

THE CHALLENGE IN DISASTER REDUCTION FOR THE WATER AND SANITATION SECTOR: improving quality of life by reducing vulnerabilities



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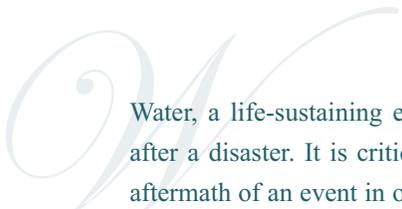
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Introduction



Water, a life-sustaining element, can become the source of major concerns after a disaster. It is critical to have sufficient clean water in the immediate aftermath of an event in order to treat the ill, provide for human consumption and maintain basic hygiene, support in the work of search and rescue, and to resume normal productive and commercial activities.

Access to water is a basic human right, and implies a responsibility that goes beyond the protection of investments and is, above all, a responsibility of public health.

In the current global situation, characterized by conditions of inequity and extreme poverty, environmental degradation and climate change have caused an increase in the occurrence of natural hazards such as landslides, intense rains, hurricanes, drought, fires, and earthquakes. Furthermore, rapid and unplanned urban growth has increased the number of settlements on unstable, flood-prone, and high-risk land where phenomena such as landslides, rains, and earthquakes have devastating consequences. Socioeconomic factors increase the vulnerability of communities as well as existing infrastructure and services.

Each year more than 200 million people are affected by droughts, floods, tropical storms, earthquakes, forest fire, and other hazards. As demonstrated by recent events, natural hazards can affect anyone in anyplace. From the tsunami in the Indian Ocean to the earthquake in South Asia, from the devastation caused by hurricanes and cyclones in the United States, the Caribbean, and the Pacific, to the intense rains throughout Europe and Asia, hundreds of thousands of persons have lost their lives and millions their livelihoods because of

disasters triggered by natural hazards. The impact of events of catastrophic magnitude on all aspects of the economy and development has been evident, in particular for developing countries.

In Latin America and the Caribbean alone, the impact of natural disasters on water and sanitation systems caused damages amounting to some 650 million dollars between 1994 and 2003.

In an environment where natural hazards are present, local actions are decisive in all stages of risk management: in the work of prevention and mitigation, in rehabilitation and reconstruction, and above all in emergency response and the provision of basic services to the affected population. Commitment to systematic vulnerability reduction is crucial to ensure the resilience of communities and populations to the impact of natural hazards.

Current challenges for the water and sanitation sector in the framework of the world's Millennium Development Goals require an increase in sustainable access to water and sanitation services in marginal urban areas and rural areas, where natural hazards pose the greatest risk. In settlements located on unstable and flood-prone land there is growing environmental degradation coupled with extreme conditions of poverty that increase vulnerability. The development of local capacity and risk management play vital roles in obtaining sustainability of water and sanitation systems as well as for the communities themselves.

Hurricane in Honduras, 1998

Development in Honduras was set back by 30 to 40 years following Hurricane Mitch in 1998.

Damage to the infrastructure for drinking water and sanitation systems amounted to some US\$ 58 million and estimated costs of reconstruction exceeded US\$ 196 million.

Source: Pan American Health Organization (PAHO), *Crónicas de Desastres: Huracanes Georges y Mitch* (PAHO: Washington, D.C., 1999).

When these factors are not taken into account, there is the danger of designing and constructing unsustainable services that progressively deteriorate and malfunction. Poor design and construction put both the community and infrastructure at risk in disaster situations.

The many actors in the water and sanitation sector (the administration, supervisors, providers, consumers, etc.) complicate the definition and assignment of functions and responsibilities. This results in confusion as to who does what regarding specific actions related to disaster prevention, preparedness, mitigation, and response. During each of these phases, each of the actions and actors have one common objective, that is, to ensure that the levels of water and sanitation service, established with local authorities and the community, can be sustained even during disaster situations.

The reduction of vulnerabilities entails multi-disciplinary work in a network with other actors in risk management, such as public ministries (in particular those responsible for public works and utilities, land planning and management, health, education, and finance), disaster management agencies, NGOs, the private sector, and the academic sector (universities, professional associations, research centers) fostering the development and exchange of knowledge in matters of protecting water and sanitation systems against natural hazards.

