Introduction

1. In 2009, the 49th Directing Council of the Pan American Health Organization (PAHO) approved the final report of the roundtable “Safe Hospitals: A Goal within Our Reach” (Document CD49/22, Add. I). This document recommends that the countries prepare work plans to reach the goal of having hospitals safe from disaster by 2015, and requests the Pan American Sanitary Bureau (PASB) to submit a progress report to the 50th Directing Council.

2. The roundtable also recommended working on implementation of the previous resolutions that urged the countries of the Region to have hospitals safe from disaster as soon as possible.

3. Reaching the goal of hospitals safe from disaster by 2015 requires the preparation of a regional plan of action, with extensive participation by the Member States, and the support of the PASB for its subsequent discussion and approval at the 50th Directing Council of PAHO.

4. The guidelines presented are based on the technical consultation held in Peru in December 2009, in which national and international experts from North America, South America, Central America and the Caribbean participated. This consultation was followed by a virtual discussion to consolidate the results of the first consultation and draft them as objectives and goals.

5. This document has been subject to a wider consultation to consolidate comments and suggestions by officials from the disaster programs of the ministries of health in the Member States. It is submitted for review by the 146th session of the Executive
Committee, for subsequent discussion and approval at the 50th Directing Council in September 2010.

Background

6. The 45th Directing Council adopted Resolution CD45.R8 (2004), which resolves in paragraph 2: “To urge Member States to adopt ‘Hospitals Safe from Disasters’ as a national risk reduction policy.”

7. The United Nations World Conference on Disaster Reduction (2005) approved the Hyogo Framework for Action 2005-2015, in which the 169 participating countries adopted the goal that by 2015 all countries will “integrate disaster risk reduction planning in the health sector; promote the objective of hospitals safe from disaster.”

8. The 27th Pan American Sanitary Conference adopted Resolution CSP27.R14 (2007) “Safe Hospitals: A Regional Initiative on Disaster-Resilient Health Facilities,”1 which urges Member States to develop national policies on safe hospitals and requests the Director to support the countries in achieving progress on the safe hospitals initiative.

9. WHO devoted the 2009 World Health Day to the theme “Save Lives: Make Hospitals Safe in Emergencies,” emphasizing the importance of keeping health open in disasters and crises, whatever their origin.

Situation Analysis

10. Sixty-seven percent of health facilities in the Region are located in disaster risk areas. One hospital out of commission in the Region leaves approximately 200,000 people on average without health care, and the loss of emergency services during disasters significantly reduces the potential for saving lives. Consequently, from 2000 to 2009, over 45 million people in the Americas remained without health care for months, or sometimes years, due to the damage inflicted directly by a disaster.

11. There is growing public demand for safe hospitals and increasing political will, demonstrated by the adoption of global, regional, and subregional resolutions, agreements, and commitments. In Colombia, Ecuador, Mexico, and Peru, as well as other countries, this political will has led to the creation and execution of national plans and programs for safe hospitals.

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1 The terminology in the official documents of the Governing Bodies of the Pan American Health Organization was recently standardized and what was defined in the “Initiative” corresponds to a “Strategy.”
12. The absence of accurate, up-to-date information on the number and safety of physical health resources and the existence of scattered, hard-to-reach health facilities have made it difficult to quantify the number of unsafe health facilities and the impact of their vulnerability.

13. In several countries, the responsibility for achieving the goal of hospitals safe from disaster by 2015 is directed or shared by the national multisectoral disaster reduction organizations and involves other stakeholders both inside and outside the health sector. However, in most countries the participation of other sectors is still very limited, which has made it difficult to include the safe hospitals initiative in specific medium- or long-term actions.

14. As a result of the increase in public health problems, the fact that hospital safety is still not considered a social value, budget cutbacks due to the economic crisis, high turnover, and insufficient human resources for health, hospital safety must compete with other priorities, including combating poverty and reducing inequality.

