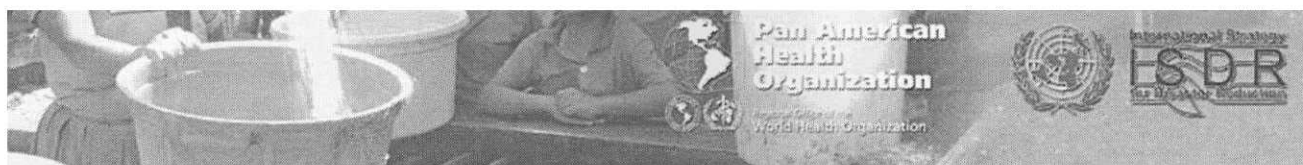




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## **PREFACE**

The Pan American Health Organization (PAHO/WHO), jointly with the International Strategy for Disaster Reduction (ISDR), called upon more than 100 experts from 18 countries of Latin America to a meeting in Nicaragua to evaluate the current vulnerability situation, discuss the progress achieved by the countries regarding risk reduction, and prepare an action plan for 2005-2015 aimed at reducing the vulnerability of health facilities and water systems.

They expressed the need to include these issues in the political agendas of the countries, with the necessary budgetary allocation, and develop a legal framework to enforce the accomplishment of the agendas.

As a preparatory meeting for the Second World Conference on Disaster Reduction convened by the United Nations in Kobe, Japan, in January 2005, the group was divided into two workshops: health facilities and drinking water systems. The proposed recommendations will be submitted in the conference of Kobe.

### **DRINKING WATER WORKSHOP**

In this workshop, the participants have realized that with the existing knowledge and technology it is possible for developing countries to ensure the availability of safe water after a disaster. However, the authorities of the water and sanitation sector should know and use these resources and experiences adequately to change the belief that the protection of these services —vital for health and development— is expensive.

There was consensus among the participants that the lack of risk management during the planning and development stages of water services will create unnecessary risks in areas prone to natural hazards, preventing the achievement of one of the Millennium Development Goals. "by 2015, reduce by half the proportion of people without sustainable access to safe drinking water and sanitation."



## **INTRODUCTION**

The "Latin American Workshop on Vulnerability Reduction in Drinking Water Systems", organized by the Pan American Health Organization (PAHO/WHO), in collaboration with the International Strategy for Disaster Reduction (ISDR), sponsored by the Association of Water and Sanitation Regulatory Entities of the Americas (ADERASA), the Economic Commission for Latin America and the Caribbean (ECLAC), and the International Drinking Water and Sanitation Centre (IRC)<sup>1</sup>, was carried out in April 21-23, 2004.

The participants included 52 professionals from 15 countries of Latin America, representatives of steering institutions, regulatory bodies, urban and rural water and sanitation utilities, technical and professional training institutions, and national and international cooperation agencies that provide technical and financial support to the water and sanitation sector<sup>2</sup>.

The most important objectives of the workshop were: to identify common problems and initiatives for vulnerability reduction in water and sanitation services (W&S); to prepare an action plan for 2005-2015 ensuring the sustainability of these services and facilitate decision-making processes of the institutions that regulate, manage, and operate drinking water systems; and to allow the systematic execution of highly effective and low-cost mitigation actions in drinking water services of Latin America and the Caribbean.

Concurrently, a similar workshop on vulnerability reduction in health facilities was carried out. The results of both workshops will be presented in Kobe, Japan, during the World Conference on Disaster Reduction to be held in January, 2005.

## **WORK METHODOLOGY**

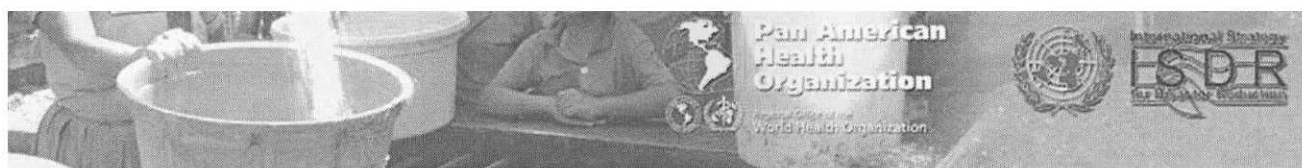
The activity was divided in three parts:

1. Assessment of the current situation and common challenges.
2. Identification of necessary actions likely to be implemented.
3. Action plan to achieve the above objectives.

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<sup>1</sup> The program of the activities is included as Annex 1.

<sup>2</sup> The list of participants is included as Annex 2.



These subjects were analyzed in simultaneous working groups, from two different perspectives. The first group was composed of representatives of institutions involved in policy-making, standardization, and regulation of the sector, and was moderated by ADERASA. The second group was composed of representatives of water and sanitation services and was moderated by the Inter-American Association of Sanitary and Environmental Engineering (AIDIS).

The workshop participants were divided into working groups to define specific vulnerability reduction actions in the following areas:

- a. Existing W&S systems.
- b. New infrastructure in small and medium size cities.
- c. Rural systems.
- d. Policy, standardization, and regulation of water services.

As a general reflection, it should be noted that whereas there have been isolated initiatives implemented in the Region that have proven that vulnerability reduction of water and sanitation services is technically and economically feasible and socially necessary in areas prone to natural phenomena, still exist limitations in the countries of Latin America and the Caribbean. Therefore, it is necessary to work on the following aspects:

1. Formulation, development, and implementation of a State policy for the integrated management of risks in water and wastewater systems.
2. Strengthening of steering and regulatory institutions of the sector.
3. Strengthening of the technical and administrative capabilities of water utilities in integrated risk management.
4. Socialization and work with communities, mainly in rural areas.



## **RESULTS OF THE WORKING SESSIONS**

### **SESSION I: ANALYSIS OF THE CURRENT SAFETY AND SUSTAINABILITY OF DRINKING WATER SERVICES IN DISASTER SITUATIONS**

During this session, the groups identified the progress achieved in vulnerability reduction of the services and the limitations to integrate at the national level successful experiences, developed either locally or by a service provider.

The importance of strengthening the capacities of the personnel of the sector and the preparation and provision of information and technical tools that make it possible the incorporation of vulnerability reduction measures, both into existing infrastructure and new projects, was also highlighted.

It was recognized that the problem should be addressed from a multisectoral perspective. Many of the determining factors of risk exposure in water and sanitation systems—as inadequate land planning, degradation, and environmental pollution—do not depend solely on the water and sanitation sector. The sector has, nevertheless, the capabilities to get involved in actions to face up these challenges. This multisectoral approach towards vulnerability reduction requires the active involvement of water and sanitation institutions with national, regional, and local organizations responsible for risk management.

The common obstacles or problems that increase the vulnerability of water systems or hinder the implementation of vulnerability reduction measures in the Region are:

- Most municipalities lack land management plans that take into account local hazards and human settlements are allowed in vulnerable areas, permanently exposing water and sanitation systems to risk.
- The growing environmental degradation deteriorates the basins and increases the frequency of disasters, affecting the components of water and sanitation systems.
- The economic feasibility criteria of the projects do not incorporate vulnerability reduction aspects, making prevention actions economically unfeasible.
- Financial resources are basically oriented to increase the service coverage, rather than to ensure its sustainability through prevention and mitigation.
- There is no historical record in the water and sanitation sector of how disasters have made impact on these systems.
- After a disaster, the systems are rebuilt repeating or increasing their initial vulnerability.