved 34,000 people from drowning. In 1999, of the 50,000 people trapped by Turkey's devastating earthquakes, 98 per cent were saved by local rescuers. So investing in disaster preparedness within communities at risk remains a top priority.

However, preparing to respond to disasters is only part of the broader risk reduction agenda. Where possible, measures to reduce the physical and human impacts of disasters must be taken. These mitigation measures take many forms. In Viet Nam, for example, a combination of embankments and specially-planted coastal mangrove forests protect vulnerable shores from storm surges and flooding. In Europe, where earthquakes have killed more people in the past decade than all other disasters put together, ensuring that construction codes are enforced is essential.

Physical protection must be complemented by better information at all levels. Often, exposed communities have expertise in dealing with risks which could be shared more broadly. In India, for example, traditional rainwater harvesting has helped thousands of households in combating drought. Equally, governments and aid organizations play a key role in promoting greater public awareness of disaster risks and how to deal with them. Enormous willpower, resources and imagination are needed across all sectors of human society to reduce the threat of disasters *before* they strike.

Since the attacks that rocked the world on 11 September last year, some global leaders have argued that fighting poverty will help promote a safer world. In March this year, donor nations committed more resources to achieve the international development goals of 2015, which include halving poverty and hunger, combating infectious diseases, and ensuring universal primary education.

Disasters, however, can wipe out years of development in a matter of hours. Big one-off disasters destroy farmland, animals, livelihoods – keeping people poor and hungry. Small

recurrent disasters wear down family resources and resilience, exposing people to disease and poor health. Children may lose the chance to be educated if a disaster demolishes their school, or if parents need their help rebuilding shattered family lives.

So reducing the risks posed by disasters is not an optional extra – it is central to the very success of development itself. Disasters threaten to derail progress towards 2015's development goals. And if development remains blind to these risks, the chances of disaster will increase. Poverty is not the only reason why communities are exposed to disaster. As Cuba's experience shows: you don't need to be rich to be well informed and well prepared.

With this in mind, I would like to leave you with one thought. The international development targets are of enormous use in concentrating the minds and resources of governments and communities alike. To these we must add disaster risk reduction targets. Such as halving the numbers killed and affected by disasters, increasing the number of governments with dedicated disaster preparedness plans and resources, and boosting the amount of emergency and development aid spent on disaster mitigation and preparedness.

This anniversary edition of the *World Disasters Report* provides powerful evidence that investing in preparedness and mitigation helps combat the terrible human and economic toll of disasters. Reducing disaster risk is an urgent priority not only for disaster managers, but for development planners and policy-makers across the globe.

Didier J Cherpitel
Secretary General

Section One

Focus on reducing risk

Chapter 1

Risk reduction: challenges and opportunities

Risk reduction – why it is needed, how best to go about it, and the challenges we face in achieving it – is the theme of this year’s report. Much attention has been paid to “complex political emergencies” over the past decade, so in this chapter we concentrate on what are often (erroneously) called “natural” disasters.

Between the 1970s and 1990s, deaths from natural disasters fell from 2 million to under 800,000. But the numbers affected tripled to 2 billion. Economic losses multiplied five times, to US\$ 629 billion in the 1990s. Disasters devastate the development of poorer nations. Hurricane Mitch, for example, put Honduras’s economic development back 20 years. Landslides in 1999 cost Venezuela US\$ 10 billion – 10 per cent of gross domestic product.

Conversely, flawed development (e.g., rapid unplanned urbanization, deforestation) is exposing more people to disasters. Even the better-off are at risk. Turkey’s earthquake fatalities in 1999 were victims of ineffective building codes, not poverty. And landslides in San Salvador in January 2001 swept away poorly sited middle-class housing.

Risk-blind development is one factor in increasing vulnerability. Another is the absence of effective disaster preparedness and mitigation measures (e.g., flood-proof dykes, early warning systems, evacuation routes, shelters, relief stockpiles, disaster response teams, public awareness). Below are some of the barriers to more effective risk reduction:

Geopolitics: conflicts of the 1990s dominated the humanitarian agenda, pushing aside the problem of vulnerability to natural hazards.

- No coherent risk reduction “community”: professionals trying to mitigate disaster impacts are fragmented along institutional boundaries.
- Risk reduction is seen as a separate sector, when it should be mainstreamed into development and humanitarian programming. As a result, risk reduction concerns are marginalized or forgotten.
- Risk reduction is viewed as a technical problem with technical solutions. But the underlying factors that compel people to live in insecure conditions are rarely addressed.
- Lack of resources: donors dedicate far fewer resources to risk reduction than to relief. the European Community’s Humanitarian Office (ECHO), for example, spent just 1.5 per cent of its aid budget on disaster preparedness last year.
- Invisibility of risk reduction spending: development programmes may include mitigation, but it is rarely reported in donor accounts.

What works in reducing risk, what doesn’t and why? Monitoring tends to be short-term and focuses on outputs rather than impacts. But there are many documented success stories which prove that mitigation and preparedness pay:

During the 1990s, 140,000 Bangladeshis were killed by cyclones. But the Cyclone

Preparedness Programme evacuated and sheltered 2.5 million more people before the cyclones struck – almost certainly saving their lives.

- Rainwater harvesting has helped 20,000 Indian villages to grow crops and maintain domestic water supplies.
- When floods struck Viet Nam in 1999, only one out of 2,450 flood-resistant homes, built by the Red Cross, collapsed.

But the picture is patchy. Initiatives are poorly documented. Policy-makers lack adequate information. Case studies demonstrating the benefits of mitigation and preparedness are needed. More international and regional commitment is needed. Disasters are complex problems which demand complex responses. Since risk reduction goes to the heart of the development process, the challenge is well beyond the capacity of disaster managers alone. It requires cooperation between development agencies, governments, non-governmental organizations (NGOs), businesses, scientists and vulnerable communities. According to the secretary-general of the United Nations, Kofi Annan, “We know what has to be done. What is now required is the political commitment to do it”.

Despite international initiatives, the front line against disasters is held by at-risk communities, which offer valuable lessons in disaster mitigation and preparedness. On the silt islands of Bangladesh’s Jamuna River, for example, a local reed is used to stabilize new silt deposits and make them fit for cultivation. The agricultural calendar and crop varieties are planned around the annual flood cycle. Marriage partners are sought on other islands to provide an escape route for relatives affected by floods.

Community-based approaches to disaster mitigation lead to more accurate definition of problems and solutions, because they draw on local expertise in living with disasters. They can deploy low-cost, appropriate technologies effectively. They are more likely to be sustainable because they are “owned” by the community and build up local capacity.

However, the main weakness of community-based initiatives is their limited outreach. Scaling up to achieve greater impact needs the participation of government. Yet the state and its apparatus are often seen as part of the problem.

National disaster plans may mention mitigation and preparedness, but lack detail and dedicated resources. Social and macroeconomic pressures can undermine authorities’ capacity to reduce risks. Cash-strapped central governments may simply abdicate their responsibilities, leaving disaster management to local government and NGOs, even though they lack the skills and resources to do so.

Cuba’s success in saving lives gives us a model of effective government-driven disaster preparedness – what was the secret of its success? Geographer Ben Wisner suggests “one cannot ‘fix’ disaster risk with technology alone. It is also a matter of enacting and enforcing laws, building and maintaining institutions that are accountable, and producing an environment of mutual respect and trust between government and the population”.

Innovative approaches to risk reduction offer considerable potential. One of the most exciting is the “sustainable livelihoods” perspective, which analyses the range of vulnerabilities poor communities face and the assets to which they have access. A valuable new field tool to assess communities’ disaster resilience and mobilize risk reduction is provided by the International

Federation's vulnerability and capacity analysis (VCA).

