

# CHAPTER 6



# Natural disasters: the complex links with HIV

When Jane Machira went to Uganda's Soroti province in the wake of massive flooding in October 2007, she found herself "shocked and upset" by the situation of people living with HIV (PLHIV). As Christian Aid's HIV officer in East Africa, she wanted to check on the mobile clinics run by partner organization Youth With A Mission (YWAM), whose clientele includes many HIV-positive people and their families. The conditions she found were harsh, as people told her of crops swept away by the flood waters and the contamination of all sources of clean drinking water by collapsed pit latrines, rotten food and the bodies of dead animals. In places where roads were severely affected, many PLHIV had been unable to reach hospitals to get their vital anti-retroviral drugs, while local clinics had run out of medications to treat opportunistic infections. In an online appeal, Jane commented:

"I was utterly saddened to see Grace Okello's farm totally flooded and water logged. Her harvest was completely destroyed and her home ruined. Grace, who takes care of eight orphans, was just about to harvest her groundnuts (the seeds had been provided by YWAM) when the floods struck. Nothing was left. Without food, people living with HIV cannot fight the HIV virus or protect themselves from opportunistic infections. With the loss of crops and destruction of farms, the price of food has risen sharply and Grace, like many others, cannot afford to buy food from the markets.

"My heart wept when I saw that Grace, along with many other families, had lost everything. I also cried because it is work undone. Uganda has been a success story in the way it has sought to tackle HIV... Now, for people like Grace who have addressed one crisis in their lives, I see another one emerging. Without food, shelter and support, because of the rains I don't know how she will cope."

(Christian Aid, 2007)

## Devastating events

Natural disasters, such as the massive flooding described in Uganda, comprise some of the most devastating events in human history. In a matter of hours, and sometimes even of minutes, an earthquake or hurricane can kill tens of thousands, and undo decades of economic development. History records many natural disasters of huge amplitude, from the earthquake in 1138 that killed almost a quarter of a million people in Syria to China's Yellow River floods that killed over a million people in 1887

Photo opposite page: In Uganda, recent floods have led to outbreaks of malaria and cholera. People have nothing to eat and all their crops have rotted away. And this in a country where a large part of the population is living under the poverty line of US\$ 1 a day.

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and 1931. Many more disasters of smaller amplitude are recorded throughout history, and continue to strike almost every week of the year in one location or another.

Natural disasters are often divided into two categories of 'climatic' and 'geological' events, although these are not strict scientific definitions (other terminology includes 'hydrometeorological' and 'geophysical' disasters). Climatic disasters are weather-related and include floods, cyclones, storms, drought and wildfires. Geological disasters include earthquakes, tsunamis and volcanic eruptions. Somewhere in the middle are avalanches, landslides and mudslides, which may be related to a mixture of climatic and geological factors.

The Global Resource Information Database maintained by the United Nations Environment Programme (UNEP) states that 118 million people are exposed each year to major earthquakes (i.e., above 5.5 on the Richter scale), 343.6 million to tropical cyclones, 521 million are exposed to floods and 130 million to meteorological drought. Another 2.3 million people are exposed annually to landslides.

Fast-moving epidemics of highly infectious diseases are also included in the list of natural disasters. The so-called Black Plague, caused by the *Yersinia pestis* bacterium, is thought to have killed around 75 million people in Asia and Europe during a decade in the mid-1300s. More recently, an epidemic of influenza killed almost 50 million people in the single year of 1918. Today, HIV constitutes a unique disaster which currently kills millions of people each year (see Chapters 1 and 2 for epidemiological information) and is having a serious impact on human development in the hardest-hit countries.

## **HIV and 2007's 'crop' of natural disasters**

The year 2007 will be remembered as a particularly bad year for floods and forest fires, although other types of disasters were registered in different parts of the world. Africa saw no less than 23 countries affected by some of the biggest floods in decades. In Asia, tens of millions were affected by floods in Bangladesh, India and Nepal, while Cyclone Sidr on 15 November had a massive impact on coastal Bangladesh. Extreme rains affected 1.5 million people in the Caribbean, Central America and Mexico; at their height, four-fifths of the Mexican state of Tabasco were submerged.

The year also saw severe 'cold snaps' in Argentina, Bangladesh, Nepal and Peru. Latin America was struck by Category 5 Hurricanes Felix and Dean, as well as a number of tropical storms, while Australia, Greece and the US state of California experienced severe wildfires or drought.

On the geological front, major earthquakes were registered in Peru, Sumatra (Indonesia) and the Solomon Islands, where the earthquake was accompanied by a tsunami.

However, the Peru earthquake, in which more than 500 people died, was the only geological event among the 15 'Flash Appeals' issued by the United Nations (UN) in 2007. Most other major seismic events in 2007 occurred in the ocean, far away from population centres. Figure 6.1 shows the major disasters in 2007 as listed by OCHA, the UN's Office for the Coordination of Humanitarian Affairs.

It is impossible to make any direct link between HIV mortality and the natural disasters occurring in 2007, but there is no doubt that such events had negative impacts on millions of people living with or affected by HIV. Of the 15 disasters resulting in Flash Appeals in 2007, nine occurred in countries with generalized epidemics, i.e., where over 1 per cent of the adult population is HIV positive (the nine include the disasters that struck the Caribbean and West African regions, which both contain several countries with generalized epidemics).

