



PAN AMERICAN HEALTH ORGANIZATION  
WORLD HEALTH ORGANIZATION



## **48th DIRECTING COUNCIL**

### **60th SESSION OF THE REGIONAL COMMITTEE**

*Washington, D.C., USA, 29 September-3 October 2008*

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*Provisional Agenda Item 4.12*

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### **ROUNDTABLE ON CLIMATE CHANGE AND ITS IMPACT ON PUBLIC HEALTH: A REGIONAL PERSPECTIVE**

#### **Background**

1. In recent years, PAHO's Directing Council has maintained a trend of including a roundtable as an agenda item related to that year's World Health Day (WHD) theme. WHD is celebrated annually on April 7, which marks the founding of the World Health Organization (WHO) and serves as an opportunity to draw worldwide attention to a subject of major importance to global health. "Protecting Health from Climate Change" was selected as the 2008 WHD theme and PAHO has convened a roundtable on the topic to be held during the 48th Directing Council in September 2008.

2. The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as "change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."<sup>1</sup> The United Nations (UN) and the Intergovernmental Panel on Climate Change (IPCC) have devoted considerable time to analyzing the issue of climate change.

#### **Summary of the Theme**

3. The adverse health impacts of climate change can be both direct and indirect. Direct impacts result from climatic extremes such as thermal stress and weather disasters. Indirect impacts result from climatic influences on vector-borne disease transmission, water- and food-borne disease transmission, and food and water security. Indirect impacts also include the consequences of social and economic dislocation, including population displacement.

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<sup>1</sup> Article 1, paragraph 2 of the Convention, UN, 1992.

4. In the Region of the Americas, major areas of concern relate to increases in extreme weather events, subsequent changes in food supply and nutritional security, as well as changes in water supply, in the range and distribution of vector-borne diseases, and in rising sea levels. The impacts of climate change on cities will become increasingly important and in some countries will be made worse as a result of rapid and poorly planned urbanization.

5. Current population vulnerability influences the capacity to respond to the impact of climate change. Effective adaptation strategies should identify population groups that are unable to cope with the effects of climate variability and extremes. At risk populations live in areas prone to floods, droughts, and heat waves. The most vulnerable groups include children under five, pregnant and lactating women, older adults, marginalized, rural, urban, indigenous populations, and displaced populations. Vulnerability can further be exacerbated by other stress factors such as poverty, food insecurity, conflict, and disease.

6. The two ways in which societies can actively respond to climate change are through mitigation and adaptation. Mitigation aims to reduce, delay or avoid impact through interventions that reduce the sources of greenhouse gases or those that enhance gas-absorbing "sinks." In the sphere of public health, this involves primary prevention aimed at preventing the onset of injury or illness. Adaptation is defined as an adjustment in the natural or human system in response to changes produced by climatic stimuli. Mitigation and adaptation must be addressed by civil society, industry, government and other sectors, while taking into consideration the cultural diversity of the Region and the need to increase the awareness of many of our citizens.

#### **PAHO/WHO Collaborative Efforts**

7. PAHO and WHO are closely collaborating on the topic of climate change in the Americas and worldwide, in an effort to increase awareness of its health consequences, assess country-specific risks, strengthen health systems to ensure adequate protection from climate-related risks, and enhance the inclusion of a public health perspective on climate change decision-making in other sectors. The Organization is in the process of developing a plan of action based on the regional country profiles reviewed during a Regional Workshop on Climate Change and its Effects on Health in the Americas, held in Brazil from 9 to 11 April 2008.

8. PAHO has prepared a White Paper on Climate Change and Public Health to be analyzed during the Roundtable (Annex A).

### Proposed Structure for the Roundtable

<b><i>Participants</i></b>	
In addition to delegates from the Member States attending the 48th Directing Council, there will be participation of representatives of academia, UN agencies and civil society organizations.	
<b><i>Format</i></b>	
<i>Introduction - in plenary (25 minutes)</i>	The theme will be introduced, with a keynote address
<i>Discussion Groups (1 hr 45 minutes)</i>	Participants will choose between three discussion groups, each of which will be provided with the same guidelines on climate change and its impacts on public health.
	Interpretation will be provided in English, French, Portuguese and Spanish for groups 1 and 2, and in English and Spanish for group 3. Each group will include a chair, a motivational speaker and a rapporteur. Sign up sheets for each group will be available at the registration desk as of the first day of the Council.
	The rapporteurs of each discussion group will synthesize the discussions and conclusions of their group and produce a combined report.
<i>Presentation of Report- in plenary on the following day (30 minutes)</i>	The combined report prepared by the rapporteurs will be presented to the Council. It is hoped that this report will guide the future work of the countries and strengthen PAHO's White Paper on Climate Change and Human Health.