Disaster insurance innovations include making policies conditional upon implementing building and zoning codes. And under new weather index-based insurance, automatic payouts are made within 72 hours of pre-determined trigger events (e.g., high winds, low rains).

The idea of a right to safety from disasters is gaining ground – a concept likely to be challenged by governments and businesses, which fear it would increase their own liability. But it could strengthen accountability between vulnerable people and those supposed to help them.

Threats that natural hazards pose to society and development are massive. Yet disaster mitigation and preparedness pay – in human, economic and environmental terms. Three ideas could radically reform the way we deal with risk:

- **Relocate disasters within the wider context of risk reduction:** risk reduction is relevant to all those working in hazardous regions, whether in relief, development, business, civil society or government. It is not exclusive to big disasters, but can be applied to recurrent, smaller hazards that undermine vulnerable households.
- **Long-term partnerships based on good governance** across many sectors and disciplines provide the best basis for tackling the threats posed by disasters. Viewing disasters in this way steers us away from the “technical fix” towards more people-centred strategies.
- **Setting targets for risk reduction** would concentrate political will and resources. Targets could be set by governments, communities, NGOs and donors, to include: reducing numbers killed and affected by disasters; implementing disaster plans; training response teams; establishing early warning and evacuation systems; protecting essential infrastructure; reversing environmental degradation; devoting a percentage of relief funds to disaster mitigation and preparedness.

[SUMMARY BOX]

Harvesting rainwater to mitigate drought

For two years, southern Sri Lanka has suffered the worst drought in half a century. Crops have failed for five consecutive seasons. Livestock has died, water in wells has dropped dangerously low, children are malnourished and school attendance has fallen. An estimated 1.6 million people have been affected.

The drought-stricken community of Muthukandiya approached a local NGO about the problem. What followed was a mitigation initiative, based on low-cost “rainwater harvesting” technology, which uses tanks to collect rain channelled by gutters and pipes as it runs off the roofs of houses.

Villagers participated throughout the planning process. Two local masons received on-the-job training in building the 5,000-litre household storage tanks. Each system cost US\$ 195, equivalent to a month's family income. Half the cost was provided by the community, in the form of materials and unskilled labour. The NGO contributed the rest. Households learned how to maintain the tanks, and the whole community was trained to keep domestic water supplies clean. A village rainwater harvesting society was set up to run the project.

Evaluations clearly show that the 37 households with storage tanks have considerably more water for domestic needs than households relying on wells and ponds – and up to twice as much during the driest months. Their water is much cleaner, too.

Nandawathie, a widow in the village, has made the most of the opportunity. With a water supply nearby, she began growing vegetables. She sold these and opened a small shop. This increased her earnings, so she applied for a loan to install solar power. She feels safer now that she no longer has to fetch water from the well at dawn and dusk. Her children no longer suffer from diarrhoea. And her daughter has more time for school work.

Section One

Focus on reducing risk

Chapter 2

Disaster preparedness – a priority for Latin America

Hurricane Michelle ripped through Cuba in November 2001, the most powerful storm since 1944. But just five people died. Successful civil defence and Red Cross planning ensured that 700,000 people were evacuated to emergency shelters in time. Search-and-rescue and emergency health-care plans swung into action. In Havana, electricity and water supplies were turned off to avoid deaths from electrocution and sewage contamination. Cuba's population was advised in advance to store water and clear debris from streets that might cause damage. Later, the United Nations (UN) reported that the government's "high degree of disaster preparedness... was decisive in the prevention of major loss of life".

The contrast between events in Cuba and earlier disasters, such as Hurricanes Mitch and Georges in 1998 and the floods in Venezuela in 1999, is enormous. Mitch killed 20,000 people and put Honduras's economic development back 20 years. Without better disaster preparedness, the region's development will be knocked back by each succeeding disaster. But where are resources for disaster preparedness best invested?

Between 1960-1988, the United States logged 64 "natural" disasters in Central America alone. Communities are left increasingly vulnerable by poor construction and environmental degradation. During the earthquakes that shook El Salvador in 2001, 700 of the 1,100 who died were buried when a landslide engulfed poorly sited houses in Santa Tecla.

Moreover, governments and aid agencies are failing to prepare communities and themselves to cope with disaster. When Hurricane Mitch struck Honduras, the absence of simple evacuation procedures, search-and-rescue teams and relief stockpiles cost many lives. Have we lost sight of the real difference that disaster preparedness (DP) can make?

Following the three disasters of 1998-99, an independent team reviewed the Red Cross's performance. They charged National Societies and the International Federation's secretariat with being "not adequately prepared...to respond in a timely and effective manner to disasters". The team added that, while community-based DP is clearly important, National Societies themselves have a "fundamental obligation" to ensure that they too are "appropriately prepared".

The International Federation has responded by creating the Pan-American Disaster Response Unit (PADRU) to strengthen regional DP and response capability. PADRU is based in Panama, where good communications, security and a free trade zone mean it can procure and distribute relief supplies within 24 hours of a request.

PADRU's first priority is strengthening the capacities of Red Cross societies to prepare for and respond to disasters. It trains national intervention teams in a range of life-saving and relief disciplines. It also helps source relief materials locally. While every Red Cross branch would like its own relief warehouse, PADRU advocates for a combination of regionally

available stocks plus “pre-contracts” with local suppliers to deliver materials rapidly when disaster strikes.

PADRU’s overall aim is to ensure swift, effective delivery of relief aid while building capacity of local-level disaster preparedness and response. Some resources (e.g., search-and-rescue personnel) need to be locally based to be effective; while others (such as strategic stockpiles of relief aid) may be better sourced regionally or nationally. Some skills (for example, evacuation procedures) need to be embedded within communities themselves; while others (e.g., management expertise in handling massive international relief supplies) are best centralized.

Many argue that vulnerability to natural disasters is driven by poverty and therefore that economic development is the best form of disaster preparedness. Mostly, it is the poor who suffer most from disasters. But not always. During Peru’s earthquake last year, some shanty dwellers survived where richer neighbours perished. And the 700 victims of the Santa Tecla landslide in El Salvador were mostly middle class.

Forces other than poverty are exposing people to disasters. Lack of land-zoning regulations may allow developers to build in high-risk areas. Corruption may allow them to ignore building regulations. Ignorance may mean that people move into substandard buildings blind to the risks. And without maps of high-risk areas, no amount of wealth will provide protection. Rich and poor died together when lava belched from a Colombian mountainside in 1985 and obliterated a city of 20,000 people. Riches would not have saved one of them; a decent prediction of the eruption and an evacuation procedure could have saved them all.

Experts agree that, while national governments should take the initiative to reduce risks, progress can be made at community and municipal levels. In Peru, 15 Red Cross emergency brigades, trained in evacuation and first aid and linked to local civil defence, came to the aid of 30,000 people during 2001’s earthquake. According to one volunteer, people “knew what to do and where to go as their houses collapsed. They didn’t panic. They worked together as neighbours, getting everybody to open spaces. The brigades definitely saved lives here”.

While earthquakes cannot be accurately predicted, extreme weather events can; but forecasts are of little use unless communities are warned and know what to do. In Cuba, effective planning and dissemination of information through state-run media allowed the country’s evacuation procedures to be activated before Michelle struck.

Few such systems were in place in Central America when Mitch hit. But some communities had devised their own early warning. In Guatemala, towns along the Coyolate River got together in the mid-1990s to map flood-hazard zones, build shelters and monitor river levels. An alarm, triggered by rainfall gauges in the mountains, alerts communities to check river flows and, if necessary, to evacuate. During Mitch, 300 people died in floods along other rivers. But along the Coyolate there was no loss of life.