In practical terms, this means that hundreds of thousands of people living with HIV would have been affected in one or more ways, and general populations exposed to increased risk of infection. Such impacts and risk factors include interrupted care and treatment for AIDS or opportunistic infections, reduced or lost access to medical interventions to prevent mother-to-child transmission, shortages or lack of condoms and other prevention-related supplies and disruption of prevention programming and reproductive health services (see Box 6.1).

## Specific impacts on HIV-positive people

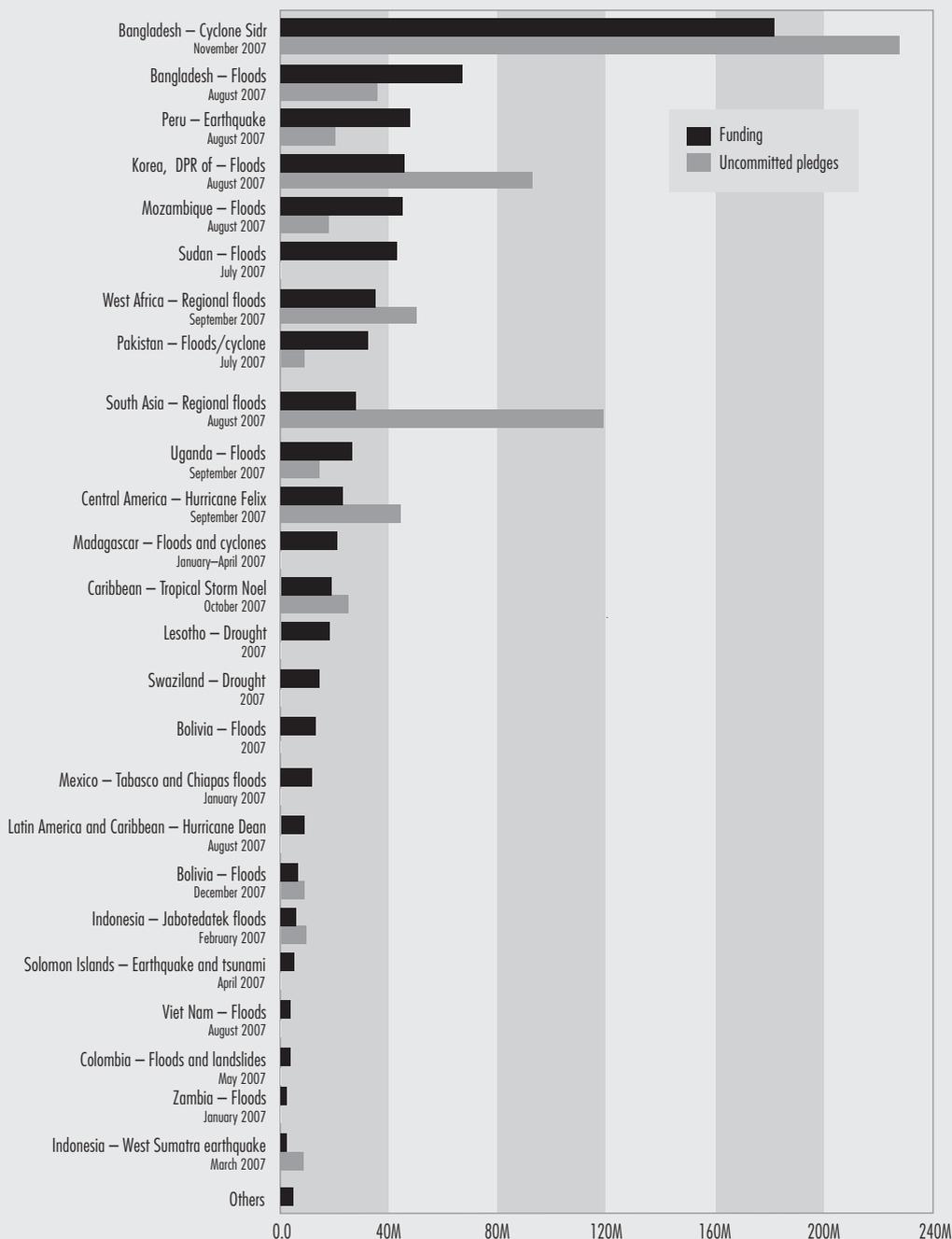
When natural disasters strike, HIV-positive people suffer the same negative impacts as everyone else – but certain problems affect them even more, or in particularly severe ways. Everyone is hurt when a disaster disrupts the supply of medications, but for someone on anti-retrovirals, any disruption of the medical regime is likely to cause resistance to treatment. Scarcity of food is hard on everyone, but for someone living with HIV, malnutrition is likely to speed up the progression of the infection.

Similarly, disruption of water supplies poses a huge problem for someone with advanced HIV for a variety of reasons. Clean water for food preparation is essential to minimize the risk of intestinal infections, to which PLHIV are especially vulnerable, and to make food easier to eat for those suffering from mouth ulcers or thrush. Since HIV-positive people suffer frequent attacks of diarrhoea, extra drinking water is needed to avoid dehydration, as well as to swallow medicines. Susceptibility to skin infections means frequent bathing is necessary.