Annexes

## White Paper

### Protecting Health from the Effects of Climate Change in the Region of the Americas: Moving from Evidence to Action

1. The objective of this White Paper is to present the *evidence* that climate change is a phenomenon that is increasingly affecting human health. It also aims to describe a set of *actions* that are needed in order to protect people from current and expected climate related health impacts.

2. Climate change is not new to the health sector. The first scientific report on climate change and health was released by World Health Organization in 1990. In 1995, PAHO presented the issue at the National Academy of Sciences during a conference on climate change and human health. Since then, PAHO has worked to increase awareness, information and initiate risk assessments in the Member States. Nowadays, these actions must be scaled up. Climate change is a more serious threat than anticipated in the early 90s, affecting mostly vulnerable populations with the worst health conditions, and those threatened by multiple environmental risk factors. The impact of climate change on health could seriously challenge the public health advances made, and thus calls for heightened awareness and preparation to face emerging threats. This fact is reflected in the agreements made during the 61st World Health Assembly in its Resolution WHA61.19 (2008).

#### *There is scientific evidence of climate change*

3. There is scientific evidence showing that the world's climate is changing and there is consensus on this within the scientific community. This change is due, in great part, to diverse human activities related to the burning of fossil fuels. In 2007, the Intergovernmental Panel on Climate Change (IPCC) concluded that the warming of the climate—which includes an increase in climatic variability—is unequivocal based on observed increases in global average air and ocean temperatures, the widespread melting of snow and ice, and rising global average sea level.

4. The ambient temperatures of the globe increased 0.74°C over the period 1906-2005. The rate of warming averaged over the past 50 years ( $0.13^{\circ}\text{C} \pm 0.03^{\circ}\text{C}$  per decade) is nearly twice that of the last 100 years. Evidence from around the world demonstrates that rising temperatures are changing and disrupting the balance of natural systems that supply the basic needs of life.

***There is evidence of health risks from climate change***

5. During the 61st World Health Assembly in 2008, Member States expressed concern over the impact of rising temperatures being observed in some aspects of health. Observed changes in the precipitation and rainfall patterns are affecting the geographic range and incidence of many climate-sensitive health determinants and the consequences resulting from these factors. The health effects associated with climatic conditions can be divided into three broad categories: effects that are directly related to weather or climate; effects that result from environmental changes that occur in response to climate change; and effects resulting from consequences of climate-induced economic dislocation, environmental decline, and conflict. Changes in the frequency and intensity of thermal extremes and other extreme weather events (i.e., floods and droughts) directly influence population health. In addition, indirect impact due to changes in the intensity and variety of infectious diseases and food- and water-borne diseases have been noted. Increases in the prevalence of respiratory diseases are associated with air pollutants and aero-allergens. Saline intrusion from rising sea levels and retreating glaciers can greatly affect local water supplies. Other impacts include the health consequences of social and economic dislocation and of population displacement.

6. Globally, people at greatest risk include the very young, the elderly, the infirm, migrant populations, indigenous populations, poor communities, and poor women in particular. Low-income countries and areas where under-nutrition is widespread, education is poor and infrastructure is weak, will have the most difficulty in adapting to climate change and the related health consequences. Vulnerability is also determined by geography, and is higher in areas with a high endemicity of climate-sensitive diseases, water scarcity, low food production and isolated populations. Moreover, populations considered to be at greatest risk are those living in small-island developing states, mountainous regions, water-stressed areas, mega cities and coastal areas in developing countries, as well as the poor in urban and rural areas and those lacking access to health services.