Risk mapping is gaining popularity. But what risks do you map, and how do you quantify risk? In southern Peru, geologists have drawn up detailed maps of earthquake and tsunami risks, following the 2001 quake. Meanwhile, volcanic eruptions and floods from glacial lakes are largely ignored. The biggest city in southern Peru, Arequipa, sits in the shadow of El Misti volcano. Experts say it is a “considerable hazard” to the city, which has extended up valleys

that would carry any lava flow. The city's civil defence chief says, "We don't have a plan for that. But maybe we will."

Reducing the deadly effects of disasters in Latin America means:

- **Building risk reduction into development planning.** This long-term priority will reduce vulnerability to disasters. Championing development alone is not enough. Development can exacerbate disasters, by degrading the natural environment or moving people from quake-proof shanties to quake-vulnerable apartments.
- **Investing more resources into disaster preparedness.** Ensuring that development policies are risk resilient will take decades – but disasters hit the region every year. Priority DP measures include risk and vulnerability mapping, disaster awareness and education, early-warning and evacuation systems, stockpiling relief materials, training in response skills, and planning at all levels to ensure coordination of disaster response.

A culture of risk reduction needs to cut across the activities of both the disaster and development professions, as well as vulnerable communities and their governments. Riches alone won't save anyone from disaster. Yet you can be poor and still be well informed and well prepared.

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Risk mapping and relocation get political

Hazard risk mapping is an important step in preparing societies for future disasters. But, especially when accompanied by calls to relocate people, mapping can get very political. The people of Catas, a small community on Peru's Pacific coast, have been told to move. Half their village collapsed during the June 2001 earthquake. Sixty-three families out of the 71 in the village lost their homes. Three people died. Most of the survivors live in tents and are fed from a charity food kitchen.

Geologists compiling risk maps of the region say Catas is very vulnerable to future quakes. Villagers are confused about exactly why; they suspect another motive behind why the authorities want them gone. Having categorized the village as high risk, municipal authorities have earmarked new land nearby for resettlement. But the villagers must pay the price themselves – around US\$ 40,000. If they don't, the authorities warn that villagers won't get help with rehabilitation if they choose to stay. "For us this is a big dilemma," says the Red Cross's Freddy Gonzalez. "If they refuse to go to somewhere safer, should we help them? If we bring in housing modules, for instance, we would be encouraging rather than preventing a future disaster."

Community leader Fernando Herrera says they will agree to leave if they can keep title to their old land. "We want to continue farming; we might build summer houses here by the sea," he says. "The trouble is the survey people say they found oil here. Some people think that is why they want us to go." Red Cross volunteers smile ruefully. "Risk mapping is a very political process here," says the International Federation's information delegate Fernando Nuño.

Section One

Focus on reducing risk

Chapter 3

Preparedness pays off in Mozambique

The response to 2000's floods in Mozambique – the worst for over a century – was a great success. Media headlines celebrated the helicopter rescue of a mother who gave birth while sheltering in a tree. Less reported were the 45,000 lives saved, mostly by regional rather than international rescuers.

A year later, more floods hit Mozambique. Local boat teams rescued over 7,000 survivors. In each year, for every person who died, over 60 were saved. Despite being one of the world's poorest countries, Mozambique was better prepared than many had feared. And, although international help was crucial, it succeeded because agencies let Mozambicans lead. So how did disaster preparedness help save lives?

Flood plains provide fertile farmland. Most farmers want to work on it and live near it. So people will have to continue living with floods. That means prediction, early warning and evacuation systems are essential, as well as community awareness-raising to ensure that these systems work in practice.

Long-term weather prediction remains an inexact art. Short-term flood warnings can be given using rainfall and river-level monitoring. In March 2000, there *was* advance warning of flood crests. Some Mozambicans, however, ignored the warnings, fearing that possessions left behind could be stolen. Many of the 700 who died in 2000 were at home tending animals.

To ensure people react to warnings, all the links in the chain, from high-tech meteorology to low-tech warning and evacuation, must be maintained. Communities at risk must trust those delivering the warnings. After 2000's floods, Mozambique's President Chissano said that "warnings must be clear and simple". He suggested using primary schoolteachers to watch rivers and issue warnings to their communities. The government is also considering legal powers which could force people to leave.

When meteorologists gave advance warning of unusually heavy rains, the Mozambique Red Cross (CVM) immediately began retraining volunteers. The government's disaster management agency (INGC) sent teams to prepare people in vulnerable areas, and ran a major simulation exercise in flood relief, involving the police, CVM, local flying clubs, fire brigades and scouts. The ministry of health delivered medicines to provincial clinics a month early. And officials renewed contacts with the South African air force, which had helped in previous emergencies. Wartime experiences in the 1980s had strengthened Mozambique's capacity to cope with crisis.

Traditionally, agencies stockpile relief supplies. But Mozambique had bitter experience of emergency reserves being stolen or sold. Moreover, the gap between major disasters may be a decade; maintaining stocks in good condition for that long is almost impossible under Mozambique's climatic and economic conditions. One alternative to aid stockpiles is to

establish contracts or retainers, for example with local petrol stations and boat owners, to provide (for a fee) essential supplies during bad flood seasons.

A key lesson from both disasters is that relief coordination worked best when Mozambicans led or fully participated in the response. In 2000, before international help arrived, local health workers and the CVM set up emergency health posts. Local government officials organized resettlement centres, coordinating distribution of tents and food, and construction of latrines and water tanks.

As the floods worsened and hundreds of foreign aid agencies poured in, Foreign Minister Simão personally coordinated the relief effort. The United Nations disaster assessment team worked within INGC's offices. And the government chaired daily meetings to ensure aid coordination. The effect was spectacular. Adequate water and sanitation eliminated cholera; health staff controlled malaria; enough food meant there was little hunger. Overall, the death rate of people displaced by 2000's floods was lower than if they'd stayed at home.

In 2001, coordination was weaker, partly because the floods were further from the capital, where INGC's resources were weaker. Providing the INGC with well-trained and resourced staff nationwide is therefore a priority. Where it isn't practical to employ full-time relief staff, existing provincial officials could be given emergency responsibilities, additional training and extra pay when, for example, the president declares a state of emergency.

At community level, the CVM showed that investment in volunteers pays off. During 2001's floods, volunteers trained in the drought of 1992-93 put their training to good use. Volunteers are trained in how to erect tents, organize a camp, register displaced people, assess needs, chlorinate water, build latrines and carry out first aid and boat rescues. Such broad-based training can be applied to a range of different disasters.

Structural mitigation measures are also important. During 2000, road embankments trapped water and prolonged floods in the Limpopo valley. Now, more gaps and bridges are being built into the embankments to allow floodwaters to pass underneath. Well-constructed clinics survived the floods with little damage, suggesting that protecting vital infrastructure pays off. Making a flood-proof community strong-house, in which to store valuable possessions, would encourage more people to evacuate.

There is substantial donor rhetoric about improving flood early warning, but donors proved reluctant to pay for it. Of the money Mozambique requested to replace river and rain gauges destroyed by 2000's floods, donors promised just 15 per cent. Yet in May 2000, donors pledged US\$ 470 million for reconstruction. Meanwhile, essential repairs to dykes before the next rainy season were impossible due to the slow release of donor funds. Greater donor flexibility in using reconstruction money to improve preparedness is needed.