In advanced AIDS care, clothing, beds and patients themselves need to be washed frequently, and toilets need to be flushed more often. Where 'nutrition gardens' have been planted to provide an additional source of healthy food for HIV-positive people, irrigation is essential.

**Figure 6.1**

Natural disasters 2007 (Summary of contributions in US dollars)



Source: ReliefWeb/Financial Tracking Service. Note that a 'pledge' is a non-binding announcement of an intended contribution by the donor, while a 'commitment' indicates a contractual obligation between the donor and recipient. An 'uncommitted pledge' indicates the balance of original pledges not yet paid or bound into a contract.

## Box 6.1 Was 2007 a 'blip' or portent of the future?

The types and impacts of major disasters vary greatly from year to year, and to say that 2007 was a bad year for floods and fires does not make it unusual (except of course for the millions of victims). There were no major geological events – at least, not affecting heavily populated areas – on the scale of the previous two years. The worst-affected countries were, typically, developing countries; with the exception of the forest fires affecting parts of Australia, Greece and the US, the industrialized nations suffered relatively little. There was no repeat of Europe's heatwave in 2003 that killed thousands – mostly elderly people – or the unusually high number of tropical cyclones that battered Japan in 2004.

However, analysis does suggest some patterns. In recent decades, the incidence of heatwaves has increased considerably: there were 29 in the ten-year period 1987–1996, compared to 76 in the period 1997–2006 (EM-DAT, 2006). An even greater increase has been recorded in cold snaps, although there is some question of whether this is a result of better reporting (Oxfam, 2007). In general, it appears that although some regions such as the Mediterranean basin, southern Europe and southern Africa are growing drier overall, the general trend is for increasing humidity (which, under certain conditions can actually intensify heatwaves) and greater frequency of extreme rain events.

In the long-term view, there is increasing concern that climate change, and particularly global warming, may result in an increasingly harsh environment for some already vulnerable populations. The UNDP *Human Development Report* for 2007 speculated about the possible effects over the coming century if an overall warming of 2 degrees Centigrade

occurs (UNDP, 2007). The scenario is a nightmare of dying tropical rainforests, loss of biodiversity as oceans heat up and shrinking icesheets and glaciers.

As this report makes clear, natural disasters have severe impacts on HIV-positive people living in affected areas. An increase in climatic disasters would increase both the numbers of individuals suffering these impacts each year and their severity. Moreover, the shape of the global epidemic could be affected if climate change causes significant population movement between areas with significantly different HIV prevalence levels (see Chapter 4 for a discussion of HIV and mobility).

It is impossible to fully predict the magnitude of impending climate change, nor if current assumptions about impacts will be borne out. Nonetheless, such predictive exercises are of great value in that they permit societies to (a) change their behaviours insofar as these have an impact on climate change, and (b) organize themselves to deal with disasters if and when they strike. In the words of Sálvano Briceño, Director of the UN International Strategy for Disaster Reduction:

"The problem today is that around the world vulnerability to disasters continues to increase, a situation that will worsen with climate change. So we need to take action now to reduce the risks of devastating impacts on people and their livelihoods. Disaster risk reduction is not an option, it is an urgent priority" (UN, 2007). ■

## Impacts on risk behaviour

Although AIDS advocates frequently refer to the potential of increased risk behaviour, sexual and gender-based violence and other problems that might increase the incidence of HIV transmission in disaster situations, there appears to have been little research to actually assess the extent of this risk (with the exception of rape in certain conflicts). A recent document devoted to women in disaster situations, Oxfam's *The tsunami's impact on women*, found more questions than answers:

“How safe are women in crowded camps and settlements, when they are so outnumbered by men in several of the countries in question? Will widows in India have access to land once owned by their husbands? Will younger women enter into marriages with much older men, as already seems to be happening in some locations? And will this carry risks in terms of compromising their education and reproductive health? In the fishing communities of South India, what rights will surviving women enjoy under new arrangements and programmes? In whose names will newly built houses be registered? Will men take on new domestic roles, or will women's workloads increase?”

(Oxfam, 2005)

Other questions might be asked that relate more directly to HIV. For example, do natural disasters break down family structures or change sexual networking in ways that might increase HIV transmission in places where prevalence is significant? Again, there is little information available.

What is certain is that some components of HIV prevention can be halted in their tracks. For example, supplies of condoms can be disrupted, sometimes for long periods of time, which can certainly put people at risk if they have unprotected sex. Similarly, HIV prevention activities such as counselling and testing and behaviour change communications – everything from school programmes to mass media campaigns – are generally put on hold while priority medical interventions are emphasized. While this is understandable and even necessary at a time when basic survival needs have to be prioritized, it is important that such services be resumed as soon as possible. A different form of risk is faced by HIV-positive mothers who give birth during emergencies, since they are not likely to have access to medical interventions that reduce the risk of mother-to-child transmission of HIV.

## Key populations at higher risk

With most discussions of HIV and disasters focused on general populations, little attention has been paid to so-called populations at higher risk – injecting drug users, male prisoners, sex workers and men who have sex with men (MSM) – when disas-

ters strike areas with concentrated epidemics (defined as HIV prevalence of over 5 per cent in a specified sub-population).