***The evidence highlights the need of effective responses***

7. Climate change affects some of the most important risk factors for health, such as the availability of fresh water and food. It also affects several climate-sensitive diseases, including those with the highest global disease burden—malnutrition, diarrhea and malaria, amongst others—which in turn mostly affect children.

8. Some climate change is inevitable. This means that it will be necessary to make changes in the health sector to adapt to such changes, and for health systems to be prepared to protect peoples' health from increased climate-associated risks. In particular, it will be necessary to strengthen core public health interventions, paying greater attention to environmental and socioeconomic determinants of health. Effective responses in the health sector represent opportunities to protect public health, interacting in synergy with initiatives such as "Healthy Places" and "Faces, Voices and Places." In addition, responses need to consider the numerous experiences acquired during decades by the health sector in the management of environmental risks and emergencies, such as those resulting from hurricanes and El Nino preparedness.

9. Considering the high rate of urbanization, the Region of the Americas should focus on urban health determinants, including the provision of water. However, rural areas, where some of the most vulnerable populations live cannot be overlooked. Furthermore, due to the many island states in the Region, concern over rising sea levels and the availability of potable water in small islands needs to be addressed, as do health actions related to preparedness and response to emergencies in countries that are experiencing extreme climate-related phenomena. The availability of food and crop yields may suffer in some countries, impacting nutrition and bringing about the displacement of populations. Climate sensitive vector-borne diseases, such as dengue, yellow fever and malaria, require particular attention. These are just some of the health concerns which a comprehensive plan of action should address.

***The health sector needs coordinated action***

10. Following consultation with Member States, PAHO is proposing a Regional Plan of Action to Protect Health from the Effects of Climate Change in the Region of the Americas. The Plan could serve as a model for the development of national plans of action in the countries, adapted to local needs. Elements that should be addressed in a plan of this nature are detailed below.

***Goals, strategic objectives and actions***

11. A Regional Plan of Action on climate change should ensure that concerns about public health security be placed at the center of the response to climate change. It should support the development and implementation of adaptation strategies at local, national, and regional levels to minimize the health impacts of climate change, and encourage the adoption of energy measures to mitigate climate change and avoid further and potentially disastrous impacts on health. A plan would need to be regularly evaluated in order to remain effective with regards to this emerging phenomenon.

12. The **goals** of the proposed plan would seek to empower, equip and strengthen the capacity of health systems locally and nationally to protect human health from risks related to climate change.

13. The **strategic objectives** to be achieved would include:

*Evidence:* Promote and support the generation of knowledge on health risks associated with climate change and on the response of the public health sector to this phenomenon.

*Sensitization:* Create awareness of the effects of climate change on health among both the general public and in different sectors including health sector personnel, by promoting communication and dissemination of information in a multidisciplinary approach.

*Resources:* Promote the strengthening and development of human resources, financial resources, institutional development, and policy development.

*Adaptation:* Strengthen and develop the capacity of health systems to design, implement, monitor, and evaluate adaptation measures with the aim of improving response capacity to prepare for and effectively respond to the risks of climate change.

*Partnerships:* Promote, articulate and establish cross-disciplinary, interagency and intersectoral partnerships to ensure that health protection and promotion is central to climate change policies.

14. The following **actions** are needed to facilitate the achievement of these objectives, most of which need to be carried out with the participation of other sectors.

*Evidence:* Promote and support the generation of knowledge on health risks associated with climate change and on the response of the public health sector to this phenomenon.

- *Observatory of climate and health:* Support the establishment of observatories on climate change and human health where no surveillance system exists, and strengthen existing systems, specifically integrating reliable information systems.
  - (a) Develop, adapt or adopt vulnerability indicators, establish the degree of vulnerability and monitor advances and progress in adaptation measures, as well as the efficacy and efficiency of the interventions.
  - (b) Harmonize health indicators within the United Nations system, in

particular the achievement of the targets of the United Nations Framework Convention on Climate Change (UNFCCC).

