



PAN AMERICAN HEALTH ORGANIZATION
WORLD HEALTH ORGANIZATION



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UPDATE ON CLIMATE CHANGE AND ITS IMPACT ON PUBLIC HEALTH

Background

1. In recent years, PAHO's Directing Council has maintained a trend of including a roundtable on the year's World Health Day (WHD) theme on its agenda. WHD is celebrated annually on April 7 and marks the founding of the World Health Organization (WHO). It is 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. Consequently, PAHO has decided to convene a roundtable on this theme during the afternoon meeting on Thursday 30 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"¹. The United Nations (UN) and the Intergovernmental Panel on Climate Change (IPCC) have also expressed special interest in climate change.

Summary of the Theme

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

¹ Article 1, paragraph 2 of the Convention, UN, 1992.

4. In the Region of the Americas, the major areas of concern relate to increases in extreme weather events, changes in food supply and nutritional security, changes in water supply, changes in the range and distribution of vector-borne disease, and rising sea levels. Urban health issues will become increasingly important as a result of rapid urbanization in the Americas.

5. Population vulnerability and the capacity to respond to new scenarios influence the gravity of the impact of climate change. Effective adoption prevention and adaptation strategies require an identification of the areas in which populations are unable to cope with the effect of climate variability and extremes. Some of these areas include 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 be further 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 undertaken by civil society, industry, government and other sectors and take into consideration the mixture of cultures and sensitizing citizens some more.

PAHO/WHO Collaborative Efforts

7. PAHO and WHO are working jointly on climate change in the Americas and in the rest of the world to increase awareness of the health consequences, assess country-specific risks, strengthen health systems to provide protection from climate-related risks, and to facilitate the enhancement of public health through decision-making on climate change in other sectors. Additionally, PAHO is in the process of developing a plan of action based on the regional country profiles which were discussed and revised during the 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 comprehensive document on Climate Change and Public Health to be analyzed during the roundtable, and it is attached in Annex I.

Attendees

9. It should also be noted that apart delegates from Member States attending the 48th Directing Council, representatives from academia, United Nations agencies, and civil society organizations will be participate in this event.

Program Format

10. The roundtable is expected to be of hour and a half duration and will comprise the following:

Opening Session (30 minutes)

- The roundtable session will commence with a video presentation on climate change, followed by opening remarks to be made by Dr. Mirta Roses Periago, Director of the Pan American Sanitary Bureau (PASB).
- A special guest has been invited to deliver the keynote address.
- Dr. Luiz A. Galvão, Area Manager, Sustainable Development and Environmental Health (SDE) will make a presentation on the elements of a regional plan of action on climate change and its impact on public health.

Discussion Groups (30 minutes)

11. Following the opening session and first plenary, working groups based on linguistic distribution and the closest sub region will be convened to discuss the pertinent elements of a regional plan of action on climate change and its impact on public health. Each group will include a chair, a motivational speaker and a rapporteur. The composition of the groups will be as follows:

Group 1 *Chair:* Directing Council President (*to be decided*)
Motivational speaker: Minister of Health (*to be decided*)
Rapporteur: PAHO Advisor (*to be decided*)

Countries: Antigua and Barbuda, Bahamas, Barbados, Belize, Canada, Dominica, Grenada, Guyana, Haiti, Jamaica, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, United Kingdom Overseas Territories (Anguilla, British Virgin Islands, Montserrat), and United States.

Group 2 *Chair:* Directing Council Vice President (*to be decided*)
Motivational speaker: Minister of Health (*to be decided*)
Rapporteur: PAHO Advisor (*to be decided*)

Countries: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela

Group 3 *Chair:* Directing Council Vice President (*to be decided*)
Motivational speaker: Minister of Health (*to be decided*)
Rapporteur: PAHO Advisor (*to be decided*)

Countries: Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Mexico

Plenary (30 minutes)

12. Upon conclusion of the group discussions, the second plenary will be convened to present the conclusions of the group discussions.

Expected outcome

13. The expected outcomes of this roundtable are congruent with the strategic objectives of a regional plan of action for health and are likely to provide additional information based on shared experiences, and guidance aimed at obtaining the following:

Evidence Encourage and support the generation of knowledge on the risks for health associated with climate change and the public health response to this phenomenon.