Some research has been undertaken to study HIV-related risk behaviours of drug users in disaster situations. In 2003, a rapid assessment of drug users was carried out in the wake of the earthquake in Bam, Iran. The earthquake was a major event that killed an estimated 35,000 residents of the city, which in recent years has had a significant drug use problem. The study found that about half of drug-dependent interviewees had suffered withdrawal symptoms as it became difficult to obtain opium. Behaviour changed somewhat as oral intake of opium replaced smoking, neither of which puts the user at high risk of HIV infection. However, a newspaper report three years later suggested that heroin injection had increased in the city and surrounding areas, and that a small but growing number of HIV infections had been recorded in the city (Tait, 2006). Although there is no evidence that the new infections are related to the earthquake, the report quoted a heroin addict who, when asked about the risk of AIDS, replied, “Those using needles don’t care if they are shared or dirty. They just see a needle and want to get high. My life is already destroyed.”

Given the potential for fast-spreading epidemics demonstrated among injecting drug users in other parts of the world, such data constitute an ‘alarm bell’ that should be heeded.

Little research or journalistic information appears to be available about HIV-related risk to (or services for) sex workers or MSM during disasters. Even in documents devoted to women in disaster situations, such as the Oxfam document mentioned above, there is no mention of sex workers except for concern that women whose livelihoods are disrupted by the disaster might have to resort to sex work for economic reasons.

## **Slow-onset disasters in areas of high HIV prevalence**

For some of the world’s population, the greatest danger is less from unpredictable climatic or geological events of short duration than from ‘slow-onset disasters’ in which natural phenomena interact with population growth, unsustainable production systems and ill-targeted development practices (although these can contribute to and amplify such natural disasters). To a large extent, the most vulnerable populations are rural ones, although environmental degradation can have disastrous impacts on urban and peri-urban populations as well. Again, some of the populations most vulnerable to these factors live in countries with general HIV epidemics in sub-Saharan Africa and the Caribbean.

A vivid example of chronic vulnerability that is at least partly due to human activity can be seen in the rural populations in the Horn of Africa. In 2000, a UN Inter-

Agency Task Force on long-term food security and development in the region noted that poverty itself was one of the main causes of environmental degradation, as the growing population is forced to cultivate increasingly marginal, unproductive land. Soil fertility is falling as land once left fallow is farmed continuously, steeper slopes are being cultivated and ill-conceived development projects to encourage livestock-raising in hitherto unused rangeland have actually increased the vulnerability of pastoral farmers to drought – at a time when hard-pressed governments are less inclined to bring health, education and water services to such areas. Less than 10 per cent of cultivated or cultivatable land is irrigated in the region (in Asia the figure is 37 per cent) and evidence-based approaches to agriculture in drought-prone areas (drought-resistant crops, better tillage systems and improved water ‘harvesting’) have not been applied on any significant scale. The result in many areas is chronic food insecurity.

In the first half of the current decade, it was postulated that sub-Saharan Africa faced a ‘new variant famine’ – an acute food crisis different to other such crises because of the cumulative impacts of HIV and AIDS on rural households and food production systems. In this hypothesis, the epidemic increases rural populations’ susceptibility to events such as flooding or droughts and reduces their resilience when such shocks occur. This raised considerable controversy: the hypothesis was treated as fact by some, particularly people concerned about an impending famine in the Southern African Development Community (SADC) countries at the time, which threatened an estimated 15 million people in the region. The hypothesis also found a number of critics, some of whom objected that it was unsupported by data. Others – donors and non-governmental organizations (NGOs) among them – suggested that the ‘new variant famine’ allowed advocates to use AIDS as a means of encouraging food aid to countries where agricultural production was actually sufficient, while obscuring the contribution of political factors to food insecurity.

As it turned out, the massive tragedy expected to afflict the SADC countries did not occur, at least in terms of the feared high levels of starvation and acute malnutrition. This was partly because of a massive humanitarian response and partly because of what Paul Harvey, of the Overseas Development Institute’s Humanitarian Policy Group, refers to as “the usual underestimation of the resilience of people’s survival strategies”. Harvey hastened to add that “this does not disprove the hypothesis or refute the possibility that an HIV/AIDS epidemic may lead to heightened mortality in acute crises: it simply suggests that this did not happen in southern Africa in 2002-2003... Disentangling the relative importance of HIV/AIDS compared to bad governance or bad weather is and will remain difficult” (Harvey, 2004).

Three years later, a summary of SADC National Vulnerability Assessment Committee reports noted that, although 2006 had been good in terms of both rainfall and agricultural production, about 3.1 million people remained vulnerable to food inse-

Photo opposite page:  
People wait at a Red  
Cross food distribution  
in Mphamanta,  
Malawi. The food  
shortage in southern  
Africa creates great  
difficulties especially  
for households where  
women are caring for  
orphans, the elderly  
and people living with  
HIV and AIDS.