Operating an early warning system needs money to pay and train flood monitors, and to provide coordinators with bicycles, radio batteries and mobile phones. Not large amounts of money, but it would mean an increase in government spending. However, Mozambique's World Bank-led poverty reduction strategy paper (PRSP) calls for cuts in government spending. Mozambique has reluctantly decided to invest more in health while cutting short-term education spending. Under such severe limits, investment in disaster risk reduction has lost out. The PRSP has a section on "Reducing vulnerability to natural disaster" – but no money is allocated for this.

In conclusion, several compelling lessons emerge from two years of record floods:

Early warning needs trust. Predicting bad weather is only half the battle. Mozambicans must trust the warnings before they will move. Involving community leaders in the early warning chain will help.

- **Evacuate quicker.** Many left it too late. Building community strong-houses and cattle pens, to secure possessions and animals before the flood, could save lives. Marking previous flood levels, evacuation routes and safe havens would also help.
- **Agency preparedness pays off.** Flood simulation exercises ensured that emergency services had experience working together. Pre-positioning essential relief supplies paid off.
- **Coordination works when Mozambicans lead.** Building the government's capacity to coordinate disaster relief at all levels is a key priority.
- **Africans rescued Africans.** In total, 53,000 Mozambicans were saved from drowning. Two-thirds were rescued by Mozambique's own military and Red Cross. International relief was crucial, but only after the rescue phase.
- **Training volunteers works.** Investment in training local people pays off. They will be there for the next disaster, while many international relief staff will not.
- **Gap between donor rhetoric and reality.** Donors mouth the language of disaster preparedness, but their words are not matched by the money needed to make risk reduction a reality.

[BOX]

Community-based disaster preparedness

Matasse is a rural community of 2,000 people threatened by flooding. Last year, the Mozambique Red Cross (CVM) initiated a project in community-based disaster preparedness (CBDP). CVM emphasizes the importance of respecting local tradition and involving villagers if such projects are to succeed. So CVM arranged community meetings to describe the project and recruit volunteers.

The volunteers were trained to analyse potential hazards and identify ways of preparing the community to save lives and livelihoods. They drew up a history of disasters – charting a pattern of drought and flood since 1939 – and recorded how people coped with past disasters. And they made a seasonal calendar, indicating times of year when villagers were most vulnerable to poverty and ill-health.

Then, with Red Cross help, the volunteers explored their surroundings, visually identifying its key features. They mapped the resources, infrastructure and possible risks and hazards which they saw. These risk maps covered residential and farming areas and identified those most exposed to flooding, as well as the best places of refuge.

This process helped identify a series of objectives. Priority mitigation activities included planting trees to halt erosion near the riverbank, and constructing a secure community hall to serve as a store for pre-positioned relief stocks and household goods in the event of disaster. Priority preparedness objectives included recruitment and training of new volunteers, rescue training and distribution of radios to improve early warning.

Section One

Focus on reducing risk

Chapter 4

Pacific islands foretell future of climate change

Scientists now describe climate change as “inevitable” – and Pacific islands are on the front line. Conventional development risks fuelling vulnerability. So future development decisions must be viewed through the lens of risk reduction. Far more resources and political will are needed to protect exposed coastal communities from the worst of the weather.

The latest reported data show that the number of people in the Oceania region affected by weather-related disasters has soared by 65 times over the past 30 years. Cyclones, droughts and floods threaten to make life unviable on many islands long before rising seas swallow them up.

Over the next century, global surface temperatures are projected to climb at a rate without precedent in the last 10,000 years. Sea levels are projected to rise between 9 and 88 centimetres. According to the Intergovernmental Panel on Climate Change (IPCC), “there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities”.

Sea-level rise is already eroding coastlines, where critical infrastructure and populations are most concentrated. Coastal flooding is inundating farmland and fresh water supplies with salt, forcing some islanders to consider abandoning their homes forever. In the Marshall Islands, farmers are resorting to growing crops in old oil drums to avoid planting in saline soils. On the Carteret atolls, off Papua New Guinea, rising seas have cut one island in half and left 1,500 people dependent on food aid from the mainland.

Meanwhile, higher sea temperatures are threatening to kill off coral reefs, which attract tourists, maintain natural sea defences, supply beach sand and provide habitats for marine life essential to the local diet. According to the IPCC, “the thermal tolerance of reef-building corals will be exceeded within the next few decades”.

Climate change will trigger more intense, frequent and unpredictable hazards. Across Oceania, while reported disasters have remained constant between the 1970s and 1990s, their impacts are getting far worse. Droughts and extreme temperatures affected 71,000 people during the 1970s and 1980s, but over 13 million people in the 1990s. Cyclones affected 18 times more people in the 1990s than in the 1970s, while floods and landslides affected nine times more. Either disasters are becoming more extreme, or people are less well protected than before.

Research by Commonwealth scientists suggests that “under climate change, there is likely to be a more El Niño-like mean state over the Pacific”. This will further increase the threat of cyclones and drought. During the 1982-83 El Niño, rainfall across the western Pacific was 70-90 per cent below average. Changes in temperature and rainfall are also encouraging diseases such as dengue fever and malaria.

Pacific island nations share common vulnerabilities which hamper their ability to adapt to climate change: small size and (often) low elevation; wide distribution and remoteness; proneness to natural disasters; rapid urbanization; increasing environmental degradation; limited natural, human and financial resources; loss of traditional coping mechanisms; and export-dependent economies.

Existing adaptation options may be unfeasible. Structural protection for coastlines (e.g. breakwaters and beach nourishment using shipped-in sand) is expensive. The alternative is to abandon shorelines – “managed retreat”. But for the lowest-lying Pacific atolls, there is nowhere to retreat to. Most critical infrastructure is within 100 metres of the coast. Replanting protective coastal mangroves is a cheaper alternative. Other adaptation measures must include: early warning for cyclones and droughts; water management and rationing; rainwater harvesting; preventive health care and education to combat diseases.

Initiatives at various levels are under way to combat climate change-related risks. But more resources and political urgency are needed. Progress in reducing greenhouse gas emissions is slow. Costs of adaptation are unknown – guesses range from tens to hundreds of billions of dollars per year worldwide. Last year, however, rich countries pledged to provide just US\$ 0.4 billion per year by 2005 to help developing countries adapt to climate change. By contrast, industrialized nations spend US\$ 70-80 billion per year on energy subsidies, including for fossil fuels.

During the 1990s, a UN disaster reduction programme established national disaster management offices and plans across the region. But the offices are often understaffed and fail to consult with disaster-prone communities. National disaster plans are often unworkable since they are not written by local people, nor backed up by sufficient budgets.

Since governmental assistance concentrates on disaster response, people usually have to prepare for disasters on their own. And for remoter islands, relief may take days to arrive. So community-based disaster mitigation and preparedness will prove a vital survival strategy.

The Red Cross emphasizes community-based self-reliance (CBSR). Villagers are taught to assess their own vulnerabilities and capacities. They are encouraged to draw maps of their local community, identifying vulnerable locations (e.g., houses on steep slopes, deep water lagoons) and vulnerable people (for example, the elderly and disabled). They also map resources such as strong buildings to use as evacuation centres. Islanders are trained to set up disaster preparedness committees and plans, and receive first-aid training.

Indigenous coping strategies are crucial in promoting disaster resilience. Before cyclones hit, islanders instinctively prepare containers of food and water, cut down overhanging branches, erect windbreaks and lash their houses to trees. One non-governmental organization in Fiji communicates preparedness messages through community theatre – a method rooted in the way that islanders learn their history, through songs, dance, rituals and legends handed down from one generation to the next.

