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Protect, Prevent, Live Well

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“Healthy Planet, Healthy People: Global Warming and Public Health”
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Chairman Markey and members of the Committee, my name is Dr. Georges Benjamin and I serve as the Executive Director of the American Public Health Association. The American Public Health Association (APHA) is the nation’s oldest and most diverse organization of public health professionals in the world, dedicated to protecting all Americans and their communities from preventable, serious health threats and assuring community-based health promotion and disease prevention activities and preventive health services are universally accessible in the United States. I thank the Committee for the opportunity to present APHA’s views on the health impacts of climate change. We are especially pleased this hearing is being held during National Public Health Week.

Each year since 1996, the American Public Health Association has organized National Public Health Week and developed campaigns to educate the public, policy-makers, and public health professionals about issues important to improving the public’s health. This year the theme of National Public Health Week is “Climate Change: Our Health in the Balance.” By making climate change the theme for 2008, the public health community is changing how society addresses this unprecedented challenge. While we are pleased that the issue of climate change has received much attention over the past year, we are also aware that the health effects of climate change continue to be overshadowed by the concerns of climate change on the environment. APHA believes it is critical that Congress act now to address the growing threat that climate change poses not just to the environment but also to the health of the American public and the entire global community.

Climate Change and Health

Climate change is a public health issue. Scientists from across the globe have stated in the strongest possible terms that the climate is changing and that human activity is to blame. The recent Intergovernmental Panel on Climate Change (IPCC) report has unequivocally concluded that greenhouse gas is causing global warming and the United States is a leading contributor of greenhouse gases globally. Greenhouse gases – produced mainly from the fossil fuels used to power cars and trucks, from power plants used to create electricity and from the industries that manufacture goods and produce food –are causing

the Earth's temperature to increase. This increase in the Earth's temperature (referred to as global warming) is causing regional weather changes such as more extreme weather events and increases and decreases in temperature and rainfall. These regional weather changes may create environmental conditions (floods, heat waves, drought, poor air quality) that lead to poor health outcomes such as heat stroke, injury, malnutrition, respiratory illness and asthma, and infectious (vector- and rodent- borne) diseases.

Climate change is already dramatically affecting the health of people around the world especially in the developing world. The World Health Organization reported that climate change, which occurred from 1961 to 1990, may already be causing over 150,000 deaths or the loss of over 5.5 million disability adjusted life years annually starting in 2000, in developing countries.

These numbers are staggering, but they should not be surprising: climate change influences the living environment on the most fundamental level, which means it affects the basic biological functions critical to life. It impacts the quality of air breathed, availability of food and drinking water, and the potential for disease to spread.

These impacts are different in different parts of the world — and equally troubling, they are disproportionately burdensome for the world's more vulnerable populations. Children, the elderly, the poor and those with chronic and other health conditions are considered the most vulnerable to the negative health impacts of climate change because they are most susceptible to extreme weather events like heat waves, drought, intense storms and floods. They are also least likely to have the resources to prepare or respond. This unequal burden seems especially unjust given that these populations are the least likely to contribute substantially to climate change. Any strategies for managing climate change impacts must take the unique challenges and needs of vulnerable populations into account.

Many studies predict that climate change will cause adverse health outcomes due to regional changes in weather causing poor environmental conditions in communities around the country. For example:

- In the Midwest and Northeast, major cities such as New York and Chicago could see temperatures that would mean more heat stress and heatstroke. The poor and the elderly would be hit especially hard.
- In the Northwest, heavy rainfall may lead to flooding and overflow of sewage systems, causing an increase in the spread of disease.
- In the southwest, higher temperatures and decreased rain are likely to strain already limited water sources, increasing the likelihood of wildfires and air pollution.
- In the Great Plains, increased temperatures could mean scorching summers and more mild winters - which would significantly hurt food production.
- In the southeast Atlantic and Gulf Coast, hurricanes and other weather events are expected to last longer and be more intense. That would mean bigger storm surges, more damage to buildings and roads, and contaminated food and water.

Extreme weather events that have occurred in the US such as the Chicago heat wave in 1995, Hurricane Katrina, and the recent wild fires in southern California offer good examples of how extreme weather have led to poor environmental conditions and death and disease. Several Alaskan communities are facing real consequences of climate change – mostly associated with increased temperatures - that is resulting in shorter winters and melting ice, which is negatively impacting many aspects of life. In addition as concluded by a recent study, climate change could detrimentally affect air quality (therefore respiratory health) in major urban cities in the US.

