

Issue Brief

Investing to Address Climate Change

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The world's leading scientists agree that climate change, or "global warming" as it is commonly known, is being driven by rising levels of greenhouse gases (such as carbon dioxide) that are trapping the sun's heat like a blanket, warming the Earth's atmosphere, and threatening to disrupt its climate system. Goldman Sachs has deemed climate change "one of the most significant environmental challenges of the 21st century."¹

NASA's Goddard Institute ranked 2005 as the warmest year on record. Globally, all ten of the warmest years on record have been since 1990. Warming has accelerated in recent years and has boosted Earth's average temperature by nearly one degree Fahrenheit over the past 30 years. If these trends continue, global average temperatures could increase by three to ten degrees Fahrenheit by the end of the century. The difference between an ice age and the current period is only about nine degrees Fahrenheit.

Studies show that rising temperatures in recent years may have contributed to an increase in the frequency and severity of natural disasters such as tropical storms and hurricanes, of which there were a record 27 in the Atlantic in 2005. Ecological impacts from the warming climate include the spread of crop pests in the Midwest, damage to forests in British Columbia, and proliferation of shellfish disease in the Chesapeake Bay. Melting of glacial ice in Antarctica and Greenland could raise sea levels by up to three feet, inundating low-lying coastal cities. And many of the effects of climate change are expected to have significant repercussions on public health.²

Speaking on climate change, the vice-chairman of Merrill Lynch declared "we are conducting an enormous chemical experiment with potentially huge consequences for our environment, for our economies, and for human life."³ The solution to slowing or reversing global warming lies in intensified action to alter our energy use, reducing greenhouse gas emissions and adopting new technologies that produce energy cleanly.

SUCCESSSES AND CHALLENGES

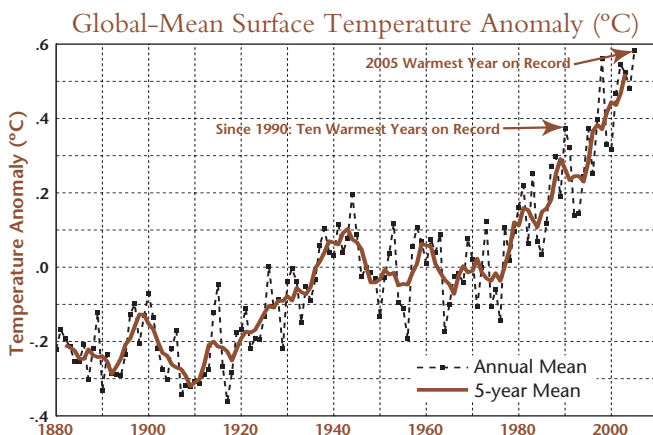
There are many examples of climate change actions at all levels around the world that give reason for hope:

- In 2005, an emissions trading program went into effect in Europe that requires more than 11,000 industrial facilities to achieve greenhouse gas emission reductions by 2012. Emissions trading involves setting a cap on the amount of pollution and allocating emission allowances totaling that amount; companies that will exceed their allocation can purchase allowances from other companies that have reduced emissions. European companies traded more than 230 million tons of carbon dioxide allowances in the first year, with a value of roughly \$5 billion.⁴
- Regional collaboration to reduce emissions is increasing. Seven northeastern U.S. governors adopted the Regional Greenhouse Gas Initiative to reduce emissions from power plants, and the governors of New Mexico and Arizona signed an agreement launching the Southwest Climate Change Initiative.
- California and other states are pursuing new standards to reduce emissions of greenhouse gases from cars, and twenty states have adopted requirements that electric power companies increase their use of renewable energy sources such as wind and solar.
- Hundreds of mayors representing more than 40 million Americans have signed on to the U.S. Mayors Climate Protection Agreement, in which participating cities pledge to cut their greenhouse gas emissions below 1990 levels by 2012.
- General Electric (GE) and BP have both pledged to double their investments in cleaner technologies and alternative energies.
- The University of New Hampshire has conducted dormitory-based outreach to encourage energy-efficient behavior, purchased Energy Star appliances, and retrofitted buildings to help reduce UNH's greenhouse gas emissions.
- Religious institutions across the country have begun to assess and reduce their energy consumption. In Pittsburgh, PA, Zion Hill Baptist Church conducted an energy audit of their facilities, purchased energy-efficient windows and furnaces, and now purchases renewable power.

Numerous challenges exist to making meaningful progress against climate change:

Rising emissions: Emissions are still rising in most of the world, particularly in rapidly developing countries such as China and India, as well as in the United States.

Political will: The Bush Administration believes in a government role limited to promoting further research and voluntary action. Most experts agree that the administration's approach will be insufficient. Reflecting on the need for intensified action on this issue, JPMorgan Chase & Co.



Source: NASA, <http://data.giss.nasa.gov/gistemp/2005/>

declared, “We believe we cannot accomplish significant reductions alone; we need... public policy that establishes certainty for investors and allows significant investments in greenhouse gas mitigation.”⁵

Public awareness: Although most Americans believe global warming exists and that it is a major problem, only 21 percent considered it one of the most important environmental concerns, and less than half think they personally can do anything about it.⁶

Scientific uncertainties: We still do not fully understand how the very complex climate system works, and we cannot yet concretely tie specific current effects to climate change. While the uncertainties fuel the few skeptics who still deny that global warming is occurring, the vice-chairman of Merrill Lynch noted that “the probability that we face global warming caused by fossil fuels is now so overwhelming that it is legitimate to doubt the motives of those who deny it.”⁷

Long-term scope: Climate change occurs slowly and will likely take decades or centuries to undo, making it hard to capture the public imagination, generate political will, and create a sense of urgency.