Tuvalu’s environment officer fears that the “shift to a modern western lifestyle is making people more vulnerable to the climate. They have lost their ways of coping and managing”. He adds: “Both climate change and development are killing the island.”

As populations increase, the lack of decent land and housing has led to more squatter settlements. New homes are being built on plots exposed to flooding and landslides. Local development priorities can be “risk-blind”. For example, Tuvalu recently spent US\$ 3 million (one-third of its annual budget) on a road-building programme, but only US\$ 107,000 on new homes, despite a housing shortage.

Over-dependence on a few key exports is risky. Tourism and cash-crops can account for 50-75 per cent of all foreign exchange earned by Pacific islands. Yet these industries are seriously threatened by fluctuations in global markets and weather. Cultivating hardy local crops such as taro, yam and sweet potato may prove essential.

The threats posed by global warming to the people and economies of Pacific islands are varied and far-reaching. A new development paradigm is needed. Every policy decision must pass the acid test of whether it increases or decreases vulnerability to climate change. Communities at risk must be at the centre of development planning if it is to succeed. Urgent priorities include:

- Global assessment of the costs of adaptation to climate change in poor countries.
- New funds from rich countries for poor-country adaptation, equal to the value of the subsidies given by rich countries to domestic fossil fuel industries.
- Development models based on risk reduction, incorporating indigenous coping strategies.
- Disaster awareness campaigns with materials available in local languages.
- Coordinated plans for relocating threatened communities with appropriate political, legal and financial resources.

[BOX]

Relocation – the last resort

On 5 March 2002, the prime minister of Tuvalu, Koloa Talake, announced that he was planning to sue the world’s worst greenhouse gas polluters at the International Court of Justice. He stressed that global warming was an issue threatening both his people and country. “It is frightening,” said Talake, “islands that used to be our playgrounds have disappeared. Some scientists say there is no rise in sea level, but the tide is rising. We have seen it with our own eyes.”

Last year, Tuvalu’s government attracted the world’s attention by declaring it would start evacuating its citizens in the face of climate change and rising sea levels. When Australia rejected their proposal for special immigration status, Tuvalu negotiated a deal with New Zealand whereby a number of its citizens would be accepted each year, effectively as “environmental refugees”.

It is easy for urban-dwelling people in developed countries to underestimate the importance of land to Pacific islanders, and hence the deep personal and cultural significance of its loss. One woman from Kiribati explains: “We can’t just move to another country. I would love to go to Fiji. But there I have no land. There I am no one.”

The spectre of wholesale relocation raises challenging questions. Once land has been lost, will a residual nationality persist, or does there need to be a new category of “world citizen”? What legal status do environmental refugees have? What happens to an abandoned country’s exclusive economic zone, its territorial waters and nationhood?

Section One

Focus on reducing risk

Chapter 5

Reducing earthquake risk in urban Europe

Earthquakes have proved the deadliest of all Europe's disasters over the past decade, and cost the continent US\$ 27 billion in damage alone. Collapsing buildings kill most victims, so how are European cities planning to reduce these risks?

Major tremors can be expected in Romania and Albania within five years. The last big quake to hit Bucharest, in 1977, left 1,650 dead and 10,000 injured. A repeat of the 1963 Skopje quake, in which 1,066 Macedonians died and much of the town was demolished, would be devastating.

Turks share the fear – two earthquakes in 1999 killed up to 20,000 people and cost the country 10 per cent of its gross domestic product. Scientists can predict disaster locations fairly accurately, but not specific times. They say Istanbul runs a 60-70 per cent risk of being struck by a major earthquake within the next 30 years. With a population well over 10 million, a direct hit could be catastrophic. Up to 30 per cent of Istanbul's 900,000 buildings could collapse completely.

The number of deaths from the Turkish quakes would have been dramatically less if the country had enforced its building regulations. They've been law since 1939 and prescribe an impressive chain of inspections. Unfortunately these are often simply ignored. There are too few trained inspectors, and substandard building practices remain common.

In south-eastern Europe, the transition from communism and associated economic reforms have stretched capacities to the limit. Building regulations, often adhered to before transition, have since been ignored. Widespread bribery and corruption throughout the region exacerbate the situation.

Improving building practice will require both encouragement and enforcement. The insurance industry could share the risks. Authorities could provide incentives such as tax breaks and cheap loans. Since 1992, house insurance in Turkey has been mandatory – but it only applies to new owners when they buy property. A government proposal to hold contractors responsible for construction quality was reversed by the High Court.

Meanwhile, architects and engineers can practise without receiving any seismic training. This must change. There is no shortage of knowledge in south-eastern Europe. But it is insufficiently shared.

For buildings already at risk, the best mitigation option is "retrofitting" – reinforcing the structure to make it earthquake-resistant. This is very expensive. It is highly unlikely that all Istanbul's buildings could be retrofitted. An alternative is to reinforce "lifeline" infrastructure (for example, schools and hospitals). Simply assessing the need for retrofitting costs US\$ 3 per square metre.

Retrofitting private apartments is complicated. All the owners must agree. Even if they do, it's difficult to find financing or alternative housing while the work is being done. The average Turkish building has a 50-year life span, so one option is to replace substandard housing once its design life has ended.

Mitigating earthquake risk by enforcing building codes and retrofitting lifeline infrastructure will take time, money and political will. It's a long-term strategy. But what if catastrophe strikes tomorrow? Lives can be saved if authorities and communities take action now to prepare for the worst.

There are promising signs. New crisis management centres have been established in Turkey. New maps of Istanbul detail alternative routes for emergency vehicles, space for 1 million tents and even emergency graveyards. Disaster preparedness plans have been drawn up – but a recent simulation exercise scared everyone involved.

A key priority is defining and decentralizing roles and responsibilities of different agencies within an effective disaster response strategy. Otherwise, the chaos of disaster will create a chaotic response. According to a 2001

risk analysis commissioned by the Stability Pact for South Eastern Europe, “Highly centralized systems of governmental authority and allocation of resources often create delays and add layers of bureaucracy, compounding problems of an already difficult emergency response situation.” The analysis found that few national disaster plans defined clear roles for individual organizations.

Serious controversy now surrounds the practice of flying international search-and-rescue teams into disaster zones. It is rare for them to arrive in time to be really effective. The money and effort would be better spent training local people in simple emergency response. After the Turkish earthquakes, 50,000 people were found alive under collapsed buildings. Locals rescued 98 per cent of these. Outside professionals saved just 350.

Where local emergency response depends on volunteers, specialist search-and-rescue training may not make sense, if earthquakes are 25 years apart. “Training people to be multi-purpose, as indispensable in dealing with traffic accidents as they are in mountain rescue or earthquakes, makes far greater sense,” maintains Sune Follin, regional disaster preparedness delegate for central Europe.

The Romanian Red Cross, for example, prioritizes preparedness for a range of disasters. It has trained over 4,000 volunteers for 278 intervention teams which can be called upon at any time for any kind of disaster.

Factors considered vital to reduce seismic vulnerability are not new: enforcement of building codes and land-use guidelines, public awareness, dispersed populations, strong public infrastructure, and effective warning, evacuation and response procedures. But turning these ideas into action is far more challenging. “You need an earthquake every five years to keep politicians interested,” says a leading European seismologist.

Disaster mitigation and response are increasingly viewed as a government priority. Albania, for example, introduced legislation in 1998 which tightens high-rise construction – any building over eight storeys requires approval from the national seismological institute. But laws must be backed up by aggressive enforcement. Boosting public awareness can help promote a culture of prevention and prompt changes in government policy. Humanitarian organizations can play a key role through advocacy campaigns and strategic links with local and international media. But there is a thin line between building public awareness and whipping up hysteria.