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International Federation

curity in the region. This “confirms the fact that vulnerability to food insecurity in the region is chronic in nature and is largely an outcome of growing poverty, HIV and AIDS, and weak governance, commonly referred by the UN in the region as the ‘Triple Threat’” (SADC, 2006). The report noted that all SADC countries, with the exception of Swaziland and Zimbabwe, had registered growth of more than 3 per cent in gross domestic product between 2000 and 2005, but stated:

“The growth of the economies however, has not meant reduction in the percentage of people living below the poverty datum line however; the percentage of people living below the poverty datum line remains high. At least two-thirds of the poor households (those living on less than a dollar per day) are in rural areas and derive their livelihood from agriculture.”

(SADC, 2006)

Health status in the region continued to be of concern “with populations suffering from frequent bouts of diarrhoea, endemic malaria, cholera outbreaks, tuberculosis and the highest prevalence of HIV and AIDS in the world” (SADC, 2006).

The international community’s response to the 2003 crisis was primarily one of food aid, and there was considerable discussion in its aftermath as to whether valuable opportunities for lasting benefits to the region were missed.

Few efforts were made to strengthen national health systems or to address long-standing problems of water and sanitation (as noted above, access to clean supplies of water is of heightened significance to people living with HIV and AIDS). This, it can be argued, reflects the downside of humanitarian responses in locations where extensive risks are chronic: the immediate crisis may be averted or mitigated, but the underlying problems remain.



In a thought-provoking essay on the future of food aid, Daniel Maxwell suggests that approaches to such slow disasters need to be very different from those caused by major ‘events’:

“Programmatically, between ‘relief’ and ‘development’ there is an emergent grey area around social protection and safety nets, and around the reduction and mitigation of disaster risk. In some contexts, notably Ethiopia, donors and national governments have put enormous effort into separating chronically vulnerable groups from disaster-affected groups—dealing with the former as a safety net issue and the latter as a humanitarian response issue... While these categories might seem similar in terms of the interventions required, the causal factors underlying the problems being addressed are different. The safety-net category is relatively predictable, permitting donors to allocate resources without waiting for assessments and appeals. This reduces considerably the level of unpredictability in allocations and pipelines—and should also make an appropriate humanitarian response quicker.”

(Maxwell, 2007)

## Natural disasters in areas of low HIV prevalence

As shown in Figure 6.1, many natural disasters occur in regions where HIV prevalence is relatively low in the general population. An example can be seen in the tsunami of 26 December 2004, which had a devastating impact on several Asian countries. Over 232,000 people were killed or missing, millions lost their homes and local and national economies were severely affected. At the same time, a surge of humanitarian assistance was mobilized, with unprecedented amounts of unrestricted cash donations from individual citizens in industrialized countries.

Of the countries affected, only Thailand has a generalized epidemic (estimated adult prevalence 1.4 per cent), and it has well-organized prevention and treatment services for people living with HIV. Some of the other countries have concentrated epidemics among certain sub-populations. For the most part, however, the areas hit by the tsunami had low levels of HIV prevalence, and relief efforts concentrated on other priorities. In the hard-hit Indonesian island of Sumatra, for example, HIV-related efforts were initially restricted to promoting the consistent application of universal precautions in health settings. Mindful of the risk of HIV arriving in the area with external responders, training workshops were provided for the approximately 45,000 uniformed personnel involved in providing humanitarian assistance.

Over the following weeks and months, health services were restored in the coastal areas of the affected countries. The disaster gave rise to a considerable amount of activity

aimed at strengthening emergency systems in the region. However, unlike in the case of Hurricane Katrina (see Box 6.2), little research appears to have been done about HIV-positive people in the tsunami. One of the few projects to do so was a joint effort by the Asia Pacific Network of People Living with HIV (APN+) and the International Federation of Red Cross and Red Crescent Societies (International Federation), which used a peer-based survey to investigate the immediate and longer-term impacts on HIV-positive people in affected areas in India, Indonesia, Sri Lanka and Thailand. The project staff found it relatively difficult to find subjects to interview, noting that the HIV-population is relatively 'invisible' in many countries and that local-level organizations of HIV-positive people do not exist in all areas. The project report found that:

“HIV-positive people faced increased challenges due to the Tsunami such as illness, unemployment, poverty, psychological trauma and discrimination. While many tens of thousands of non-positive people also faced these challenges, positive people were placed at increased risk due to the double impact of HIV and the Tsunami on their physical and mental health, and the isolation and discrimination they often felt from their own families and communities... We found that many of our survey respondents believed they faced HIV related discrimination, and whether this was actual or perceived, it affected their access to services.”

(APN+ and International Federation, 2007)

### **Box 6.2 Hurricane Katrina, a disaster under the microscope**

While the greatest amount of media attention was captured by Hurricane Katrina, it is sometimes forgotten that the 2005 hurricane season buffeted the Caribbean and Central America with no less than 27 named storms (UNDP, 2007). The impacts of some of these storms were significant. For example, Hurricane Stan in October killed over 1,600 people in Guatemala's Central Highlands, most of them Mayan people from the country's aboriginal majority (Simms et al., 2006).

