



ENVIRONMENTAL DEFENSE FUND

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This Week's Climate Fact

Friday April 11, 2008

Global Warming is a Serious Public Health Concern

Cap greenhouse gas emissions now.

“Over the next few decades in the United States, climate change is likely to have a significant impact on health.”
- Howard Frumkin, Director of the National Center for Environmental Health at the Centers for Disease Control and Prevention

Climate change is already affecting public health across the globe. The World Health Organization estimates that climatic changes are already causing more than 150,000 deaths annually and substantial losses in quality of life due to diarrheal disease, malaria, malnutrition, and flooding. And the health impacts from climate change will likely increase over time. Some of these anticipated health impacts include:

- **Asthma and allergic diseases are likely to worsen.** Warmer temperatures favor the formation of ozone, which aggravates asthma; higher CO₂ and other climate changes may increase allergenic pollen formation.^{ii,iii,iv}
- **Food and water-borne disease could increase.** Climate-related increases in natural disasters and warmer ambient temperatures could increase the burden of food- and water-borne diarrheal diseases.
- **Increased extreme weather events will directly impact health.** More frequent and severe heat waves,^{v,vi} hurricanes, wildfires, and floods will cause deaths and injury.^{vii} Contact with contaminated floodwater,^{viii} and displacement contribute to additional morbidity and mortality.

Climate change will magnify health disparities.^{ix} Our experience with natural disasters such as Hurricane Katrina in the U.S. and Hurricane Mitch in Central America suggests that minorities and disadvantaged populations will suffer the most when extreme weather events increase.^x Poorer populations may lack adequate shelter or access to protective resources such as air conditioning,^{xi} transportation, healthcare, and emergency assistance.

But if we act soon – and we can – some of the harshest consequences of climate change can be avoided. The solutions exist to significantly and cheaply cut U.S. greenhouse gas emissions today, but Congress needs to enact an economy-wide cap-and-trade policy to really reach the reductions we need.

McKinsey & Company, the well-respected consulting firm, released an analysis in December 2007 that shows that there are **over 250 technologies available today** to start reducing U.S. emissions^{xii}. Many of these emission reduction measures also provide ancillary health benefits, such as reduced exposure to toxic air pollution. And, nearly 40 percent of these opportunities would not only **pay for themselves**, but also earn enough savings to largely offset the cost of more expensive options. And the report does not even consider the costs to society of not taking action on climate change, or the benefits of doing so.

We have the solutions available today to slow, stop, and reverse climate change, but Congress must mobilize our economy if we are to achieve the reductions we need. *It's time to cap emissions now.*

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- ⁱ Frumkin testimony to the Select Committee on Energy Independence and Global Warming, April 9, 2008
- ⁱⁱ Bernard et al. "The potential impacts of climate variability and change on air pollution-related health effects in the United States." *Environmental Health Perspectives*. 2001 May; 109(Suppl 2): 199–209.
- ⁱⁱⁱ Patz J, Campbell-Lendrum D, Holloway T, Foley J. "Impact of Regional Climate Change on Human Health." *Nature*. 17 November 2005; 438. http://www.conservationmedicine.org/papers/Patz_et_al_Nature%202005.pdf
- ^{iv} Bell M et al. Climate change, ambient ozone, and health in 50 US cities. *Climatic Change*. 2007;82:61-76.
- ^v Field, C.B., L.D. Mortsch,, M. Brklacich, D.L. Forbes, P. Kovacs, J.A. Patz, S.W. Running and M.J. Scott, 2007: North America. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 617-652.
- ^{vi} Curriero, F. C., Heiner, K., Zeger, S., Samet, J. M. & Patz, J. A. Temperature and mortality in 11 cities of the eastern United States. *Am. J. Epidemiol.* 2002;155:80–87.
- ^{vii} Confalonieri, U., B. Menne, R. Akhtar, K.L. Ebi, M. Hauengue, R.S. Kovats, B. Revich and A. Woodward, 2007: Human health. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 391-431.
- ^{viii} Wade et al. Did a severe flood in the Midwest cause an increase in the incidence of gastrointestinal symptoms? *American Journal of Epidemiology*. 2004;159(4):398-405.
- ^{ix} Patz JA, McGeehin MA, Bernard, SM, Ebi KL, Epstein PR, Grambsch A. et al 2000. Potential consequences of climate variability and change for human health in the United States. in: *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change* (National Assessment Synthesis Team, eds). U.S. Global Change Research Program. Cambridge, UK: Cambridge University Press, 437–458.
- ^x U.S. Senate Committee on Homeland Security and Governmental Affairs. Hurricane Katrina: A Nation Still Unprepared. Washington DC, 2006: 109th Congress, 2nd Session, S. Rept. 109-322.
- ^{xi} Klinenberg E. Heat wave: A social autopsy of disaster in Chicago. The University of Chicago Press, Chicago: 2002.
- ^{xii} *Reducing US Greenhouse Gas Emissions: How Much at What Cost?*, conducted by McKinsey & Company and published jointly with the Conference Board in November, 2007 is available at: <http://www.mckinsey.com/client-service/ccsi/greenhousegas.asp>