15. Many countries have begun drafting or updating specific legislation on the design and construction of health facilities to withstand disasters and operation of these facilities in disaster situations. However, most countries still lack up-to-date standards, oversight mechanisms, and the administrative power to guarantee the safety and continuous operation of health facilities in the event of a disaster. Therefore, health facilities without adequate protective measures continue to be built in high-risk areas.

16. Protecting health facilities is not part of the infrastructure development plans in all countries, which has led to the absence of institutionalized mitigation procedures. In these cases, feasibility and prefeasibility studies are not properly prepared, facilitating potentially poor resource management. Consequently, the expansion or modification of health facilities is done inorganically, increasing their vulnerability.

17. Some countries have successfully integrated safe hospital criteria into the accreditation, certification, and licensing processes for health facilities.

18. In recent years, all of the countries have developed technical capacity in disaster risk reduction and in some cases they have reached levels of excellence in specific areas. As a result, there is growing availability of national and regional experts in this area and the issue of safe hospitals is gradually being introduced into university curricula.

19. Although more applied research on vulnerability reduction is needed, since the benefits of applying mitigation measures are evident only after a disaster, the Region as a whole has technical publications and guides that are easily accessible. Much of this knowledge has been placed online through institutional Web sites. However, the
available technical information has not been adequately circulated and the issue has not been internalized by health, engineering, or architecture professionals.

20. The development of common simplified instruments such as the Hospital Safety Index (HSI) and its checklist, achieved with the participation of experts from throughout the Region, and the willingness of hospital boards of directors to have their facilities evaluated have enabled 17 countries to rapidly evaluate the safety of 194 hospitals in the face of disasters.

21. Application of the Hospital Safety Index shows that only 39% of the hospitals evaluated have a high probability of remaining in operation following a disaster, and 15% of the hospitals require urgent measures immediately, since their safety levels are insufficient to protect the lives of patients and staff during and after a disaster.

22. Application of the Hospital Safety Index has been beneficial for strengthening the health services network, defining priority measures to improve safety, and preparing health sector disaster response plans, since the safety level of the facilities evaluated and the probability that they will remain operational in a disaster have been taken into account.

23. The methodology for evaluating hospital safety has spread beyond the health sector. It is also being applied to educational facilities and other public buildings.

24. There is greater interest by financial institutions, and new sources of financial resources are available for hospital construction and risk management. However, due to the lack of incentives to invest in hospital safety, few projects have included protection criteria and very few existing hospitals, including those that were evaluated and rated as high risk, have implemented mitigation measures.

25. In general, few resources are allocated to the maintenance of existing health facilities, which limits action to reactive repairs when damage or malfunction occurs, and postpones or eliminates the expected protective actions.

Purpose

26. The purpose of this Plan of Action is to facilitate adoption by the Member States of the theme "hospitals safe from disaster" as a national risk reduction policy, and achievement of the goal of constructing all new hospitals with a level of protection that better ensures their ability to keep operating in disasters. It also seeks the implementation of adequate mitigation measures to improve the safety of existing health facilities.
Objectives, goals, indicators, and actions

Objective 1
To develop and implement a national safe hospitals program and policy that promote interinstitutional and intersectoral coordination and participation at the national, subnational, and local levels; identify intervention priorities; allocate resources; and conduct evaluation and monitoring.

Goal
By 2011, 80% of the countries will have established a national safe hospitals program.

Indicator
Percentage of countries that have officially established a national safe hospitals program.

Actions
1.1. Preparation and approval of the national hospitals safe from disaster policy.
1.2. Creation and operation of a national safe hospitals program with interinstitutional and multisectoral participation.
1.3. Preparation of guidelines, standards, and procedures for implementing the safe hospitals program at the national and subnational levels.
1.4. Development of instruments to monitor and evaluate the progress of the safe hospitals program.

Objective 2
Develop and implement information systems to rapidly identify all new construction, repairs, or improvements in the health infrastructure so that measures can be established to guarantee their operation in the event of an emergency or disaster.