However, the fact that Katrina hit a major city in the United States, and the controversies that arose as a result of official emergency responses, meant that the late August hurricane is possibly the most reported and analysed climatic disaster in history. This is

borne out by some of the scientific literature that has emerged since the hurricane. A quick perusal of titles in a medical database finds that there has been research on topics as varied as:

- symptoms of post-traumatic stress disorder in New Orleans workers
- trauma, poverty and health among hurricane survivors from the Vietnamese-American community
- symptoms of depression and post-traumatic stress disorder among hospital outpatients
- skin disorders among construction workers following Hurricane Katrina and Hurricane Rita.

Moreover, there has been unprecedented research into HIV-related aspects of this hurri-

cane, which occurred in a part of the United States with relatively high prevalence among specific groups such as injecting drug users, MSM and parts of the black population (these are not mutually exclusive groups, there is a considerable overlap). Unlike most parts of the world, there was a fairly clear picture of the numbers involved: about 21,000 HIV-positive people were estimated to be living in the three affected states, including almost 7,400 in the New Orleans metropolitan area. Also unlike other parts of the world, many of these people were receiving HIV-related services, even the poorest. Since much of US health-care is delivered through private systems, it is difficult to know what happened to many of the better-off people. However, a good deal is known about government services. As one report noted soon after the hurricane:

“Prior to Hurricane Katrina, many low-income people with HIV/AIDS in Alabama, Louisiana, and Mississippi relied on their state’s Medicaid program for medications and other services or its AIDS Drug Assistance Program (ADAP) for medications if they had no other source of care or coverage. For example, in June 2004, Alabama served 1,220 ADAP clients, Louisiana served 1,654, and Mississippi served 769. These individuals may now be faced with trying to access ADAP

services in other parts of their home state or in other states; a similar challenge is facing Medicaid beneficiaries with HIV/AIDS who may have relocated to other states as well” (Kaiser Family Foundation, 2005).

Information was soon available about how the disaster had affected public health services. It took only a short time for basic outpatient primary care services to be re-established for HIV outpatients outside the city, but access to anti-retroviral treatment was disrupted for months. The largest HIV care provider, the Medical Center of Louisiana at New Orleans, was able to help patients obtain medications by mid-October and opened a temporary HIV clinic in the first week of November. A study reported: “Six months following the hurricane, microbiologic studies are still unable to be performed in clinics and uninsured patients must travel at least 70 miles for subspecialty care” (Clark et al., 2006). The longer-term aftermath of the disaster brought further challenges. For example, the dispersal of survivors to other locations meant that the local services faced a reduced patient base and remaining patients were served by fewer healthcare professionals and facilities (Louisiana State University Health Science Center, 2006). ■

One interesting fact to emerge from the study was that the influx of medical services in the wake of the disaster and of people seeking medical assistance led to an increase in the number of people who learned their HIV-status. The study noted that “many positive people interviewed as part of this Project, particularly in Tamil Nadu State in India, became aware of their positive HIV status only after the Tsunami due to medical care provided to them for various health problems often linked to the effect of the Tsunami”. It added, “Hopefully many of these positive will now be able to [be] more proactive in terms of their own health needs and be active in terms of their level of involvement in their local positive organisations”. The report made a number of recommendations, chief among which was the need for more involvement of representative organizations of HIV-positive [people] in emergency planning and for more

peer-based support services “whether in disaster situations or general life” (APN+ and International Federation, 2007). (See Box 6.3 for a review of the work of Islamic Relief, other Muslim organizations and people living with HIV, in natural disasters and other humanitarian situations.)

### **Box 6.3 When faith leaders and people living with HIV come together**

Fatima\* does not know how she contracted HIV. The young mother from East Africa only found out that she was HIV positive when she moved to another country and had to undergo a compulsory medical examination. The diagnosis came as a shock, but what was more terrifying was the reaction of the community in her new home country.

Like many other people living with HIV, Fatima experienced stigma, discrimination and hostility from those she was supposed to feel closest to. She felt that she had nowhere to turn.

Like many other communities, Muslim communities often associate HIV with ‘sinful’ practices. A consequence is that Muslim organizations have been conspicuously absent from the international HIV discourse. It is rarely a consideration for Muslim organizations involved in disaster relief.

Islamic Relief realized that the absence of Muslims from HIV-related work was a challenge that needed to be tackled urgently. Islamic Relief is a relief and development organization that works in over 25 countries worldwide and has its headquarters in the United Kingdom. It traditionally had no HIV-related programmes, but it noticed that the epidemic was having an increasing effect on its operations.

Islamic Relief organized five days of consultations on Islam and HIV/AIDS in Johannesburg at the end of 2007. The consultations were based on expertise and experience from

over 50 countries, related by over 200 Islamic scholars, people living with HIV, HIV practitioners and medical doctors.

Within Muslim communities, stories such as Fatima’s are often met with calls for compassion and moral messages. However, these consultations showed that such responses were often too simplistic to tackle the problem effectively, especially in the context of natural disasters. One of the participating scholars gave an example: “We discussed the issue of children who have lost their parents in a disaster, and are vulnerable to homelessness and HIV. The traditional Islamic answer that orphans should be fostered by their immediate relatives would not suffice, as this often proves to be practically impossible.

“Simply encouraging these children to ‘avoid sin’ will not help either. Many children who have lost their parents in a disaster have no support structures, are vulnerable to sexual abuse, and may turn to commercial sex in exchange for food or shelter in order to survive. Moral messages mean little to children living in such circumstances. So what can we do? We would not stop talking about dozens of issues such as this one until we felt we had found a meaningful way forward.”