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

Resources Strengthen and develop human, financial, institutional development and the legal framework.

Adaptation Strengthen the capacity of health systems to develop, implement, monitor and evaluate adaptation interventions to prepare for and effectively respond to the risks of climate change.

Partnerships Promote, articulate and establish cross-disciplinary, inter-agency and inter-sectoral partnerships to ensure that health protection and promotion is central to climate change policies.

14. A summary of the discussions undertaken and conclusions reached will be compiled into a working document that will add additional input and serve as the basis for PAHO's proposed plan of action.

Action by the Executive Committee

15. The Executive Committee is invited to note the preparations underway for the convocation of this roundtable and provide guidance to the Bureau in order to refine its approach so that optimum benefit could be derived from the exchanges that will take place during the event.

Annex

Proposal for PAHO's Plan of Action to Protect Health from Climate Changes in the Region of the Americas

PAHO proposes the development of a Plan of Action to Protect Health from the Effects of Climate Change in the Region of the Americas. This Plan is to be carried out in close consultation with Member States. This Plan is expected to form the basis for National Plans of Action that will be adapted to national and local needs. This document reflects the results of a conference that took place in Brasilia, Brazil from 9-11 April, 2008 at which representatives of eight countries of the Region worked on the elaboration of the plan.

Evidence of climate change

There is substantial scientific evidence and clear scientific consensus that the world's climate is changing. This is largely the result of human activities related to the burning of solid fuels, deforestation and agricultural practices. In 2007, the Intergovernmental Panel on Climate Change concluded that warming of the climate system is unequivocal based on observations on increases in global average air and ocean temperatures, the widespread melting of snow and ice, and rising global average sea level.

Ambient temperatures increased 0.74°C worldwide 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 the amount of the last 100 years. Evidence from around the world shows that increasing temperatures are changing rainfall and storm patterns, and disrupting the balance of natural systems that supply the necessities of life. The warming of the planet will be gradual, but the increasing frequency and severity of extreme weather events, such as intense storms, heat waves, droughts and floods, will be abrupt and the consequences may be acutely felt.

Evidence of Health Risks as a result of Climate Change

Changing temperature and precipitation patterns are affecting the geographic range and incidence of a range of climate-sensitive health determinants and outcomes. The three broad categories of health impacts associated with climatic conditions are impacts that are directly related to weather or climate; impacts that result from environmental changes that occur in response to climate change; and impacts 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 the health of the population. Indirect impacts occur through changes in the range and intensity of infectious diseases

and food and water-borne diseases, and changes in the prevalence of diseases associated with air pollutants and aeroallergens. Other impacts include the health consequences of social and economic dislocation and of population displacement.

Globally, people at greatest risk include the very young, the elderly, and the medically infirm. Low-income countries and areas where under nutrition is widespread, education is poor, and infrastructures are weak will have most difficulty adapting to climate change and related health hazards. Vulnerability is also determined by geography, and is higher in areas with a high endemicity of climate-sensitive diseases, water stress, low food production, and isolated populations. The populations considered to be at greatest risk include those living in small-island developing states, mountainous regions, water-stressed areas, mega cities and coastal areas in developing countries, the poor, and those unprotected by health services.

Evidence for effective responses

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 disease burden such as malnutrition, diarrhea and malaria, which in turn affect mostly children.

Some climate change is inevitable. This means that it will be necessary to make changes in the health sector to adapt to such changes. It will be necessary to strengthen health systems to protect peoples' health from increased climate associated risks. It is necessary to strengthen core public health interventions which should include greater emphasis on environmental and socioeconomic determinants of health.

Being highly urbanized, the Region of the Americas needs to focus on urban health determinants, including the provision of freshwater to cities. On the other hand, and given the many island nations in the Region, concerns about sea level rise and potable water availability in small islands need to be addressed. Increased focus on health action in response to emergencies in countries requires strengthening, especially in those countries which experience Extreme climate related events. Food availability and harvesting may suffer in some countries and consequently impact nutrition and the displacement of populations. Climate sensitive vector borne diseases, such as dengue, yellow fever and malaria, need particular attention. Since these are just some of the health concerns, a comprehensive plan of action should address them all.