Goal
By 2013, 90% of the countries will have an information system on the construction of new hospitals or the improvement of existing hospitals.

Indicator
Percentage of countries with an up-to-date list of the new investments in health infrastructure.

Actions
2.1. Development and application of methodologies and tools to identify new health investment projects.
2.2. Inclusion of information on financing processes and execution of health facility projects on the agenda of the international transparency organ of the United Nations and the countries.

2.3. Preparation of a mechanism for recording and consolidation of information on new health investment projects at the national and regional levels.

2.4. Adoption of transparency mechanisms for financing and execution of health facility infrastructure projects.

**Objective 3**
Establish and implement supervision and control mechanisms that are independent from the investment projects, with the intervention of skilled professionals.

**Goal**
By 2013, at least 80% of the countries in the Region will have established mechanisms for the supervision of hospital construction work and other investments in health facilities.

**Indicator**
Number of countries that have supervision mechanisms independent from other health investments and projects.

**Actions**
3.1. Development and application of terms of reference for supervision of health investments and projects.
3.2. Development of human resources for the evaluation of health investment projects.
3.3. Application of mechanisms for project supervision and control.
3.4. Creation and maintenance of a regional, subregional, and national directory of experts in the structural, nonstructural, and functional safety of health facilities.

**Objective 4**
Guarantee the introduction of criteria for protecting lives, investment, and operations during all stages of the new health investment projects.

**Goal**
By 2015, all countries will have included measures that guarantee the operation of health facilities in the event of a disaster in all new health investment projects.

**Indicator**
Percentage of new projects per country that introduce criteria for the protection of new health investment projects.
Actions

4.1. Development of technical guidelines for analyzing the location of health facilities and the environment.

4.2. Introduction of basic standards for safe hospitals in health facility financing agreements.

4.3. Application of technical guidelines for the introduction of damage mitigation in new health facility projects and the inclusion of these guidelines as terms of reference in bidding tenders for design, construction, and operation.

Objective 5
Update the design, construction, and operating standards for health facilities to protect structural, nonstructural, and functional components in the event of a disaster.

Goal
By 2015, 90% of the countries will have up-to-date standards for the design, construction, and operation of new, safe health facilities.

Indicator
Number of countries that have up-to-date standards for safe health facilities.

Actions

5.1. Application of basic safety standards in the licensing of new health facilities.

5.2. Development of a legal framework that ensures that new health facilities and medical support services have the basic conditions to keep operating in the event of a disaster.

Objective 6
Improve the safety of existing health facilities, giving priority to those that are an essential part of the health services network in emergencies and disasters due to their importance and complexity.

Goal
By 2015, at least 90% of the countries will have improved the safety of the existing health facilities in disasters.

Indicator
Number of priority health facilities in each country that have improved their safety in the face of disasters.
Actions

6.1. Analysis of the safety of health services networks and identification of priority health facilities, applying the HSI or a similar index.

6.2. Introduction of safety criteria in the instruments for the accreditation and certification of health facilities and medical support services.

6.3. Preparation of response plans and training of health personnel in risk management and disaster response in health services networks located in disaster risk areas.

6.4. Intervention on vulnerability in priority health facilities.

Action by the Executive Committee

27. The Executive Committee is requested to examine the Plan of Action on Safe Hospitals and consider the possibility of approving the proposed resolution (Annex B).