Regional cooperation may help raise standards in risk reduction. Traditional tensions can be put aside during disasters. Following the Turkish earthquakes in 1999 and 2002, Greece offered immediate assistance. Where nations share risks, the foundations for sustained cooperation in disaster mitigation and preparedness can be found. This would make sense in the Balkans, where average earthquake losses top 30 million Euros (US\$ 26.5 million) per year, quite apart from human casualties.

Lessons painfully learned from recent disasters should not be forgotten. It takes common sense, not technology, to remember these lessons – plus the political will to turn them into reality. More active humanitarian advocacy is needed, to achieve real changes both in people’s behaviour and in government policy. Critical changes that will reduce the risk of future earthquakes include:

- Legislation and enforcement of regional standards in construction, land-use and urban planning – plus incentives to encourage better building.
- Decentralized disaster preparedness and response planning, along with resources to train local emergency teams.
- Regional knowledge sharing, to ensure what is learnt in one place is known in another, through specialist training and public information.
- Promoting responsible public debate through national media to maintain the pressure on policy-makers to prioritize risk reduction.
- Raising public awareness of threats and how to react, through mass media and education of schoolchildren.

[BOX]

“Grandpa Earthquake” dispels fear of disaster

“The worst possible reaction to an earthquake is panic.” This is the message of Ahmet Metin Isikara, director of the Kandili Observatory, situated on a hill high above Istanbul. For thousands of children and their parents, Isikara has become “Grandpa Earthquake”. He stars in

a series of short films, which show children and adults exactly how to react in an earthquake. The films are skilfully made and feature genuine Turkish homes where children help Grandpa bolt down the furniture. With his shock of white hair and toothbrush moustache, Isikara is stopped on the street by children saying things like, "Hello there, Grandpa Earthquake. Like you told me, I'm not afraid anymore."

In its campaign against fear, the Kandili Project began with teachers. At least one teacher from each of the city's 3,000 schools has been trained to train other teachers and, ultimately, the children in how to prepare for the day when disaster strikes. The enthusiasm at Kandili is infectious. Disaster training has been incorporated into the curriculum of grades 1 to 8 and schools hold disaster preparedness days.

The message is beginning to get across: "It doesn't matter how big it is; what counts is *Are you ready?*" Turkish children are disciplined and good disseminators of information. Earthquake survival kits – including items such as bottled water, torch, radio and photocopies of the family's important papers – are appearing in homes and even offices.

Section Two

Tracking the system

Chapter 6

Assessing vulnerabilities and capacities

The International Federation's approach to disaster risk planning is known as the vulnerability and capacity assessment (VCA). Its main aims are to:

- assess the risks facing communities and the capacities available to deal with those risks;
- involve communities, local authorities and humanitarian/development organizations in the assessment from the outset; and
- draw up an action plan to prepare for and respond to the risks identified.

The process of being involved in the assessment can provide participants with greater awareness of their own potentialities. "Instead of seeing themselves as victims, people tell themselves that they can influence what happens," says the International Federation's Graham Betts-Symonds. So VCA is a capacity-building tool as well as a diagnostic measure.

Crucially, the VCA process aims to heighten the awareness of communities and aid organizations *before* disaster strikes. It then converts that awareness into concrete risk reduction activities. But the process carries risks. It may expose root causes of vulnerability, its solutions may be unacceptable to authorities, and it may raise unrealistic expectations.

To date, hundreds of VCAs have been completed. The Swedish Red Cross (SRC) was one of the first to experiment, in 1994. Their aims were better identification of vulnerable groups and greater ownership of the VCA process by staff and volunteers. A good VCA requires total commitment, but the effort pays off. The Gambia Red Cross's 18-month VCA led to the society playing a lead role in national disaster planning.

The experience of the Palestine Red Crescent Society (PRCS) with VCA has shown that the process can make a difference whether during peace or war. The assessment was concluded shortly before the second intifada (uprising). To ensure that key players would collaborate from the outset, other international agencies and Palestinian Authority ministries were invited to join a steering committee. PRCS social workers familiar with target communities formed focus groups to draw out local perspectives on disaster. The 429 individuals who took part came from a cross-section of Palestinian society – cities, villages and refugee camps in both the West Bank and Gaza. The assessment broke new ground by including 113 children, who were asked to express in drawings their vision of disasters and ways in which they could be mitigated.

The hazards regarded by Palestinians as most likely to occur in the future were, in of importance: lack of water; "events of a political nature"; road accidents (for West Bank interviewees) and open sewers (for Gaza interviewees); pollution; fires; earthquakes; poor health; and epidemics. One might have expected confrontations (frequent even before the

intifada) to top the list. But problems related to water are a daily chore and affect everyone. Water is scarce, expensive and frequently polluted. Added to low levels of rainfall, there is competition between Israelis and Palestinians for this limited resource, most of which remains under Israeli control.

The analysis of the VCA results was finalized in August 2000; 28 September 2000 marked the beginning of the intifada. "Events of a political nature" became hazard number one.

According to one PRCS official, "The VCA acted as a key catalyst for PRCS strategic thinking and action in the direction of disaster preparedness and response. PRCS, which traditionally reacted to various types of crisis by dispatching ambulances, moved in a direction of disaster management thinking and programming." But of course, they *did* dispatch ambulances; the fleet was doubled in size. They had no choice: the first 18 months of the intifada resulted in over 1,100 Palestinians dead and 20,000 injured.

But changes recommended by the VCA were implemented. An 24-hour operations room and a disaster management unit were set up. An emergency action plan was drafted, defining roles for the Red Crescent and partner agencies. Emergency committees, recommended by PRCS workers at the outset, were formed. These consisted of a teacher, a health professional, a village council member and a local Red Crescent employee. They were tasked to intervene in confrontations and road accidents, and to keep the PRCS informed in case of food or medicine shortages.

But what about the other hazards identified during the VCA – water, public health, road accidents? They were not sidelined by the intifada. But the PRCS had to define clear criteria to avoid raising unrealistic expectations.

Health care is a core activity for the PRCS. So, in the West Bank town of Silwad for example, the PRCS were able to increase the staff in their clinic from six to nine; they improved communications by installing a fax machine; they installed a generator to ensure that vaccinations could be safely stored; and they created a six-month supply of medicines, in case of a blockade.

Water shortages, however, are a far more difficult and political problem, beyond even the Palestinian Authority's capacity to solve. Nevertheless, the PRCS identified specific areas where they could be useful. Firstly, by providing drinking water and sanitation for camps and mobile hospitals. Secondly, by launching campaigns in Gaza to clean up solid garbage, the sewage system and stagnant water, with the help of students, volunteers and the municipality. For other hazards, the PRCS started public awareness campaigns.

Despite these efforts, frustration was inevitable. In Silwad, a local councillor complained that although the PRCS provided an ambulance, they would not pay the salaries. Not everyone reacted like this. But it begs the question: What is the point of a VCA if it raises issues you cannot address? One answer is that before taking any action, agencies must understand what resources the community has, and what they need. And, when an agency does identify issues outside its remit, it can either find other organizations to help, or advocate for changes to the system.

"Advocacy takes time and hard work," says Younis Al Khatib, president of the PRCS. He's

looking forward to approaching the ministries to promote much-needed regulations. Above all, he wants to encourage them to draft and adopt a national disaster plan. But this gets more difficult by the day. Territorial fragmentation prevents ministers, scattered here and there, from meeting. Many leaders reunited in one place could become a military target.

