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Drinking water and sewerage services play a critical role in the development process as they are essential for the health and well-being of populations. In Latin America and the Caribbean, the impact of natural disasters frequently results in severe damage to these systems, representing important economic losses and serious disruptions in the quality of services. Factors such as uncontrolled urban growth, deteriorating and inadequate infrastructure, and, above all, the location of these systems in areas that are vulnerable to natural hazards have resulted in a striking increase in the frequency of disasters and the severity of damage. This situation presents obstacles for development and hazards to the health of affected populations.

Prevention and mitigation measures taken before a disaster strikes can strengthen systems thus avoiding or reducing damage and human and material losses. The institution of programs that continually update mitigation and emergency plans also ensures a more responsible and efficient response in the event of a disaster.

Vulnerability analysis—the topic of this publication—provides a simple approach for assessing the vulnerability of system components to the impact of hazards in a particular area. The outcome of the analysis will define the necessary mitigation measures and emergency response procedures should a disaster occur.

These guidelines are meant to be used as an analytical tool by engineering and technical personnel working with drinking water and sewerage services to diagnose the behavior of these systems in the event of a natural disaster.

Other books on this topic published by PAHO/WHO include:

Manual para la mitigación de desastres naturales en sistemas rurales de agua potable (Quito, 1998) (*Manual for Natural Disaster Mitigation in Rural Drinking Water Systems*, available in Spanish only).

Planificación para atender situaciones de emergencia en sistemas de agua potable y alcantarillado (Cuaderno técnico No. 37, Washington, D.C., 1993) (*Response Planning for Emergency Situations in Drinking Water and Sewerage Systems*, available in Spanish only).

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