Annexes
### Analytical Form to Link Agenda Items with Organizational Mandates

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<th><strong>1. Agenda Item:</strong></th>
<th>4.12. Plan of Action on Safe Hospitals</th>
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<td><strong>2. Responsible Unit:</strong></td>
<td>Emergency Preparedness and Disaster Relief</td>
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<td><strong>3. Preparing Officer:</strong></td>
<td>Dr. Ciro Ugarte</td>
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<tr>
<td><strong>4. List of Collaborating Centers and National Institutions Linked to this Agenda Item:</strong></td>
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<tr>
<td>- Collaborating Center for Disaster Mitigation in Health Facilities, Universidad de Chile.</td>
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<tr>
<td>- Collaborating Center for Emergency Preparedness and Disaster Response, Yale University.</td>
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<tr>
<td>- Ministries of Health of all the countries in the Region.</td>
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<td>- National disaster prevention and relief organizations of all the countries in the Region.</td>
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<td>- Social Security institutions, armed forces, police, State enterprises, and other institutions with health services.</td>
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<td>- Schools of health sciences, medicine, engineering, and architecture.</td>
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<td>- Associations of engineers, architects, and hospital administrators.</td>
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<td>- Andean Committee for Disaster Prevention and Relief (CAPRADE).</td>
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<td>- Coordinating Center for Natural Disaster Prevention in Central America (CEPREDENAC).</td>
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<td>- Caribbean Disaster Emergency Management Agency (CDEMA).</td>
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<td>- World Bank Global Facility for Disaster Reduction and Recovery (GFDRR).</td>
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<td>- International Hospital Federation.</td>
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<td>- Other national and international institutions associated with health services and disaster reduction.</td>
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<td><strong>5. Link Between Agenda Item and Health Agenda for the Americas 2008-2017:</strong></td>
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<tr>
<td><strong>a) Strengthening the National Health Authority:</strong></td>
<td>“Ministries of Health must fully carry out the essential public health functions and efficiently perform their role in guidance, regulation, and management of health systems…. An essential part of the steering role of the National Health Authority is to ensure that health issues adopted as regional and subregional mandates are incorporated in the hemispheric development agenda.”</td>
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<td><strong>b) Strengthening Health Security:</strong></td>
<td>“The countries of the Americas should prepare for and take intersectoral measures to address disasters, pandemics, and diseases that affect national, regional, and global health security.”</td>
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<td><strong>6. Link Between Agenda Item and Strategic Plan 2008-2012:</strong></td>
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<td><strong>Strategic Objective 5:</strong></td>
<td>“To reduce the health consequences of emergencies, disasters, crises, and conflicts and minimize their social and economic impact.”</td>
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“Natural hazards remain the most common threat for Latin American and Caribbean countries. Regardless of their frequency and severity, it is generally admitted that the countries’ vulnerability is on the rise as a result of unsafe development practices and the deterioration of existing infrastructure. Following [the] Hyogo Framework for Action 2005-2015, safe hospitals will be an indicator of the level of vulnerability in the health sector.”

7. Best practices in this area and examples from countries within the Region of the Americas:

Since the International Conference on Disaster Mitigation in Health Facilities, held in Mexico (1996), for nearly two decades, the countries of the Americas have made strenuous efforts to conduct vulnerability studies in health facilities. These studies have focused almost exclusively on physical aspects.

Several countries in the Region have demonstrated that hospital vulnerability can be reduced. Barbados, Chile, Colombia, Costa Rica, Mexico, Peru, and other countries have reinforced or built hospitals and health facilities that have subsequently been resilient to earthquakes, floods and hurricanes.

With technical assistance from the members of the PAHO Disaster Mitigation Advisory Group and the participation of a large group of experts from Latin America and the Caribbean, a checklist was prepared in which individual values were assigned to each component (structural, nonstructural, and functional), a guide was prepared for the evaluation teams, and a mathematical model was developed for the calculation of the Hospital Safety Index and preparation of disaster safety graphs. It is an easy-to-use tool that is inexpensive to apply in the countries and can be used to determine priority investments for improving the safety of health facilities.

At least 22 countries in the Region (Anguilla, Argentina, Barbados, Bolivia, Colombia, Costa Rica, Cuba, Dominica, Ecuador, Grenada, Guatemala, Honduras, Jamaica, Mexico, Montserrat, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago) have already used the index in hundreds of hospitals. There are also trained evaluation teams that can easily expand and build on their experience.

There is growing public demand for safe hospitals and increasing political will, demonstrated by the adoption of global, regional, and subregional resolutions, agreements, and commitments. The agreement that sets the goal of hospitals safe from disaster by 2015, adopted by the ministers of health at the 45th Directing Council of PAHO in 2004, was ratified by 169 countries at the World Conference on Disaster Reduction and included as a priority line of action in the Hyogo Framework for Action 2005-2015.

