Summary points

Much of the aid promised immediately after disasters does not reach those affected

More emphasis should be put on rehabilitation after immediate needs are met

UN relief agencies should be funded at least in part from assessed contributions rather than relying on pledges in response to individual disasters from donor governments

"Disaster proofing" should be taken seriously in all development planning

but not a devastating disaster that compounds with profound vulnerability and leaves massive death and destruction in its wake.

Contributors and sources: PW worked for 20 years in disaster management and policy development for several international non-governmental organisations and the Red Cross before his current post. BW has written extensively over the past 30 years on natural disaster management and mega-city disasters. JL lectures on disasters, public health, and human rights at Harvard School of Public Health and has recently completed a mission to the Chad-Darfur border evaluating the aid effort there. LM has extensive experience in analysing humanitarian and development policy and operations. This article draws on extensive contacts with governments, NGOs and UN agencies active in the tsunami

disasters and on the official financial and narrative reporting systems of the UN, the Red Cross, and several major NGOs.

Competing interests: PW, JL, and LM have received funding for research from the US Agency for International Development (USAID) in the past five years.

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Commentary: Change will not happen overnight

A Griekspoor, D Nabarro, A Loretto, I Smith

Department of Health Action in Crises, World Health Organization, 20 Avenue Appia, CH-1211 Geneva 27, Switzerland
A Griekspoor technical officer, policies, capacities and intelligence,
D Nabarro representative of director general for health
A Loretto coordinator of policies, capacities and intelligence
Director General's Office, World Health Organisation
I Smith adviser to director general
Correspondence to: A Griekspoor griekspoor@who.int

We endorse the view expressed by Walker et al, that short term thinking and related funding mechanisms can undermine efforts for a more sustained approach to reducing the risk of disaster.¹ Inequity in the scale of response poses other problems. Over the past decade, about half of the \$2bn (£1bn; €1.5bn) committed to the Inter Agency Standing Committee Consolidated Appeals went to high profile crises such as those occurring in Bosnia, Afghanistan, and Kosovo. Other countries affected by chronic conflict, such as Liberia and Somalia, received much less per person affected, although their needs are at least as great. Rapid onset disasters can also trigger a series of responses that are influenced more by emotions or political motives than by evidence based assessments of needs.² Some of these responses are harmful and can add to the suffering or chaos, such as rapid burials in mass graves because of unwarranted fear of epidemics.³

It is harder to raise funds for disaster prevention, preparedness, and mitigation than for response, even though there is strong evidence that response costs several times more to achieve the same effect. A dollar spent on constructing hospitals and houses to withstand natural hazards, such as hurricanes or floods, can save an estimated \$5-7 on rebuilding after severe damage.⁴

We agree with the authors' plea that funding arrangements should be revisited, but recognise that change will be incremental. We must make use of win-

dows of opportunity for improvement, including learning from the tsunami experience. Donors are responding to criticism on inequitable funding allocations through the Good Humanitarian Donorship Initiative, in which they endorsed a set of principles and good practices to improve their role in humanitarian interventions.⁵ The initiative also commits to "strengthen the capacity of affected countries and local communities to prevent, prepare for, mitigate and respond to humanitarian crises, with the goal of ensuring that governments and local communities are better able to meet their responsibilities and co-ordinate effectively with humanitarian partners." The tragedy of 26 December 2004 is providing much evidence to support the rationale behind this goal. Thanks to strong institutions, and supported by civil society and non-governmental organisations, the national authorities of countries affected by the tsunami have been active in action and coordination for health since the first hours of relief (box).

Long term changes

Within four weeks of the disaster occurring, the response is already shifting to rehabilitation. It is essential that available funds are also used for a long term strategy, to reduce the vulnerability to future disasters.⁷ Last week's world conference on disaster reduction in Kobe proposed that 10% of funds for responding to

disasters be invested in strengthening preparedness.⁸ Much expertise exists in this field, and programmes like the Leaders courses can enhance capacity to develop disaster reduction programmes by increasing strategic management, leadership, and analytical skills of the participants.⁹ Governments in Latin America now help their neighbours when they are hit by hurricanes and other natural disasters. Similar capacity is urgently needed in other parts of the world.

Disasters undermine and reverse development, particularly in fragile states, where some indicators for the millennium development goals are in decline.¹⁰ Adequate funding is needed to make progress and we should encourage donor countries to achieve the Monterrey consensus of providing 0.7% of their gross domestic product as development aid to the poorest countries.¹¹ New ways must be found to coordinate and invest development and humanitarian funds in fragile states, so that communities at risk can receive adequate support to improve their livelihoods and reduce their vulnerabilities.

WHO response to tsunami

The immediate WHO response to the tsunami was to help local authorities in the provision of life saving care, mobilising supplies, and assessing health needs (www.who.int/tsunami/en/). Within three weeks, 120 staff were moved into the region and medical supplies for two million people and cholera kits for a million more were sent to the affected countries. The priorities for action were:

- Early warning, surveillance, and response to communicable disease (especially malaria, diarrhoea, dengue, and tetanus). This was in place by day 10 of the crisis, providing daily epidemiological updates in partnership with the Global Outbreak Alert and Response Network⁶
- Develop and act on public health strategies—priority to be given to water, nutrition, sanitation, immunisation, environmental and mental health, and women's health
- Ensure access to dependable health services—more than 70% of the target areas are now assessed and supported
- Sustain an effective health system supply chain—logisticians are deployed and systems developed in about 70% of the target areas
- Coordination of all health actors—functioning in about 85% of locations

Mass burial immediately after the tsunami diverted resources from more urgent needs

This tsunami hit the poor the hardest. The impact of disasters reflects the way societies choose their priorities and allocate their resources. The choices of the international community can substantially reduce the risks and impact of such disasters.

Competing interests: WHO's humanitarian programmes are largely financed through extrabudgetary funds.

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A teacher remembered: Gerald Tresidder

Gerald Tresidder, consultant urological surgeon and anatomy teacher at The London Hospital, Whitechapel, taught me one of the most memorable lessons I received during clinical training. He was a devoted anatomy teacher, as well as a urologist, and in 1974 was very dismayed when none of our fifth year student group attended an ileal conduit operation he had performed on a patient with bladder carcinoma.

At our next teaching session, he expressed his disappointment and asked why we were not interested. Nobody volunteered, and so I said that very few, if any of us, felt we were going to be urologists and that a long technical operation therefore held little

interest. Gerald replied that if we were going to be urologists he was not worried in the slightest whether we attended, since we would see many such operations during our urology training. However, since most of us were going to practise in other specialties, particularly general practice, an understanding of the operation and its complications might one day prove important. I realised that he was right, and for once remained silent.

Kieran J Moriarty *consultant physician and gastroenterologist, Royal Bolton Hospital, Bolton* (Kieran.Moriarty@boltonh-tr.nwest.nhs.uk)