- (c) Develop a uniform methodology or tools to evaluate vulnerability that provides information on the necessary actions for adaptation, to include the use of climatologist-prepared scenarios.
  - (d) Develop research based on epidemiological and statistical methods to analyze and interpret multisectoral data and the impacts of climate change.
  - (e) Carry out quantitative and qualitative evaluations of the effects of climate change on health.
  - (f) Establish networks of experts and institutions to share information on climate change and health that contributes to the regional integration of adaptation activities.
  - (g) Disseminate the information that is generated through communication networks, such as web pages and the virtual library.
  - (h) Systematize local experiences salvaging health promotion initiatives, with community participation.
- *Surveillance systems:* Create and strengthen health and health determinant surveillance systems, with an emphasis on environmental health and climate sensitive diseases.
  - *Research promotion:* Support research to gather evidence on the impacts of climate change on health.
    - (a) Promote applied research to evaluate the impact of climate change on the health of vulnerable populations, including children, the elderly, people with preexisting illnesses and poor people, in particular among women.
    - (b) Promote studies on the calculation of the cost of actions and of lack of action, in order to guarantee an appropriate and transparent use of resources invested in protecting public health from climate change.

- (c) Promote the use of evaluation, integrated health and environment action methods (such as GEO-Health, the ecosystem approach, and panoramic epidemiology, among others) to develop comprehensive actions to minimize the negative effects of climate change on human health and wellbeing.
- (d) Promote the evaluation of greenhouse gas mitigation strategies proposed in other sectors such as energy, transport and urban design, to minimize the negative effects of climate change on human health and wellbeing.
- *Generation of information:* Promote technical cooperation and provide national and regional support to evaluate the health consequences of climate change:
  - (a) Support the academic sector and promote research to determine to what extent the weather and the climate affect geographic reach, and the incidence of climate sensitive diseases, taking into account multi-causality, confounding factors and effect modifiers.
  - (b) Prepare guidelines on how to evaluate vulnerability and adaptation at local, national and regional scales. These evaluations would need to provide a better understanding of current and future health risks due to climate change and uncertainties related to these risks, as well as point to interventions that can increase the population's resilience in the face of climate change.
  - (c) Determine what approach and tools should be used to quantify climate change-attributable burden of disease; determine particularly vulnerable populations and regions; assess existing health systems capacity to cope with the projected effects on health, and prioritize additional interventions needed to increase the adaptation capacity to climate change.
  - (d) Systematize adaptation experiences among indigenous, rural and traditional communities to generate mechanisms that adequately address different cultures.
  - (e) Evaluate achievements, failures, areas of opportunity and lessons learned, in climate change-related areas, such as emergency response and health services, and improve regional, national and local capacity to evaluate actions.

- *Exchange of Information:* Promote and facilitate the exchange of knowledge between sectors, and support collaborative efforts to strengthen action capacity:
  - (a) Promote the creation of regional networks to disseminate health risks caused by climate change and responses on the part of the health sector, as well as of other disciplines in light of these changes.
  - (b) Strengthen situation rooms and emergency operations centers.
  - (c) Establish or strengthen subregional databases on climate change and health.
  
- *Sensitization:* Create awareness of the effects of climate change on health among both the general public and in different sectors including health sector personnel, by promoting communication and dissemination of information in a multidisciplinary approach.
  - (a) Increase awareness: Sensitize decision-makers to the projected negative outcomes for human health as the result of climate change and the need to reduce risks associated with climate change in the field of public health, and promote the health system response in the face of this phenomenon.
  - (b) Promote strategies: Promote education, information and risk communication strategies related to climate change and human health within health personnel and the general population.
  - (c) Develop guides: Develop education, training and information guides for the incorporation of climate change adaptation mechanisms to protect human health.
  
- *Resources:* Promote the strengthening and development of human resources, financial resources, institutional development, and policy development.
  - (a) Strengthen the national regulatory framework to include climate change in health sector policies in a cross-cutting manner.
  - (b) Strengthen human resources: Strengthen and continue the work of WHO/PAHO in supporting countries in environmental health training and, specifically, in climate change and health.
  - (c) Identify funds at the national and regional level for all the activities identified in this plan.