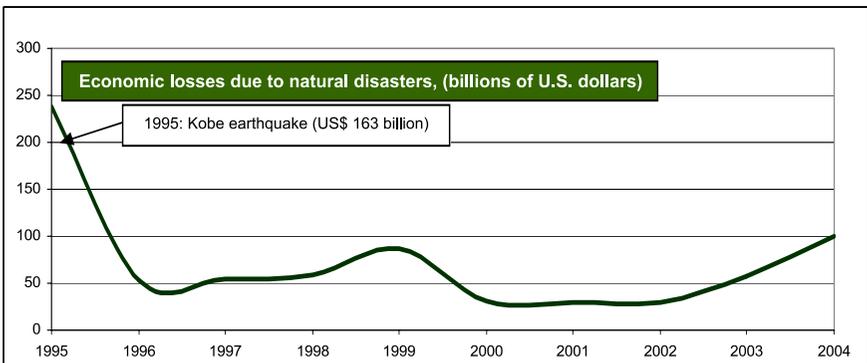
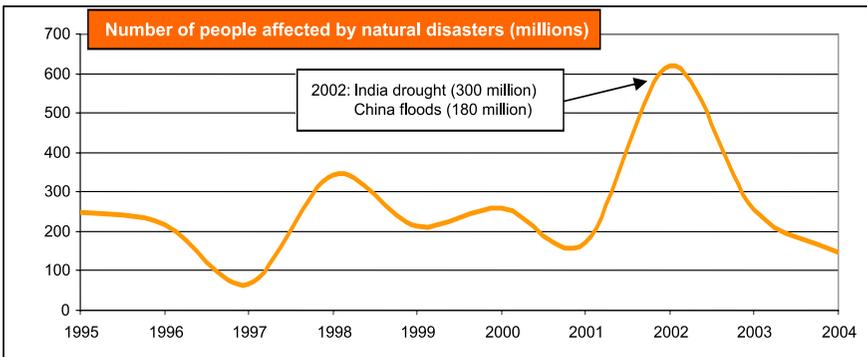
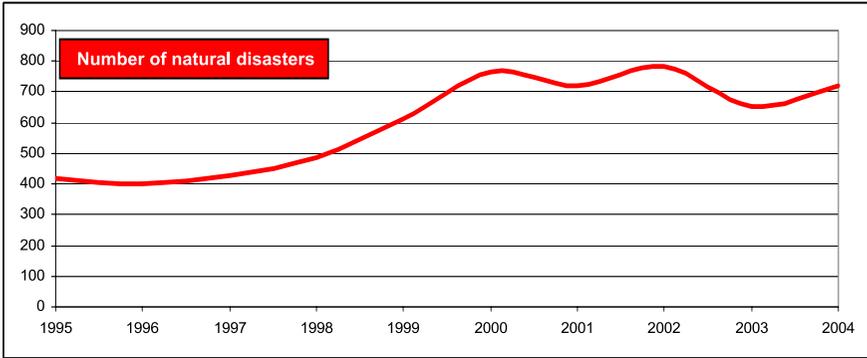
On the other hand, the resistance of systems to natural disasters is an important step toward ensuring that the achievements made in increased access to water and sanitation services are strengthened in the long term, thereby realizing the goal of reducing by half, by the year 2015, the percentage of people that lack sustainable access to safe drinking water and basic sanitation. In this sense, the local activities of risk management position themselves as a tool for realizing the global challenges of providing water and sanitation services for all and at all times.

In January 2005 in Kobe, Japan, 168 governments committed to act to reduce disaster risk, and adopted a 10-year plan known as the Hyogo Framework for Action, with the objective of reducing vulnerability to natural hazards. The inclusion of criteria of vulnerability reduction to the impact of natural hazards

in the water and sanitation sector is a priority activity for advancing the objectives of the global plan. Furthermore, water and sanitation systems warrant consideration as “critical” infrastructure, and as such are a priority for the efforts of disaster risk reduction, as are schools and hospitals. The loss of human life and economic and environmental losses as a result of disasters in 2005 serve to strengthen the belief that disaster reduction should be an integral part of sustainable development, and a critical factor for reaching the Millennium Goals. The water and sanitation sector must not be overlooked when addressing this challenge.



Increase in number and impact of natural disasters worldwide (1995 - 2005)



Source: Based on data from "The OFDA/CRED International Disaster Database" (Center for Research on the Epidemiology of Disasters--CRED), Catholic University of Louvain, Belgium, 2006). Accessed at www.em-dat.net