Each VCA will face its own unique challenges. It could focus on communities, or more on the implementing agency itself. Its priority may be to highlight capacities, or to identify vulnerable groups more accurately. But the process is defined by three overriding principles:

- **VCA puts people first.** Rather than relying on technical systems to determine hazard risk, VCA reveals the risks which vulnerable people perceive to be most threatening. Unlike needs-assessments, VCA concentrates as much on capacities as needs and vulnerabilities. People-centred assessment ensures that actions taken by authorities, aid organizations and communities will be more relevant to real needs and available resources.
- **VCA is a process not a product.** VCA does not aim to provide a “snapshot” situation report. It is a learning process which grows into a long-term way of assessing the operating environment.
- **VCA involves all players from the outset.** VCA provides the catalyst for a closer working relationship with key actors. Drawing in the full range of players from the outset is the only way to create ownership of the assessment process, and of the programmes which follow.

[BOX]

Self-reliance in the south-west Pacific

The volcano on Manam island, off the coast of Papua New Guinea (PNG), is one of the most active in the region. An eruption in 1996 killed 13 of the island’s 8,500 inhabitants. Some died because they failed to evacuate before lava swept through their homes. Others died due to a lack of basic first aid.

As well as volcanic eruptions, islanders are threatened by tsunamis, earthquakes, landslides and drought. So, in 2001, the PNG Red Cross initiated a vulnerability and capacity assessment. The results were startling: only 11 per cent of islanders were aware of the risks facing them and just 6 per cent knew about resources available to deal with those risks. Over half were aware of escape routes and pickup points. But no one knew what the government’s evacuation plan entailed.

Isabell, a 43-year old teacher, is enthusiastic about the VCA. “Our women never been asked to attend any assessment or planning session in Manam. It was only the man’s job,” she says. “I don’t know how you Red Cross convinced our men/leaders to include women in the process. It was really good; now our men know, the women can also contribute.”

Based on the VCA, the Red Cross began a community-based self-reliance (CBSR) project. Its aim is to boost islanders’ faith in their own resourcefulness to reduce risks. According to the Catholic school’s headmaster, “VCA, disaster prevention, mitigation, preparedness – all these are new to us. But at the end of the last few days’ activities, we are clear about our strengths and weaknesses; it gives us new hope, as we are not part of the government plan. Through this process, we have learned the value of self-reliance.”

Section Two

Tracking the system

Chapter 7

Accountability: a question of rights and duties

Why is accountability important? Put simply: humanitarian actors exercise real power over crisis-affected people. Power to decide who receives aid and who does not; what will be given, when and where. Power to determine where people must go and when, what they will eat, what clothes and shelter they will have.

As early as 1983, a disaster expert argued that: “Without accountability, programmes inevitably become paternalistic in nature or end up serving the needs of the donors and the agencies rather than the needs of the victims.” In 1994, the wide-scale clinical mismanagement of cholera by inexperienced relief workers among Rwandan refugees increased calls for stronger accountability. In early 2002, disturbing reports emerged of agency staff in west Africa abusing their power by demanding sex in return for aid.

Evaluators have consistently highlighted problems encountered in humanitarian operations, such as lack of professionalism; poor management; problematic funding policies and practices; absence of coordination; lack of humanitarian access; and military targeting of civilian populations and relief workers.

Addressing these problems involves defining responsibilities and focusing on accountability, as both a pre-eminent humanitarian principle and an institutionalized practice. Building a culture and practice of accountability requires acknowledging that with power comes responsibility, and that humanitarian action is not about logistics, but about individuals – with rights.

Accountability requires individuals, organizations and states to implement two interdependent principles: to account for actions (and inactions) and be held responsible for them; and to be able to safely report complaints and seek redress. It shares common features with quality assurance, such as monitoring impacts, organizational leadership and stakeholder satisfaction. However, accountability differs in its focus on the *responsibilities* of duty-bearers and the *rights* of affected populations.

Initiatives since the mid-1990s to improve the quality of humanitarian aid have included the *Code of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Response* (Code of Conduct) and the *Sphere* project’s Humanitarian Charter and Minimum Standards. These initiatives aim to adopt a rights- rather than needs-based approach that focuses on the responsibilities of humanitarian actors.

All those working in humanitarian relief, from governments and armed forces to non-governmental organizations (NGOs) and civil society groups, should be accountable to crisis-affected populations. Different actors have different responsibilities. States and armed groups are obliged to respect humanitarian standards defined by the Geneva Conventions and

to prevent their violation. Equally, states are obliged to secure universal observance of the rights to food, clothing, housing and health.

Where states cannot assist crisis-affected populations, they have an obligation to seek assistance from others – and therefore to allow access for humanitarian purposes, whether in conflict or non-conflict situations. Despite the consistency of international law in promoting access, the practice is sadly different. Governments and armed groups too often violate this principle, in the name of “national sovereignty” or war efforts. And humanitarian workers are often the deliberate targets of intimidation or killings.

Non-state actors are also accountable for their actions. The Universal Declaration of Human Rights calls on “every individual and every organ of society” to play their part in securing universal observance of human rights. The Geneva Conventions detail the rights and obligations of any personnel participating in relief. The development of the Code of Conduct, Sphere’s Humanitarian Charter and other professional standards indicates the commitment of humanitarian actors to define their roles in terms of human rights and responsibilities.

Aid guidelines and standards have mushroomed recently, establishing general principles, sectoral benchmarks and interagency codes. Does this thwart attempts to offer a single baseline against which to assess humanitarian operations? No. Firstly, these codes offer a practical framework of reference for a range of different contexts. Secondly, after consistent monitoring, only those codes that emerge as relevant will be adopted.

But the quality of aid is threatened by lack of monitoring and indicators to measure compliance. The results of monitoring must be made public and lead to tangible outcomes. Otherwise standards will remain no more than paper tigers.

Accountability at field level means ensuring that crisis-affected people are involved in the decisions that affect them. They have their own ways of coping, so it’s essential to include them in aid planning. Failure to engage them in meaningful dialogue about their needs and capacities can prove frustrating and even dangerous. Yet many consultation exercises simply extract information rather than promote dialogue.

While agencies may be experienced in listening to local people, some key questions need to be asked. Listening and consultation for what? Who asks the questions? What happens next? Working in more transparent and accountable ways means more than just listening.

A central principle of accountability is the ability to voice complaints. They may be frivolous or serious, but they are rarely taken up within aid organizations or governments. How can agencies better hear what people are concerned about? How can they tap the experience and creativity of those affected by disaster? And respond to what they hear? Three specific components to accountability are beyond doubt:

- **Obligation to inform.** Agencies must inform affected people about all aspects of aid operations and about their rights – through public meetings, mass media or information centres.
- **Obligation to listen.** Agencies must actively seek the views of affected people about their perceived concerns and priorities for improving aid delivery – through interviews, focus groups, social audits or a help-desk. Crucially, aid-providers must set up mechanisms, which provide individuals the opportunity to report complaints and seek redress.

- **Obligations to respond and report back.** Listening to crisis-affected people should stimulate changes in aid delivery. Agencies must assume responsibility for what they did well and for where they failed. To demonstrate that listening to beneficiaries has resulted in concrete changes, agencies must report back on their actions (and inactions) to communities, donors and other stakeholders. Reporting back completes the accountability circle of informing, listening and responding.

Building a culture of accountability never ends; it is not a tangible outcome but rather an ongoing process with benchmarks measuring its evolution. The challenge is to turn exceptional examples of accountability into regular, institutionalized practice.

Existing standards are not disseminated widely enough. Very few of them are evaluated, monitored or their non-implementation sanctioned. Lack of self-regulation diminishes the impact that these initiatives could have. Humanitarian actors must act together to build self-regulatory bodies, at national and international levels, which should: ensure beneficiary participation; ensure other stakeholders' participation; be transparent; have the authority to monitor and enforce agreed rules; update rules; accredit or remove the endorsement of organizations; and include a right of appeal.