The consultations on Islam and HIV/AIDS were designed to tackle difficult and often controversial problems. There were discussions on topics ranging from sex work, injecting drug users and methods of prevention in the context of war, natural disasters and other

causes of social disintegration, as well as on issues such as mandatory testing, inheritance rights and care for vulnerable children. The outcomes of these discussions will help Muslim organizations to make meaningful decisions regarding HIV in disaster contexts in the future.

Because discussions took place in small and diverse groups, people were forced to acknowledge different experiences and to challenge their own assumptions. It led to significant attitude shifts in many participants. Impressed by their own ability to change attitudes, the HIV-positive Muslims who attended the consultations established a worldwide positive network in which the members provide support to each other and push HIV higher up the policy and action agendas in the Muslim world. Similarly, the Muslim organizations that funded the consultations (Al Eslah Society, Islamic Development Bank, Islamic Relief Association, Kuwaiti Ministry of Awqaf, Qatar

Charity and the Qatar Red Crescent Society) noticed that implementing organizations had the impression that Muslim donors would not be willing to fund their HIV-related operations. In response, these donor agencies jointly established an inter-agency HIV fund. These consultations are not the first time that Islam and HIV have been discussed, but mark a significant change in emphasis away from the traditional discussion topics of condoms and 'sin' to focusing on the wider realities of the pandemic. It is also the first time that such consultations were managed and funded by Muslim organizations. Over the next few years a consortium of Muslim organizations will continue to build on the success of these consultations (see [www.islamandhivaids.org](http://www.islamandhivaids.org)).

Although this will not change the discrimination or suffering that people such as Fatima have already experienced, it may help to ease the pain of those who will come after her. ■

\* Not her real name

## Rhetoric versus risk

Concerns that HIV advocacy can sometimes distort humanitarian aid efforts are relatively common though difficult to substantiate. However, there are plenty of examples where the rhetoric of HIV vulnerability is used without reference to real infection levels or observed risk behaviours. An early example can be seen in the aftermath of Hurricane Mitch, which struck Latin America and the Caribbean in October 1998. Mitch caused up to 18,000 deaths in the region, affected an estimated 560,000 people and inflicted an estimated US\$ 5 billion in damage.

In addition to these impacts, research showed that Mitch caused serious health consequences for some of its victims. A study in three hurricane-affected areas of Honduras found that nine months after the hurricane, small children from resettled families were significantly underweight, compared to their pre-hurricane status. In neighbouring Nicaragua, a six-fold increase in cholera was linked to flooding due to the hurricane. However, although Honduras already had one of the highest levels of HIV prevalence in the region (an estimated 1.5 per cent of the adult population, the majority among males in most-at-risk groups), no research to date indicates that Mitch contributed to increased cases of HIV infection in the country, nor even in the

local areas most affected by the hurricane. Disruption to HIV-related health services was minimal: in fact, the country had few services for the small numbers of people diagnosed as HIV positive, and these were by and large concentrated in the capital and other areas relatively unaffected by the hurricane. (The situation is considerably different today, with subsidized treatment programmes covering many people who need anti-retroviral drugs.)

Nonetheless, in the following year, a seminar in London considered an emotively titled report called *The silent emergency: HIV/AIDS in conflicts and disasters* (UK Consortium on AIDS & International Development, 2002). In the report, a chapter on Hurricane Mitch listed a variety of HIV-related impacts imputed to the hurricane in Honduras. These included entirely undocumented claims such as “a 30-50% under-reporting of HIV/AIDS cases”, an increase in “girls involved in/at risk of sexual exploitation”, and an “increase in domestic violence and sexual violence”. Bafflingly, the report also lamented that there had been “no modification in sexual health behaviour”, due, apparently to the fact that Mitch “was not perceived as a threat to HIV/AIDS”. It also complained that most international NGOs did not do more about HIV, “with many initially ceasing sexually transmitted infections (STI) and HIV prevention in favour of providing food, shelter and medical care”. (One wonders what the reaction might have been at the time if these NGOs had ignored the need for food, shelter and medical care, and instead carried on their condom distribution activities.)

Almost a decade later, the language of theoretical HIV vulnerability (as opposed to real infection levels or observed risk behaviours) still emerges in official communications about disasters, sometimes a long time after the fact. A 2007 UN publication devoted to HIV in Asia bizarrely chose to devote its section on Indonesia to the population of Banda Aceh on the island of Sumatra – ignoring other parts of Indonesia which have serious concentrated epidemics. A UNAIDS official responsible for HIV prevention stated unequivocally that camps for internally displaced persons “breed high-risk behaviour” – a claim that is not only insulting to tsunami victims but, as in the case of Hurricane Mitch, is not supported by any evidence. The publication further commented that displaced women “face social instability, poverty and powerlessness – conditions that could heighten their vulnerability to another possible tsunami that could sweep the nation: HIV/AIDS” (UN OCHA/IRIN, 2007). Quite apart from the condescending attitude to women implicit in this statement, the idea that Indonesia faces a tsunami-like HIV epidemic flies in the face of all epidemiological evidence.