Goals, strategic objectives and actions

The Regional Plan of Action is designed to ensure that concerns about public health security are placed at the centre of the response to climate change. It is also geared to implement adaptive strategies at local, national, and regional levels to minimize the health related impacts of climate change; and to support strong actions to mitigate climate change and to avoid further dramatic and potentially disastrous impacts on health.

The **Goals** of the proposed plan are to:

Empower, equip and strengthen health systems locally and nationally to protect human health from the current and projected risks of climate change.

The **Strategic Objectives** to be achieved are:

Evidence Encourage and support the acquisition of knowledge on the health associated with climate change and the public health response to this phenomenon.

Sensitization Promote awareness of the effects of climate change on health, both in the general public and in different sectors that include health sector personnel, promoting communication, dissemination of information and a multidisciplinary approach.

Resources Strengthen and develop human, financial, institutional development and the legal framework.

Adaptation Strengthen the capacity of health systems to develop, implement, monitor and evaluate interventions to be adapted to prepare for and effectively respond to climate change risks.

Partnerships Promote, articulate and establish cross-disciplinary, inter-agency and inter-sectoral partnerships to ensure that health protection and promotion is central to climate change policies.

The following **Actions** are needed to facilitate achievement of these goals.

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

- **Observatory on Climate and Health:** Support the establishment of observatories on climate change and human health that integrates reliable information systems, including the coordination of a regional network.
 - (a) Develop a set of indicators to closely monitor climate change-related health risks (including tracking the climate change-related health risks, 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 UNFCCC targets.
 - (c) Develop a uniformed methodology and tool to evaluate vulnerability that provides information on the actions necessary for adaptation.
 - (d) Establish networks of experts and institutions to share information on climate change and health that would in turn contribute to the regional integration of adaptation activities.
 - (e) Disseminate the information generated through communication networks, such as web pages and the virtual library.
 - (f) Systematization of local experiences salvaging health promotion initiatives, with community participation.
 - (g) Develop sectoral implementation indicators of achievement of the UNFCCC targets for the health sector.
- **Surveillance Systems:** Create and strengthen health surveillance systems and health determinants with emphasis on environmental health and climate-related illness.
- **Generation of information:** Provide technical cooperation and national and regional supports to evaluate the repercussions of climate change on health, and conduct research on the subject.
 - (a) Promote research to determine to what extent the weather and the climate affect the geographic scope and the impact of the climate on diseases, taking into account diverse causes, factors and effect modifiers.
 - (b) Prepare guidelines on the methodology for evaluating vulnerability and adaptation on local, national and regional scales. Evaluations will provide a better understanding of the current and future risks to health due to climate change and the uncertainties related to these risks, as well as the

interventions that can be made to increase the population's recuperation capacity vis a vis climate change.

- (c) Determine what focus should be used to quantify the Burden of Disease attributable to climate change, determine which are the particularly vulnerable populations and regions, examine to what extent the existing health systems can cope with the predicted effects on health and prioritize the additional interventions that are needed to increase the recovery capacity from climate change.
 - (d) Promote studies on the calculation of the costs of action and of lack of action, in order to guarantee that the resources invested in public health are wisely spent.
 - (e) Promote the use of evaluation and integrated health and environment action methods, such as GEO-Health, the ecosystem approach, and panoramic epidemiology, among others.
 - (f) 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 the poor, in particular women).
 - (g) Systematization of the adaptation experiences in indigenous, rural, traditional and similar communities for the generation of mechanisms adequate for different cultures.
- **Exchange of information:** Promote and facilitate the exchange of knowledge.
 - (a) Promote the creation of regional networks to disseminate information on health risks caused by climate change and the responses from the health sector and other disciplines in light of these changes.
 - (b) Strengthen emergency operations centers.

Sensitization: Promote awareness of the effects of climate change on health of the general public and in other sectors that include health sector personnel, promoting communication, dissemination of information and a multidisciplinary approach.

- **Increase awareness:** Sensitize decision makers at different levels of the need to reduce the risks caused by climate change in the field of public health and promote health system response in light of this phenomenon.