Only by being transparent in its undertakings and accountable to those whose lives it most affects, can humanitarian action truly meet its objective to safeguard and uphold the well-being and dignity of those who have been affected by disasters and armed conflicts.

[BOX]

Recommendations for the “accountable organization”

- **Commit to human rights.** State a commitment to the protection and fulfilment of human rights. Provide adequate budgetary and human resources to realize this commitment.
- **Set standards and indicators.** Set standards and performance indicators for protecting and fulfilling the rights of crisis-affected people and field staff. Set these in participation with stakeholders and review periodically.
- **Communicate with all stakeholders.** Inform crisis-affected people and other stakeholders about standards adopted, aid programmes to be undertaken, and complaints processes available. Provide appropriate training in the use of standards.
- **Involve crisis-affected people in programme management.** Involve affected people in the planning, management and monitoring of aid programmes. Report to them regularly on the progress of programmes.
- **Monitor compliance with standards.** Involve crisis-affected people and field staff in monitoring compliance with standards, and in revising them. Regularly audit compliance, using internal and external mechanisms.
- **Resolve complaints.** Put in place complaints mechanisms, which safely and impartially provide crisis-affected people and field staff the opportunity to report concerns and to seek appropriate redress.
- **Report back on standards.** Report back regularly to affected people and other stakeholders on compliance with standards and changes to programmes.

Section Two

Tracking the system

Chapter 8

Disaster data: key trends and statistics

While the total number of all disasters (both “natural” and technological) reported during 2001 was lower than the previous year, at 712 events it still represents the second-highest total of the decade. The number of geophysical disasters has remained fairly constant, but the past two years have seen the highest number of weather-related disasters reported over the decade.

A total of 39,073 people were reported killed by disasters in 2001. While this was nearly double the figure for the previous year, it was lower than the decade’s annual average of around 62,000. Last year, earthquakes proved to be the world’s deadliest disasters, accounting for over half the year’s toll. Much of this can be attributed to the quakes which hit the Indian state of Gujarat in January 2001. Over the decade, however, hydro-meteorological hazards have claimed 71 per cent of all lives lost to disasters.

From 1992-2001, countries of low human development (LHD) have accounted for just one-fifth of the total number of disasters, but over half of all disaster fatalities. On average 13 times more people die per reported disaster in LHD countries than in countries of high human development (HHD). Over the decade, different kinds of disaster have proved deadly in different continents. In the Americas, floods accounted for 45 per cent of all deaths from disasters. In Asia, drought/famine claimed 58 per cent. In Europe, earthquakes claimed 58 per cent, while in Oceania, tidal waves claimed 66 per cent. Surprisingly, Africa’s deadliest disasters were transport accidents – claiming 45 per cent of the decade’s deaths.

Last year, a total of 170 million people were reported affected by disasters – below the decade’s average of 200 million. Earthquakes affected more people during 2001, 19 million, than any other year of the decade. Meanwhile drought/famine affected over 86 million people last year, many of those living in central and south Asia. Weather-related disasters have been the most pervasive in the past ten years. Drought/famine accounted for 82 per cent of all those affected in Africa, 48 per cent in Oceania and 35 per cent in the Americas. Meanwhile, floods accounted for 69 per cent of all those affected in Asia. And windstorms accounted for 36 per cent of those affected in the Americas, and 33 per cent in Europe.

The total amount of estimated damage (direct damage to infrastructure, crops, etc.) inflicted by disasters during 2001 was US\$ 24 billion – the decade’s lowest and well below the annual average of US\$ 69 billion. Over the decade, earthquakes have proved the most expensive of disasters, costing the world US\$ 238 billion in damage alone – without even measuring the effect on economies. Around half of this figure, however, can be attributed to one event – the 1995 quake in Kobe, Japan. Globally, floods and windstorms are very nearly as costly as earthquakes.

Disasters can have a devastating effect on the development of poorer nations. In Honduras, for example, Hurricane Mitch put the country’s economic development back 20 years. In 1998, an El Niño year, Peru suffered storm damage to public infrastructure estimated at

equivalent to 5

per cent of gross domestic product (GDP). In 1999, losses from earthquakes in Turkey and landslides in Venezuela cost these countries equivalent to 10 per cent of their GDP.

Over the past 30 years, the impacts of *natural* disasters have changed dramatically. Deaths from natural disasters fell from nearly 2 million in the 1970s to just under 800,000 in the 1990s. But numbers reported affected by natural disasters rocketed from just over 700 million in the 1970s to nearly 2 billion in the 1990s.

The reasons behind these statistics are complex and need further analysis. However, the drop in fatalities can be attributed in part to better disaster preparedness. In 1970 a cataclysmic cyclone killed half a million people in Bangladesh. Following that catastrophe, the Bangladesh government supported by the Red Cross and Red Crescent initiated the Cyclone Preparedness Programme (CPP). In the 1990s alone, the CPP successfully evacuated 2.5 million people into emergency shelters before cyclones hit – and very probably saved their lives as a result.

Many factors are likely to be contributing to the increase in those reported affected by disasters. The profile of vulnerability is changing. As more people move into urban areas and slum settlements, they are increasingly living in the path of disaster. Traditional coping mechanisms are being eroded as families fragment and communities disperse. Environmental degradation is increasing the negative effects of floods, windstorms and droughts. While disaster preparedness measures are helping save lives, the failure to reduce risks more broadly may be contributing to the higher numbers of disaster-affected people. Better reporting of the numbers of disaster-affected people may contribute to the higher figure. And the definition of “affected” is open to interpretation.

These global figures disguise some serious discrepancies between the continents. Apart from Africa and Europe, the rest of the world reported substantial *increases* in the numbers of disaster fatalities in the past two decades. For Oceania, deaths tripled from one decade to the next, while for Asia deaths were up 41 per cent and for the Americas up 32 per cent. Meanwhile, the figures for those affected have more than tripled in Europe and increased 12-fold in Oceania.

Official development assistance (ODA) from members of the Organisation for Economic Cooperation and Development’s (OECD) Development Assistance Committee (DAC) slipped to US\$ 53.7 billion during 2000, the latest year for which statistics are available. This represented a drop of around US\$ 2.7 billion from aid disbursements during 1999.

Expressed as a percentage of donor countries’ gross national product (GNP), ODA remained static during 2000 at 0.39 per cent. Denmark, the Netherlands, Norway, Sweden and Luxembourg were the most generous donors, meeting or exceeding the United Nations (UN) target of 0.7 per cent. The United States stayed at the bottom of the pile, donating one-tenth of 1 per cent of its US\$ 10 trillion GNP in aid.

Emergency/distress relief from DAC donors fell from the decade’s high of US\$ 4.4 billion in 1999 to US\$ 3.6 billion in 2000. However, 2000’s figure was still the second highest of the decade. The biggest donor was the United States, which accounted for one-third of all emergency aid donations.

Earlier this year, the UN's secretary-general, Kofi Annan, called on governments to raise an extra US\$ 50 billion a year in ODA (effectively a doubling of world aid) to improve the chances of attaining the international development goals of 2015. The Monterrey finance for development conference in March 2002 failed to produce a doubling in aid pledges. But some of the world's biggest donors made moves in the right direction. The European Union agreed to boost its aid budgets by US\$ 7 billion by 2006. And the United States pledged to increase foreign aid spending by 50 per cent, or US\$ 5 billion, in the three years from 2004.