- i. Identify international funds for research on the effects of climate change on human health.
  - ii. Procure financing of health adaptation using resources of regional funds and other regional financing mechanisms.
  - iii. Systematize successful experiences for the financing of health adaptation measures for climate change, using resources generated from mitigation as a base.
  - iv. Include climate change and health in PAHO workplans.
  - v. Facilitate greater financing from donor organizations to execute programs and activities that address health risks of climate change. For example, national or regional proposals could be developed, financed by the Adaptation Fund from the Global Environment Facility.
- *Adaptation:* Strengthen and develop the capacity of health systems to design, implement, monitor, and evaluate adaptation measures with the aim of improving response capacity to prepare for and effectively respond to the risks of climate change
    - (a) Adaptation evaluations: Provide technical cooperation and national and regional support to design and to execute national plans of action in order to address the health risks of climate change, to manage such risks in an effective way and to provide them with follow up, such as quantifying the costs and benefits of the interventions.
    - (b) Adaptation priorities: Implement and evaluate adaptation measures in critical health matters. Implement adaptation measures based on vulnerability assessments already made or being undertaken.
    - (c) Work with other sectors: Evaluation of the health implications of actions of other sectors.
      - i. Provide technical cooperation and modify the necessary instruments—like cost benefit analyses and evaluations of the health effects—to evaluate, at the national and regional level, health implications of policies adopted in sectors such as agriculture, energy, transportation, water and sanitation, education, finance and the environment.

- ii. Incorporate climate change in risk management plans, in preparedness, and in response to emergency and disaster situations.
  - (d) Emergency response related to climate change: Work at different levels of government to improve regional, national and local capacity to support health systems, and respond to public health and emergency problems that result from climate change.
    - i. Improve regional, national and local capacity to respond to public health needs in emergencies caused by increased frequency and intensity of disasters related to modifications in hydro-meteorological patterns, and to wide-reaching epidemics.
    - ii. Strengthen health systems response to the damage caused by extreme climatic events, and survey consequences, including effects on mental health, infectious disease outbreaks and other adverse impact on health.
- *Partnerships*: Promote, articulate and establish cross-disciplinary, inter-agency and intersectoral partnerships to ensure that health protection and promotion is central to climate change policies.
  - (a) Mitigation policies in the health sector: Facilitate the preparation and dissemination of technical guidelines on best ways to reduce greenhouse gas emissions in the health sector.
  - (b) Strengthening the health sector: Promote the formation of information centers within Ministries of Health and other health institutions, to identify, evaluate, reduce and eliminate health risks, as well for sharing information with centers in other counties:
    - i. Promote the establishment of focal points within ministries of health to focus on issues of climate change and health, considering existing the institutional base in each country.
    - ii. Strengthen health systems by means of the Essential Public Health Functions, specifically health promotion and primary health care, with the aim of being able to act on the effects of climate change on health.
    - iii. Strengthen health programs related to risk, emergency and disaster management.
    - iv. Include the health sector in National Climate Change Commissions.

- (c) Network of experts: Promote the formation of multidisciplinary expert groups and networks that will contribute to the strengthening of the health sector in the implementation of actions due to climate change.
- (d) Intersectoral work: Promote and strengthen the exchange of information between sectors, minimizing the costly duplication of initiatives. Partner with civil society and the private sector, among others.
- (e) Evaluate the benefits of measures applied in other sectors: Prepare and provide technical cooperation for the calculating costs and benefits to health of mitigation strategies proposed in other sectors.
- (f) Interinstitutional action: Provide technical cooperation to countries to ensure their active participation in processes related to climate change within the UNFCCC
- (g) Cooperation between countries: Promote technical cooperation projects between countries to study and mitigate the effects of climate change in border and among vulnerable populations.
- (h) Subregional cooperation: Promote the theme within the subregional integration mechanisms (MERCOSUR, Andean Nations Community—CAN, the Central American integration system—SICA, and the Caribbean Community—CARICOM).
- (i) Regional forum: Promote the creation of a regional forum on climate change and health with intersectoral participation.
- (j) Collaborating centers: Identify and establish WHO/PAHO Collaborating Centers in the Region in the area of climate change and health, to support national and regional capacity development.