Technology use: Climate change is fundamentally an energy issue, requiring improved energy efficiency and cleaner technology, much of which is already identified. Although some technology is starting to gain traction in the marketplace (e.g., hybrid cars and energy from solar and wind power), and promising new technology is in development (e.g., hydrogen fuel cells), neither is happening at the speed or the scale necessary for substantial impact on climate change.

TRENDS

Several trends illustrate the growing seriousness of the problem and the efforts to address it:

Improving scientific understanding: New studies are continually being published in scientific journals that increase our understanding of the disruption occurring in the climate system.

Increasing government action: Efforts at the international, state, regional, and local levels to combat climate change have been increasing with European nations and U.S. states taking the lead.

Increasing action by businesses: Initiatives by GE, BP, Dupont, and numerous others to address their impact on climate change have been increasing dramatically.⁸ JPMorganChase has pledged to pursue a cross-sector policy dialogue to advocate that the U.S. government adopt either an emissions trading system or tax policy on greenhouse gas emissions.⁹

Increasing action by investors: Participation in the Investor Network on Climate Risk has been increasing. Since its founding in 2003, this coalition grew from 10 to over 50 institutional investors, representing \$3 trillion in assets.¹⁰

Emerging new voices of concern: In the U.S., evangelical church leaders have issued an urgent moral “call to action” asking government and business leaders to agree to regulations to reduce emissions.¹¹ Farmers and security experts have been calling for increased use of biofuels made from plants to reduce dependence on oil.¹²

FUNDING OPPORTUNITIES

Though most donor investments in this area are focused on advocacy, there exist many unique opportunities for donors to make a direct and concrete impact on climate change.

Purchase carbon offsets: Individual donors can help reduce greenhouse gas emissions by purchasing carbon “offsets” – carbon credits from a public registry. These credits are often designed to offset emissions created by personal travel or energy use, and the proceeds from them are invested in renewable energy or forestry projects that reduce emissions.

Leverage religious contributions: One-third of all private philanthropy in the U.S. goes towards religious institutions. Those contributions to churches, synagogues, mosques and other faith organizations can be earmarked for “greening” the buildings through the installation of energy-efficient light bulbs and appliances or supporting their use of hybrid vehicles.

Engage educational institutions: With \$34 billion being donated to education programs annually, philanthropists may consider focusing their gifts to alma maters or local schools on strengthening climate change and environmental learning programs. Donors can also support “greening” efforts on school grounds.

Support high-return international development: Donors can fund small-scale renewable energy projects in the developing world, where every philanthropic dollar goes a long way, to help homes, schools, and villages use electricity, generate heat, and cook without contributing to global warming.

Be an active investor: Donors can seek out investments in new clean-energy technologies and encourage companies in which they invest to get involved through shareholder resolutions.

Donor Considerations

Before investing in efforts to combat climate change, donors should consider:

New venture risk, a concern whenever investing in a field with fast-developing scientific understanding and untested technological and legislative solutions;

Time horizon, understanding that efforts expected to have far-reaching impacts are likely to require longer-term investments;

Expected return, including a clear understanding of whether an investment promises concrete or less tangible outcomes; and

Leverage, including the concept of combining other philanthropic interests such as support for education, religion, or poverty alleviation with climate change solutions to simultaneously address multiple goals.

Support advocacy: In addition to supporting immediate personal and institutional measures to address climate change, advocacy organizations promoting a local, regional, national or international legislative solution may have the most far-reaching impact on this crisis.

1 Goldman Sachs Environmental Policy Framework, p.1, available at http://www.gs.com/our_firm/our_culture/corporate_citizenship/environmental_policy_framework/docs/EnvironmentalPolicyFramework.pdf.

2 Paul R. Epstein and Evan Mills, “Climate Change is Hazardous to Your Health,” *Forbes*, Nov. 16, 2005.

3 Adair Turner, Vice-Chairman Merrill Lynch, Inaugural Carbon Trust Lecture, April 2003, available at <http://www.thecarbontrust.co.uk/carbontrust/about/publications/AdairTurnerSpeech.pdf>.

4 Olivia Hartridge, DG Environment, European Commission, “The EU ETS, now and into the future,” Presentation. Available at http://www.eu.int/comm/environment/climat/pdf/pres_emission_trading_scheme.ppt.

5 JPMorganChase, Climate change policy and commitments, available at <http://www.jpmorganchase.com/cm/cs?pagename=Chase/Href&urlname=jpmc/community/env/policy/clim>.

6 Dana Blanton, “11/09/05 Fox News Poll: Global Warming,” Nov. 10, 2005; Paul D. Thacker, “Climate change and American exceptionalism,” *Environmental Science & Technology*, Feb. 22, 2006.

7 Adair Turner, *ibid*.

8 “The Race Against Climate Change,” *Business Week*, Dec. 12, 2005. “Global Warming,” *Business Week*, Aug. 16, 2004.

9 JPMorganChase, *ibid*.

10 INCR Overview, available at <http://incr.com/index.php?page=2>.

11 “Climate Change: An Evangelical Call to Action,” available at <http://www.christiansandclimate.org/statement>.

12 Richard Sine, “A bumper crop of opportunity,” *The News Journal*, Aug. 16, 2005.