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THE POLLUTER SHOULD PAY: ADAPTING TO A CHANGING CLIMATE

by Rachel T. Kirby*

With the release of the last report from the Intergovernmental Panel on Climate Change (“IPCC”), it is clear that climate change is already a reality, and future warming caused by the burning of fossil fuels is probably unavoidable.¹ As gradually warming temperatures lead to stronger storms, longer droughts, and more frequent flooding, communities all over the world must adapt to this new reality. The blame for climate change, however, is not spread equally throughout the world, and the impacts of a warmer climate will not be spread equally either. The developed nations, which are most responsible for the carbon emissions warming the climate, have a moral obligation to help less developed nations adapt.²

The next few decades will bring significant changes to global weather patterns and deviations from historical norms. Both drought-affected areas and flooding will increase as precipitation patterns change, glaciers melt, and sea levels rise.³ Crop productivity will drop in seasonably dry and tropical areas, increasing the risk of hunger.⁴ Poor coastal communities will begin to flood annually as the sea level rises, threatening small island states and delta communities in Asia and Africa where adaptive capacity is especially low due to extreme poverty.⁵ Adapting to a changing climate is vital to the survival of communities all over the world.

While the developed world benefited from cheap energy provided by burning fossil fuels, the developing world will be the first to suffer. Climate models suggest that agriculture in the United States will benefit from longer growing seasons and warmer temperatures, but crops in Africa and elsewhere are already near the upper end of their temperature tolerance.⁶ Millions of people least able to cope with environmental change will suffer as the developed world escapes the initial effects of climate change.⁷

In addition to the urgent obligation to drastically reduce carbon emissions, developed countries have a moral obligation to help the rest of the world adapt to the climate change created by development.⁸ The consequences of development are being felt largely in those communities that benefited least from this development. Developed countries must both mitigate future harm by reducing emissions and provide major assistance to reduce the harm caused by previous emissions.⁹

The IPCC defines adaptation as an “adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial

opportunities.”¹⁰ Successful adaptation goes hand in hand with sustainable development. More developed communities—measured by income, education, capacity of institutions, and access to technology and information—are more capable of adapting to changes in the climate.¹¹ To successfully adapt to a changing climate, communities require knowledge of likely impacts and efficacy of possible responses, capacity to successfully plan and design responses, the financial resources to implement adaptation measures and cope with impacts, institutions to organize responses, and technologies that meet the needs of specific

communities.¹² To prevent additional warming, developing countries must avoid following in the footsteps of developed countries. Instead, development must skip many technological generations to jump straight to efficient renewable technologies.

Adaptation efforts must be balanced between measures that respond to emergencies and measures that increase the adaptive capacity

of a community.¹³ Specific adaptations in response to immediate threats, such as disaster assistance, emergency stockpiles, and early warning systems, are vital in emergency situations. Larger benefits, however, are possible from measures that increase adaptive capacity, such as strengthening competent government institutions, public health services, and research into alternative crops.¹⁴

Successful adaptation will require a significant investment by developed nations, but that investment need not require difficult choices. Successful measures that pay for adaptations achieve the dual goals of mitigating climate change by reducing emissions and increasing the adaptive capacity of the world. In the United States, efforts to reduce carbon emissions will likely yield an energy tax, whether by a direct tax or a cap-and-trade system, and may include a reduction in subsidies provided to non-renewable energy companies. While most of the new revenue provided by new taxes and reductions in subsidies should go towards offsetting other taxes and research into renewable technologies, a portion of that revenue must go to developing nations to support efforts to adapt to a changing climate. 

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ENDNOTES: THE POLLUTER SHOULD PAY *continued from page 66*

¹ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 2007, SUMMARY FOR POLICYMAKERS CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS 2-12 (Susan Solomon et al. eds. 2007), *available at* <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf> (last visited Jan. 14, 2008).

² OXFAM, ADAPTING TO CLIMATE CHANGE 2 (May 2007), *available at* http://www.oxfam.org/en/files/bp104_climate_change_0705.pdf (last visited Jan. 14, 2008).

³ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 2007, SUMMARY FOR POLICYMAKERS CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY 11 (Martin L. Parry et al. eds. 2007), *available at* <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-spm.pdf> (last visited Jan. 14, 2008).

⁴ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 2007, *id.*

⁵ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 2007, *id.*

⁶ Sarah DeWeerd, *Climate Change, Coming Home: Global Warming's Effects on Populations*, WORLD WATCH, May 1, 2007, at 8-9.

⁷ DeWeerd, *id.* at 8.

⁸ George Monbiot, *Costing Climate Change*, NEW INTERNATIONALIST MAG., Dec. 1, 2006, at 30-31.

⁹ OXFAM, *supra* note 2.

¹⁰ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 2001, ADAPTATION TO CLIMATE CHANGE IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT AND EQUITY 879 (Anand Patwardhan & Jean-Francois Soussana eds., 2001), *available at* http://www.grida.no/climate/ipcc_tar/wg2/pdf/wg2TARchap18.pdf (last visited Jan. 14, 2008).

¹¹ Ian Burton, Elliot Diringer & Joel Smith, ADAPTATION TO CLIMATE CHANGE: INTERNATIONAL POLICY OPTIONS 10 (Pew Center on Global Climate Change 2006), *available at* http://www.pewclimate.org/docUploads/PEW_Adaptation.pdf (last visited Jan. 14, 2008).

¹² Burton, *id.* at 9.

¹³ Burton, *id.* at 10.

¹⁴ Burton, *id.* at 10-11.