Climate Variability and Change and their effects on Health in Central America

A conference and workshop on Climate Variability and change and their effects on health in Central America was held in San José, Costa Rica from 6 to 9 August 2007. The objectives, conclusions, and recommendations, based on the expert presentations, group work, country reports, and plenary discussions, are presented here. Representatives from the health, agriculture, environment, climate and water resource sectors from Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama participated along with local, regional and international agencies and groups that address climate change issues.

Presentation of the Problem

The health of the population does not depend only on health services or of the management of health determinants, but also on the state of the environment. This includes factors such as changes in water resources, the use of the land and agriculture, and ecosystem degradation and the loss of biodiversity: each can be adversely affected by climate change.

Population health should be at the center of the adaptive and mitigative actions needed to confront climate change. There is sufficient evidence on the health impacts of climate change to take action. The costs of inaction would be enormous in human and financial terms.

Objective:

To strengthen coordination between agencies and development sectors to improve planning of actions to reduce vulnerability and increase resilience to the health impacts of climate change.

- Catalyze evaluations of vulnerability and adaptation options in the health and health-related sectors, in order to improve national adaptation and action plans, and
- To contribute to strengthening the capacity of national teams for preparing and analyzing national and international reports on climate variability and change and their effects on health.

Conclusions and recommendations

1. Risk factors, vulnerable groups, and impact

- The countries of Central America have similarities in environmental risk factors, vulnerable groups, and projected climate change impacts, but also important differences, climatic and geographical, and different response capacities.
- Existing environmental risk factors, whose severity and frequency are affected by climate change, include droughts, hurricanes, storms, floods, food security, water resources and energy safety.

- Climate change impacts on health are broad and include vector-borne diseases such as dengue, malaria, and Chagas' disease; diseases transmitted by rodents, such as leptospirosis and hantavirus; food and water borne diseases, including diarrheal diseases; and acute and chronic respiratory diseases. They also include non-communicable diseases, nutritional status, impacts on mental health, and effects caused by extreme hydro-meteorological events.
- There are important socioeconomic impacts that affect the development of the countries and the health and well-being of the populations.
- Disease outbreaks associated with climate change and extreme events, the impact on marine and terrestrial ecosystems, and infrastructure can influence tourism in the region.

2. Climate variability and change requires a comprehensive approach

- Recognizing the complexity of the problem, climate change should be tackled with an intercultural approach, with contribution from all the relevant sectors of development and with the active participation of NGOs, civil society.
- Strengthening of capabilities is needed at the regional and national levels, including human resources, institutional development, and legal frameworks.
- Strategic partnerships and the establishment of networks that include all the key actors, at the different levels, is needed (local, national, and regional levels).
- Periodic inter-sectoral workshops would facilitate integration of knowledge related to impacts.

3. Strengthening of surveillance systems, information and knowledge management

The need was identified to:

- Define and harmonize indicators of exposure, impact, and interventions associated with climate change.
- Improve the availability, access, and use of information in local, national, and regional areas.
- Strengthen the analytical capacity of national and regional information.
- Create and/or strengthen surveillance systems of population health and its determinants for extreme climate events and increase the response capacity of relevant sectors.
- Develop socioeconomic and climate scenarios with regard to health, that facilitate adaptation to climate change.
- Strengthen capacity for research, networking, and sharing of experiences, aimed at improving the effectiveness and the sustainability of interventions.
- Increase citizen awareness on the implications of climate change and the possible actions to reduce vulnerability.

4. Political framework and implementation

- The formulation, implementation, and evaluation of regional public and national policies to

- Take the conclusions and recommendations of this conference and workshop to the next meeting of Ministers of Health of Central America, to the meetings of the Ministers of Health, Agriculture and Environment, and to presidential summits.

5. Mobilization of resources

- Work with bilateral agencies, multilateral agencies, foundations, international agencies and others to mobilize resources to support implementation of actions in the countries.
- Prepare a program of action for the countries of Central America in order to protect health, particularly food and nutritional security in the face of climate change.
- The risks of and responses to climate change should be represented in the budgets of each sector.

Conclusion

Climate change is unavoidable, so it is necessary to implement actions for mitigation (reducing the exposure of future populations) and adaptation (reducing impacts on the current population).

Assessments are needed of the possible health impacts of actions to reduce greenhouse gases emissions, such as the advances in energy, agriculture, water resources, and new technologies.