In Colombia, Ecuador, Mexico, and Peru, as well as other countries, political will has led to the creation and implementation of national programs and plans for safe hospitals.

8. Financial implications of this Agenda item:

From 2010-2015, it is estimated that the expenditures for the staff and activities required to implement the Plan of Action on Safe Hospitals will come to US$2.5 million. Furthermore, approximately 80% of this amount will be executed in the Member States. These funds would come from voluntary contributions and donations by the international community. Adopting a resolution for the implementation of the Plan of Action on Safe Hospitals has financial implications for the Organization.

In addition, technical and financial support from national and international organizations will be required for implementing the activities planned at the national, subnational, and local levels.
Execution of the Plan of Action will result in preservation of the health services in the event of emergencies and disasters and protection of the investment in health, representing a savings of several billion dollars in costs associated with the physical replacement and repair of health facilities, equipment, and supplies.
PROPOSED RESOLUTION

PLAN OF ACTION ON SAFE HOSPITALS

THE 146th SESSION OF THE EXECUTIVE COMMITTEE,

Having reviewed the report of the Director and the guidelines for the Plan of Action on Safe Hospitals (document CE146/20), based on the PAHO Strategic Plan 2008-2012,

RESOLVES:

To recommend that the Directing Council consider the adoption of a resolution in the following terms:

PLAN OF ACTION ON SAFE HOSPITALS

THE 50th DIRECTING COUNCIL,

Having considered the report of the Director and the guidelines for the “Plan of Action on Safe Hospitals” (document CD50/__), based on the PAHO Strategic Plan 2008-2012;

Taking into account that the Governing Bodies of PAHO have firmly supported the adoption of a regional initiative on safe hospitals;
Considering that Resolution CD45.R8 adopted by the 45th Directing Council resolves “to urge Member States to adopt ‘Hospitals Safe from Disaster’ as a national risk reduction policy, set the goal that all new hospitals are built with a level of protection that better guarantees their remaining functional in disaster situations, and implement appropriate mitigation measures to reinforce existing health facilities, particularly those providing primary care”;

Stressing that the United Nations World Conference on Disaster Reduction (2005) approved the Hyogo Framework for Action 2005-2015, in which the 169 participating countries adopted the goal that by 2015 all of the countries should “integrate disaster risk reduction planning into the health sector; promote the objective of hospitals safe from disaster…”;

Recalling that the 27th Pan American Sanitary Conference adopted Resolution CSP27.R14 (2007) “Safe Hospitals: Regional Initiative on Disaster-Resilient Health Facilities”;

Considering that the final report of the “Safe Hospitals: A Goal within Our Reach” roundtable presented at the 49th Directing Council recommends that the countries prepare work plans to reach the goal of safe hospitals;

Recognizing that to reach the goal of hospitals safe from disaster by 2015, a regional plan of action with extensive participation by the Member States of the Organization and the support of the Secretariat needs to be implemented,

RESOLVES:

1. To approve the “Plan of Action on Safe Hospitals”.

2. To urge the Member States to:

   (a) prioritize adoption of a national safe hospitals policy;

   (b) improve coordination inside and outside the health sector to coordinate efforts at the national and subnational levels to make better use of all available resources;

   (c) gradually implement the activities included in the Plan of Action to achieve the goal of constructing all new hospitals with a level of protection that guarantees their operations in the event of a disaster;
(d) institute appropriate mitigation measures to reinforce the existing health facilities;

(e) coordinate the sharing of experiences and tools, joint advocacy, monitoring, and evaluation of progress in implementing the Plan of Action with other countries of the Region.