APHA Policy on Climate Change and Health

APHA has been concerned about the potential effects of global climate change and health for more than a decade and has had a policy on this issue since 1995. In 2007, APHA updated its policy to include new information from the fourth IPCC report, which concluded that the warming of the earth is unequivocal and that warming can be attributed to human behavior. APHA's current policy and position on addressing the health impacts of climate change is:

- Based on scientific evidence, the long- term threat of global climate change to health is serious and that greenhouse gas emissions are primarily responsible.
- Policies (such as policies that will reduce greenhouse gas emissions) and actions (choosing alternative modes of transportation) to mitigate and avoid further increases in climate change are critical and a priority.
- Adaptation strategies are necessary to protect health from poor environmental conditions caused by climate change.
- Research is needed to better understand the health impacts of climate change and to develop effective adaptation strategies.
- It is the right of all individuals to be free of serious adverse effects from global climate change - vulnerable populations including individuals living in extreme poverty must be protected.
- As a front line protector and communicator to communities, the public health community plays a key role in helping to mitigate and adapt to climate change. As such the public health community must have the tools, skills, training and education and resources to fulfill this role.

The Problem of Greenhouse Gases

As the United States is the leader in contributing to greenhouse gas globally, the U.S. should also be a leader in solving the problem by reducing our greenhouse gas emissions. To achieve that goal, we must focus on carbon dioxide which is the major component of greenhouse gases. Carbon dioxide emissions come primarily from coal-burning power plants and vehicle exhaust.

While individuals can help to reduce their contribution to global warming by making healthier choices such as walking or biking rather than driving or eating less meat, this alone will not solve the problem. The solution must include:

- Energy policies that will significantly reduce greenhouse gases in particular reductions in carbon dioxide.
- Using new and existing technologies for producing cleaner cars and cleaner plants, and more efficient appliances.
- Exploring and using renewable energy sources such as wind, sun, and geothermal.

The Role of Public Health

Even though there is a direct connection between climate change and the health of our nation today, few Americans are aware of the very real consequences for our communities, our families and our children. It is time for the public health community to take a seat at the table for this critical discussion.

There is growing recognition that we must act and we must act now. As public health professionals, we are in the unique position of playing an important role in both keeping people healthy and addressing the impacts of climate change. Thankfully, these twin goals are compatible. In fact, many of the choices individuals should make for the sake of their health — and the health of their communities — are the same choices that benefit the health of the planet. Making the climate change issue real means helping people understand how the way they live affects themselves and others, whether through transportation choices, the use of water and electricity or the types and amounts of goods purchased and consumed.

Encouraging behavior change is familiar territory for public health experts, and it is a key part of the solution. The shift away from fossil fuels and a movement toward general environmental awareness aligns with existing public health priorities:

- The transportation sector is one of the largest sources of greenhouse gases. Encouraging people to walk, bike, use public transportation or carpool is co-beneficial, as it helps reduce vehicle greenhouse gas emissions and helps improve an individual's health by increasing physical activity.
- Similarly, improving community design to reduce reliance on cars means less greenhouse gases and also less obesity, diabetes and even asthma exacerbation because of cleaner air.
- Eating less meat reduces the need to convert land from rainforest or grassland to grazing fields; requires less corn to be grown for feed (meaning less pesticides and other fossil fuel-based products needed in the growing process); and reduces the output of methane gases from manure.

There are public health professionals around the country already implementing groundbreaking strategies to respond to and prevent the potentially devastating impacts

of climate change. Others are in the trenches, tackling public health problems day in and day out without recognizing that many of them are directly related to climate change.

The public health system will be a frontline responder to potential emergency conditions caused by climate change. It will also play a key role in informing, educating and empowering the nation to make the changes needed to mitigate the problem.

The public health community is well positioned to lead the way in addressing the health impacts of climate change in a number of areas including preparedness, prevention, research, partnerships and policy. While APHA and its partners at the national level play a leading role in advocating for policies to lessen the impact of climate change on health, the public health community at the local level may play the most important role of all.

As many public health activities occur at the local level, it is critical that state and local health departments have the resources they need to educate public health workers, the public and their partners about the health impacts of climate change. Additionally, our state and local health departments need adequate resources to plan and implement efforts to lessen the impact of climate change on the health of our communities.

We must also ensure that our public health workers have the tools and resources they need to educate themselves and their communities about the connection between climate change and health. We encourage those in the public health community to build partnerships with other key stakeholders to ensure the inclusion of public health concerns in programs and policies related to climate change mitigation and adaptation.