- **Promote strategies:** Promote education, information and communication strategies on climate change and human health for health personnel and the general population.
- **Develop guides:** Develop education, training and information guides for the incorporation of health related mechanisms for adaptation to climate change.

Resources: Strengthen and develop human, financial, institutional development and the legal framework.

- **Strengthen the national regulatory framework** to include climate change cross-sectionally in the policies of the sector health.
- **Strengthen human resources:** Strengthen and continue the work of PAHO/WHO in supporting countries to provide training in environmental health and specifically in climate change and health.
- **Identify funds,** at the national and regional levels for all the identified activities in this plan:
 - (a) Identify international funds for research on the effects of climate change on human health.
 - (b) Source funding for health adaptation from regional funds and other regional financing mechanisms for adaptation.
 - (c) Systemize successful experiences of the funding of health adaptation measures in the light of climate change using resources generated from mitigation as a basis.
 - (d) Include climate change and health in PAHO's work plan and budget.
 - (e) Attract greater funding from the donor organizations to execute programs and activities that address the health risks of climate change. For example, national or regional proposals could be created and funded by the Adaptation Funds from the Global Environment Facility.

Adaptation: Strengthen the capacity of health systems to develop, implement, monitor and evaluate adaptation interventions to prepare for and effectively respond to the risks of climate change.

- **Adaptation Evaluations:** Provide technical cooperation, national and regional support to design and execute national plans of action in order to address the

- health risks of climate change, to effectively manage such risks and to follow up on them by quantifying the costs and benefits of the interventions.
- **Adaptation Priorities:** Implementation and evaluation of adaptation measures in critical health matters. Implement adaptation measures based on evaluations of vulnerability made or being undertaken.
 - **Work with other sectors:** Evaluation of the health implications of actions of other sectors
 - (a) Provide technical cooperation, and modify the necessary instruments (like cost benefit analyses and evaluation of the health effects) to evaluate health implications of policies adopted in diverse sectors such as agriculture, energy, transportation, water and sanitation at the national and regional levels.
 - (b) Incorporate climate change in risk management, and in plans for preparedness and response to emergency and disaster situations.
 - **Emergency response related to climate change:**
 - (a) Improve regional, national and local capacity to respond to public health in emergencies caused by the increase in frequency and intensity of disasters related to modifications in hydro-meteorological patterns and of wide ranging epidemics.
 - (b) Strengthen health systems to respond to the damage caused by extreme climatic events and to evaluate its consequences, including the effects on mental health, infectious diseases outbreaks and other adverse health consequences.

Partnerships: Promote, articulate and establish cross-disciplinary, inter-agency and inter-sectoral partnerships to ensure that health protection and promotion is central to climate change policies.

- **Mitigation policies in the health sector:** Prepare and provide technical direction on the best ways to reduce greenhouse gas emissions in the health sector.
- **Strengthening the health sector:**
 - (a) Promote the establishment of focal points within the ministries of health to attend to matters related to climate change and health.

- (b) Strengthen health systems through the essential public health functions, specifically health promotion and primary care, with the aim of being able to act on the impacts of climate change on health.
 - (c) Strengthen health programs related to risk, emergency and disaster management.
- **Network of experts:** Promote the formation of multidisciplinary groups and networks that will contribute to the strengthening of the health sector in the implementation of actions in light of climate change.
- **Evaluate the benefits of measures applied to other sectors:** Prepare and provide technical cooperation for the calculation of costs and benefits to health from mitigation strategies proposed for other sectors.
- **Inter-institutional action:** Provide technical cooperation to countries so that they can effectively participate in climate change related processes within the United Nations Framework Convention on Climate Change.
- **Cooperation among countries:** Promote technical cooperation projects among countries to study and mitigate the effects of climate change on border and vulnerable populations.
- **Sub-regional cooperation:** Promote the theme within sub-regional integration mechanisms (MERCOSUR, Andean Nations Community - CAN, the Central American integration system - SICA and the Caribbean community – CARICOM).
- **Regional Forum:** Promote the convocation of a Regional Forum on Climate Change and Health.
- **Collaborating centers:** Identify and establish PAHO/WHO collaborating centers for in climate change and health in the Region to support the development of national and regional capacities.