## **The way ahead: integrating HIV in responses to natural disasters**

A review of agency and journalistic reports suggests that some of the lessons described above are achieving widespread acceptance, with the result that there are

increasing numbers of pragmatic, well-targeted responses to the needs of HIV-positive people when natural disasters strike. Some of these feature cooperation between government health services, international donors and NGOs. For example, soon after a powerful earthquake struck Peru in August 2007, the Ministry of Health sent two medical teams to visit affected areas with the mission of verifying health conditions of HIV-positive people and people living with multi-drug resistant tuberculosis, and to meet with sex workers. The teams brought with them anti-retroviral medicines and condoms to make up for short supplies. The initiative was supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria through CARE Peru, whose national coordinator commented, “Our primary goal is to help ensure that patients continue to take their medications so that the micro-organisms don’t become resistant to the point that the anti-retroviral medicines no longer have therapeutic value” (CARE, 2007).

It is a commonplace of HIV programming that political leadership and support are essential if interventions are to be successful. This appears to be equally true in efforts to keep HIV high on the list of priorities in disaster responses and to ensure that responses are truly multisectoral. A good example of both leadership and multisectoral approaches can be seen in Mozambique after Cyclone Flavio battered several provinces in late February 2007, and was followed by serious flooding. On 5 April the National AIDS Council convoked a high-level meeting in Chimoio (the capital of Manica province) under the banner of “HIV/AIDS and disaster: a double emergency”; chaired by the prime minister, the meeting was attended by several ministers, senior civil servants, provincial governors and representatives of municipalities. The meeting launched an emergency programme to support HIV/AIDS projects in the flood- and cyclone-affected areas, and ended with the governors signing a joint document detailing five priority areas for action: coordination; home-based care and treatment; nutrition for people living with HIV and AIDS; child protection; and prevention among children and young people. The meeting coincided with other meetings to coordinate resettlement plans for the affected areas, which involved the National Institute of Disaster Management and UN representatives.

Preparation for natural disasters is, of course, essential both in making emergency responses more effective and in strengthening the resilience of populations to cope when disaster strikes. A variety of activities are necessary to prepare for natural disasters, as is stressed by the Hyogo Framework and other international guidelines (see Chapter 3). Again, a review of news and agency reports suggests these guidelines are being taken on board.

An important trend in preparedness management in areas of high HIV prevalence is the adoption of integrated approaches which feature a mixture of classical development projects, emergency planning and HIV prevention. A good example can be seen in the countries surrounding Lake Victoria in eastern Africa, where an integrated pro-

gramme has been implemented by the International Federation with funding from the Swedish International Development Agency. The Lake Victoria Programme involves five countries – Burundi, Kenya, Rwanda, Tanzania and Uganda – each of which is either on the lake or tied to it by the Kagera River. The area faces a variety of problems including deterioration of water quality in the lake, occasional flooding, soil loss and deforestation (which contribute to the flooding) and high levels of HIV infection – up to 35 per cent prevalence in some places. The programme therefore includes a range of activities. Some projects focus on income generation to alleviate chronic under-employment, including environment-focused activities such as tree planting to fight soil loss and to mitigate the impacts of human-caused deforestation. Water control is an important part of the programme, with a great emphasis on community-built ditches and canals to take water overflow and avert flooding. Specific emergency preparation is included such as training of Red Cross lifesaving action teams, capable of intervening in case of disasters such as floods, but also fishing and other boating accidents. Finally, many of the interventions are health related, including hygiene and sanitation projects, and HIV prevention efforts appropriate to the generalized epidemics present in these countries (International Federation and Swedish Red Cross, 2007).

In areas where slow-onset disasters or chronic food insecurity coincide with high HIV prevalence, a broad development orientation now informs most guidelines for humanitarian assistance. For example, *Food Assistance Programming in the Context of HIV*, a recent high-level document jointly produced by the US Agency for International Development, the Academy for Educational Development and the World Food Programme (WFP) advises:

“Developing food-assisted livelihood programs in the context of HIV does not mean altering activities to serve only PLHIV and affected households. In fact, implementers must keep the project’s primary purpose (e.g., creating programmatically sound food security and livelihood strategies that benefit food-insecure populations) foremost in their minds.”

(FANTA Project and WFP, 2007)

Overall, the best approaches to HIV in the context of natural disasters is consistent with guidelines for all forms of disaster. Better emergency responses must be planned which take into account the specific epidemiological situation in the disaster area, strengthening existing institutions’ ability to withstand the disaster event and restore much needed health services as quickly as possible. At the same time, the development-related aspects of HIV responses must be taken into account, particularly in areas of chronic risk, addressing the epidemic’s contribution to weakening societies and economies and to undermining their ability to respond to disasters. As Paul Harvey puts it, “HIV/AIDS is a long-term crisis. Humanitarian aid has a role to play, but

agencies should recognise that it is only part of a wider response, and should be clear about what it can and cannot achieve.”

*Chapter 6 was written by Andrew Wilson, a freelance writer and editor specializing in public health issues. He also contributed Boxes 6.1 and 6.2. Box 6.3 was contributed by Willem van Eekelen, Head of the Policy and Research Unit for Islamic Relief Worldwide.*

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