**PAN AMERICAN HEALTH ORGANIZATION**  
*Pan American Sanitary Bureau, Regional Office of the*  
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Annex B

**ANALYTICAL FORM TO LINK AGENDA ITEM WITH ORGANIZATIONAL AREAS**

<b>1. Agenda Item:</b> 4.12	<b>2. Agenda Title:</b> Roundtable on Climate Change and Its Impact on Public Health: A Regional Perspective
<b>3. Responsible Unit:</b> Risk Assessment and Global Environmental Change Team Sustainable Development and Environmental Health Area (SDE)	
<b>4. Preparing Officers:</b> Luiz A. Galvão and Samuel Henao	
<b>5. List of collaborating centers and national institutions linked to this Agenda item:</b>	
<ul style="list-style-type: none"> <li>▪ Centers for Disease Control and Prevention (CDC), United States</li> <li>▪ <i>Institut national de santé publique du Québec</i> (INSPQ-CHUQ-DSP), Canada</li> <li>▪ Oswaldo Cruz Foundation (FIOCRUZ), Brazil)</li> <li>▪ University of Wisconsin, Human Ecology/Atmospheric and Oceanic Sciences, United States</li> <li>▪ University of Harvard/Department of Environmental Health, United States</li> </ul>	
<b>6. Link between Agenda item and Health Agenda of the Americas:</b>	
<p><b>Item (b) Tackling Health Determinants - Paragraph 40</b></p> <p>The determinants of health should be tackled in order to effectively protect poor, marginalized, and vulnerable populations. This refers to determinants that are related to (a) social exclusion, (b) exposure to risks, (c) unplanned urbanization, and (d) the effects of climate change. This approach requires revision of legislative frameworks, which currently provide adverse incentives for the improvement of health determinants.</p> <p><b>Notes and References - Paragraph 32</b></p> <p>The variables included in this grouping are the following: (a) social exclusion: income, gender, education, ethnic origin, and disability; (b) exposure to risks: poor living and working conditions, unhealthy lifestyles, lack of information, difficulty in accessing food and water, soil, water and air pollution, and contaminated food; (c) unplanned urbanization exacerbates the inadequate water services, sanitation, and housing; and (d) among the consequences of climate change are floods, droughts, and vector-borne diseases, which affect poor population with higher intensity.</p>	
<b>7. Link between Agenda item and Strategic Plan 2008-2012:</b>	
<p><b>SO 8:</b> To promote a healthier environment, intensify primary prevention and influence public policies in all sectors so as to address the root causes of environmental threats to health.</p> <p><b>RER 8.2:</b> Member States supported through technical cooperation for the implementation of primary prevention interventions that reduce environmental health risks; enhance safety; and promote public health, including in specific settings and among vulnerable population groups (e.g. children, older adults).</p> <p><b>IND 8.2.5:</b> Number of countries following WHO's guidance to prevent and mitigate emerging occupational and environmental health risks, promote equity in those areas of health and protect</p>	

vulnerable populations.

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

**IND 8.3.1:** Number of countries receiving technical and logistical support for developing and implementing policies for strengthening the delivery of occupational and environmental health services and surveillance.

**RER 8.4:** Guidance, tools, and initiatives created to support the health sector to influence policies in priority sectors (e.g. energy, transport, agriculture), assess health impacts, determine costs and benefits of policy alternatives in those sectors, and harness non-health sector investments to improve health.

**IND 8.4.4:** Number of regional or national events conducted with PASB's technical cooperation with the aim of building capacity and strengthening institutions in health and other sectors for improving policies relating to occupational and environmental health in at least 3 sectors.

**SO 5:** To reduce the health consequences of emergencies, disasters, crises and conflicts, and minimize their social and economic impact.

**RER 5.5:** Member States supported through technical cooperation to strengthen national preparedness and establish alert and response mechanisms for food safety and environmental health emergencies.

**IND 5.5.2:** Number of countries with national plans for preparedness, and alert and response activities with respect to chemical, radiological and environmental health emergencies.

#### **8. Best practices in this area and examples from other countries within AMRO:**

1. Country Profiles on Climate Change and Health of the Americas – 2008
2. Workshop on Climate Change and Health – Brazil, April 2008
3. Regional Communication Initiative on Climate Change and Health – April-November 2008

#### **9. Financial implications of Agenda item:**

PAHO should allocate enough funds to support the Regional Plan of Action on Climate Change and Health, particularly to the SDE Area/Vector Control and Disaster Emergency when it is developed.

Funds needed approximately US\$ 300,000 (consultants and activities) to be mobilized through WHO and direct PAHO efforts.