3. To request the Director to:

(a) promote coordination and implementation of the Plan of Action through the integration of actions by the program areas of PAHO at the national, subregional, regional and interagency level;

(b) continue to strengthen the Organization’s capacity to provide technical cooperation to the Member States for implementing the Plan of Action in keeping with their specific national priorities and needs;

(c) support the development of common technical instruments and guidelines such as the Hospital Safety Index and checklist to facilitate the monitoring of progress in the implementation of the Plan of Action;

(d) promote the strengthening of partnerships with specialized agencies and centers of excellence in the field of the disaster risk reduction in order to mobilize the human and financial resources and technology required to improve the safety of the health services in disasters;

(e) submit periodic progress reports to the Governing Bodies on the implementation of the Plan of Action.
Report on the Financial and Administrative Implications for the Secretariat of the Proposed Resolution

1. **Agenda item:** 4.12. Plan of Action on Safe Hospitals

2. **Linkage to program budget:**
   
   (a) **Area of work:** Emergency Preparedness and Disaster Relief.

   (b) **Expected result:**

   **Expected result on regional level (RER) 5.1:** Member States and partners supported through technical cooperation for the development and strengthening of emergency preparedness plans and programs at all levels.

   **RER 5.3:** Member States supported through technical cooperation for reducing health sector risk in disasters and ensuring the quickest recovery of affected populations.

   **RER 5.4:** Member States supported through coordinated technical cooperation for strengthening preparedness, recovery, and risk reduction in areas such as communicable disease, mental health, health services, food safety, and nuclear radiation.

   **RER 8.3:** Member States supported through technical cooperation to strengthen occupational and environmental health policy-making, planning of preventive interventions, service delivery, and monitoring.

   **RER 10.2:** The Member States supported through technical cooperation to strengthen organizational and managerial practices in health services institutions and networks and achieve collaboration and synergy between public and private providers.

   **RER 10.3:** Member States supported through technical cooperation to strengthen programs for the improvement of quality of care and patient safety.

3. **Financial implications**

   (a) **Total estimated cost for implementation over the lifecycle of the resolution (estimated to the nearest US$10,000, including staff and activities):** For 2010-2015, it is estimated that the expenditures for the staff and activities required for implementing the Plan of Action on Safe Hospitals will total US$2.5 million. It is furthermore estimated that approximately 80% will be executed in the Member States. These funds would come
from donations and voluntary contributions from the international community. Adopting a resolution for the implementation of the Plan of Action on Safe Hospitals has financial implications for the Organization.

In addition, technical and financial support from national and international organizations will be required to implement the planned activities at the national, subnational, and local levels.

Executing the Plan of Action will result in the preservation of the health services in the event of an emergency or disaster and the protection of health investment, which represents savings of several billion dollars in costs associated with the physical replacement and repair of health facilities, equipment, and supplies.

(b) Estimated cost for the biennium 2010-2011 (estimated to the nearest US$ 10,000, including staff and activities): $1,000,000.

(c) Of the estimated cost noted in (b), what can be subsumed under existing programmed activities?: Approximately 50% will be executed through charges against the cooperation funds of Canada and the European Union. The remaining resources will be mobilized by projects with these and other donors.

4. Administrative implications

(a) Indicate the levels of the Organization at which the work will be undertaken: National, subregional and regional, with emphasis on the national level.

(b) Additional staffing requirements (indicate additional required staff full-time equivalents, note necessary skills profile): The need for new personnel is not foreseen.

Support and monitoring for implementation of the Plan of Action will be conducted by the Regional Advisor on Disaster Preparedness and Risk Reduction, with the collaboration of professionals and advisors from the Organization at the national, regional, and subregional levels, and participation of the responsible staff from the ministries of health, members of the Disaster Mitigation Advisory Group, and the PAHO/WHO Collaborating Centers.

(c) Time frames (indicate broad time frames for implementation and evaluation of the activities): In 2010 an evaluation will be conducted on the progress made in disaster preparedness and risk reduction in the countries of the Region. In addition to annual monitoring of the implementation of the Plan of Action, specific evaluations are planned at the end of the bienniums 2010-2011, 2012-2013, and 2014-2015.