We encourage the public health community to take the following steps:

- Conduct vulnerability and needs assessment(s) and determine the potential impacts of climate change.
- Identify and build upon existing public health programs that can also help to address the health impacts of climate change.
- Ensure that surveillance and data monitoring programs capture information needed to improve public health programs and effectively identify and address the health risks of climate change.

Making Progress at the State and Local Level

Across the nation, health departments are making key contributions to larger state efforts by emphasizing the health impacts of climate change and identifying the role of public health in addressing these issues. It is this work that adds the human dimension to the issue and takes it beyond the economic and purely environmental.

The National Association of City and County Health Officials (NACCHO) is currently surveying their constituents about issues associated with climate change and public health at the local level. The results of this survey will be used to help determine what is happening within public health departments at the local level and to identify best

practices. Most state efforts in these areas are relatively new and many are yet to be uncovered. Here are a few state level efforts that can serve as good models and resources:

California

The Public Policy Institute of California (PPIC) is creating a climate change report to include a public health component. As part of this effort, PPIC surveyed local health officers' attitudes and resource needs in relation to climate change impacts. They asked critical questions on whether these institutions had adequate resources and authority to adjust to a changing climate. They found that some programs are already in place that can aid in adaptation to climate change such as disease tracking and heat emergency plans. However, almost 70 percent indicated that their agency *lacks* adequate resources to respond specifically to climate change. Officers surveyed noted the following would be needed to help their efforts: health impact assessments, funding, staff with expertise in climate science, vulnerability assessments, and state and local coordination. Preliminary recommendations from the PPIC work, presented to the California Conference of Local Health Officers, include better integrating public health into climate change-related policy efforts.

Florida

The Florida Department of Health (DOH) is working as part of the state's comprehensive "Lean to Green" Initiative. This effort gives the DOH and other Florida state agencies the opportunity to lead by example by establishing more sustainable choices in public service operations. The initiative stems from three executive orders signed in July 2007 by Gov. Charlie Crist to reduce Florida's greenhouse gases and increase energy efficiency. Some areas addressed include:

- **Flexible Work Schedules/Telework/Telecommuting** — supporting more employees working at least one day from home or an alternate location and studying arrival and exit times to support staggering work hours.
- **Alternative Transportation** — including allowing a 30-minute work credit time per day for bus, bike or carpool commuters and establishing a variety of incentives such as free bus passes and reinstating the employee transportation coordinator position.
- **Purchasing** — encouraging purchasers to adopt practices such as purchasing laptops instead of desktops when they refresh their computers in the future; purchasing only from vendors with the highest standards of recycling and offset initiatives; and considering travel options and the purchase of carbon offsets with all air travel.
- **Energy Use in Buildings** — conducting energy audits of each building; using desktop power strips at each workstation to encourage turn-offs and diminish "phantom" loss of energy; decreasing the number of printers and increase the reuse of paper and double-sided printing; supporting the transition to solar roofing for certain DOH buildings; supporting the use of green roofs on all facilities; transitioning to use of rechargeable batteries; and ensuring that vending machines in buildings are using energy-saving features.

- **Education** — adding a green focus to meetings, conferences and calls throughout 2008; establishing green work groups in each division; including green objectives in all strategic plans; establishing an assessment process for this initiative; and working toward offering assistance for staff interested in green alternatives and to conduct individual assessments of their carbon footprints.

Maryland

The state has established the Maryland Commission on Climate Change to develop a plan of action to address the drivers of climate change, prepare for its likely impacts in Maryland and establish goals and timetables for implementation. A specific work group within the commission is tasked with addressing the health implications of climate change to Marylanders. The commission emphasizes Maryland's particular vulnerability as a coastal state to climate change impacts of sea level rise and increased storm intensity. The state has also experienced extreme droughts. The commission will recommend legislation and mitigation initiatives in areas, including greenhouse gas reduction, green building incentives and encouraging federal and international action. Developing partnerships to raise public awareness of climate change will be one major initiative. Behavior change will be encouraged through education and outreach to consumers, the commercial and industrial sectors and students. The commission will develop its final climate action plan for presentation to the governor and General Assembly in this April.

The above examples by no means comprehensively cover the actions taking place throughout the country. APHA is committed to working with our local, state and national partners to continue to build and strengthen efforts to help lessen the health impacts of climate change.

What Congress Can Do

Congress must play a leading role in addressing the health effects of climate change. APHA has been working with this Committee and others in Congress in an effort to ensure that agencies including the Department of Health and Human Services (HHS), the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), the Environmental Protection Agency (EPA) and others are involved in the planning and implementation of measures to mitigate and adapt to the health effects of climate change. Specifically, APHA supports the following:

1. Funding for the Centers of Disease Control and Prevention to formally establish a climate change program at the agency. As the nation's public health agency, CDC needs to be involved in helping us prepare for and adapt to the potential health effects of global climate change. CDC has several programs that support global climate change preparedness strategies e.g., the National Center for Environmental Health routinely responds to natural disasters and heat waves, and monitors respiratory disease, the National Center for Zoonotic, Vector-borne, and Enteric Diseases works on surveillance and response to vector-, water- and food-borne diseases. However, much more program development and support is needed. APHA recommends funding the following activities at CDC to strengthen their efforts to address climate change:

- Establish a “Climate Change” program within CDC to develop expertise among CDC staff in the areas of epidemiology, disaster preparedness, climatology, communications, infectious disease ecology and others.
- Fund up to six academic “Centers of Excellence” at universities. Research would focus on forecasting and modeling; vector-borne diseases; climate change communication and behavioral change science; food and water-borne diseases; vulnerable populations; heat waves; healthy urban design and transportation to minimize the climate change impacts.
- Strengthen CDC’s Global Disease Detection Centers around the world to monitor new infectious disease trends related to changed climates by improving outbreak response, global surveillance, and research. This funding would also help to build capacity and improve quality of epidemiologic and laboratory science through developing a training program in this area.
- Supporting development, implementation and expansion of state and local monitoring and surveillance programs for health and environmental indicators.
- Supporting state and local protective plans to anticipate and reduce the health threats of climate change; this should include identifying and prioritizing especially vulnerable communities and populations and assessing impacts of land use changes.
- Represent HHS to the U.S. Climate Change Science Program which contributes to scientific research for health issues related to climate change.

2. Funding HHS to promote public health in the course of reducing greenhouse gas emissions or to protect public health from adverse impacts related to climate change. In addition to creating a climate change program at CDC, APHA supports funding at HHS for:

- Developing an applied research program, with both intramural and extramural components, focused on protecting the public from adverse health and food security effects of climate change.
- Development of public education and outreach programs to promote greenhouse gas reduction behaviors that are also health-promoting.
- Establishing and chairing an interagency workgroup to: 1) identify, assess the health and economic benefits of, and prioritize critical infrastructure projects related to climate change impacts; and 2) coordinate preparedness for climate change health impacts.

3. Funding the National Institutes of Health (including the National Institute of Environmental Health Sciences) to study water, food and vector borne infectious diseases; pulmonary effects, including responses to aeroallergens; cardiovascular effects, including impacts of temperature extremes; hazardous algal blooms; mental health impacts of climate change; protecting the health of refugees, displaced persons, and vulnerable communities; and local and community-based health interventions for climate-related health impacts.

4. Funding the Environmental Protection Agency for research and intervention activities and to assess the health benefits and risks associated with alternative fuels and fuel additives and associated land use changes, improved energy efficiency in buildings, alternative methods of energy generation, community and transportation designs that maximize transportation efficiencies; and identifying and prioritizing climate-related threats to drinking water and available technologies to mitigate those threats.

5. Funding the Department of Agriculture for research and intervention studies on the impacts of climate change on food supply and food security.

6. Through federal transportation legislation, Congress should promote energy conservation, including ensuring responsible fuel-economy standards; improvements in energy efficiency; the development of renewable fuel sources for energy production; and strengthen controls for greenhouse gas emissions and air hazardous pollutants.

7. Require and providing funding for Health Impact Assessments in relevant legislation to assure a better understanding of the effect of policy on short and long term health outcomes.

Conclusion

Growing scientific consensus shows us that the climate is changing in ways that increasingly affect the health of people around the world. Because climate influences how people live, breathe and eat as well as the availability of water, populations everywhere, including the United States, may already be experiencing the health impacts of these changes. This is especially true among our most vulnerable populations, children, the elderly and the poor.

We cannot wait to address the health impacts of climate change. We strongly urge Congress to ensure that public health and other health impacts are addressed in any climate change legislation passed by Congress this year. We appreciate the opportunity we have had to work with you and your staff on this important issue and we look forward to continuing our efforts as Congress moves forward with its consideration of climate change legislation this year.