

Who is Heating Up the Planet?

A Closer Look at Population and Global Warming

Life on Earth is dependent on carbon dioxide (CO₂) to regulate the temperature of our planet, but too much can create a heat-trapping blanket over our atmosphere. In the last century, unsustainable population growth and excessive consumption have raised levels of CO₂ so dramatically that the earth's climate has been altered in ways never experienced before. Agricultural expansion and forest depletion have multiplied emissions of greenhouse gases like CO₂, but it is our dependence on fossil fuels that propels monumental atmospheric change. When we burn fossil fuels such as coal, oil, and gas, we release unsustainable levels of CO₂—the primary global warming culprit. Those of us living in the developed world bear a majority of the responsibility for reversing this disturbing trend.

But How Much Difference Can a Few Degrees Make? Plenty

The Intergovernmental Panel on Climate Change (IPCC)¹ projects that during our children's lifetimes, global warming will raise the average temperatures on Earth within a range of 2.7° to 10.5° F. The ecological impacts of such a rapid increase include rising sea levels, coastal erosion, decreasing agricultural productivity, and accelerated extinction rates of plants and animals due to their inability to adapt to the changing climate. Global warming also poses threats to human health through increased droughts, hurricanes, tornadoes, and floods.

Health Consequences of Global Warming:

Scientists project that as warmer temperatures spread north and south from the tropics and to higher elevations, malaria-carrying mosquitoes will spread with them. This would put as much as 65 percent of the world's population at risk of infection by malaria—an increase of 20 percent.²

Global Warming— It's Not Just a Matter of Numbers

In the 20th century, human population multiplied from 1.6 billion to 6.1 billion people. During this same period of time, CO₂ emissions grew twelvefold.³

Population, global warming, and consumption patterns are inextricably linked in their collective global environmental impact. Industrialized countries' wasteful consumption patterns demonstrate that it is not just the size of a country's population that influences climate change but also the proportion of resources a country consumes. Although the United States makes up only about 5 percent of the world's population, we create approximately 25 percent of the pollution that causes global warming.⁴

The United States is the biggest global warming polluter, contributing greenhouse gas emissions primarily from transportation, industry and power plant sources. We have built our nation on a foundation of unsustainable fossil fuel dependence, jeopardizing the planet's future.

Fact: If America's autos were a separate country, they would be the world's fifth largest global warming polluter.⁵

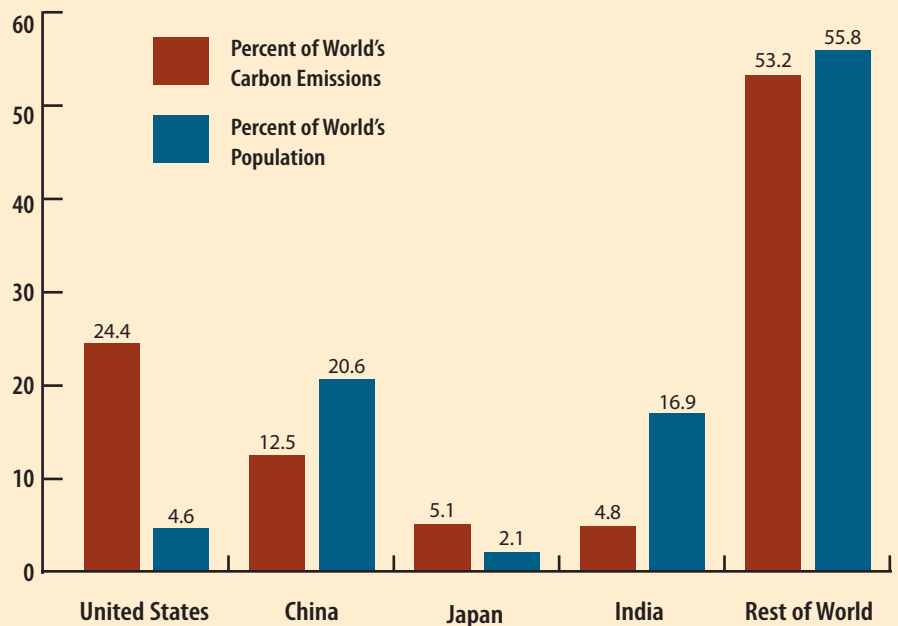


Even in developing countries with high population growth rates, global warming pollution is still far lower than that of developed countries such as the United States. However, the United Nations estimates that developing countries will contribute more than half of total emissions by the mid-21st century.⁶ As developing countries' contribution to global emissions grows, population size and growth rates will become significant factors in magnifying the impacts of global warming.

Turning Down the Heat

Reducing the world's heavy reliance on fossil fuels can help us turn down the heat and curb human-induced global warming. We must all work together to advocate for federal policies that reduce our fossil fuel dependence, promote renewable wind and solar energy sources, and encourage individuals to live in ways that have less impact on the planet. We must also work to slow population growth by increasing access to voluntary family planning and reproductive health programs so that families are better able to choose the number and spacing of their children. The Sierra Club's Global Population and Environment Program supports efforts to empower women and families through education about responsible reproductive health and natural resource use—vital components of the global goal to secure a healthier environmental future.

FOUR COUNTRIES ACCOUNT FOR ALMOST HALF OF GLOBAL CARBON EMISSIONS



SOURCE: Carbon Dioxide Information Analysis Center, U.S. Department of Energy as cited in World Development Indicators 2003, World Bank.

HOW TO LEARN MORE

Sierra Club's Global Population and Environment Program
sierraclub.org/population

Sierra Club's Global Warming and Energy Program
sierraclub.org/globalwarming

United Nations State of the World Population 2001 Report: Population and Environmental Change
www.unfpa.org/swp/2001/english/index.html

WHAT CAN YOU DO?

Support Slowing Global Population Growth

- Encourage your decision-makers to support family planning policies and programs.

Help Change Our Energy Dependence

- Encourage your decision-makers to promote renewable (wind and solar) energy.
- As you replace your appliances, select the most energy-efficient models possible.

Make Sustainable Transportation Choices

- Encourage your decision-makers to raise mile per gallon standards for all automobiles.
- Your car contributes to global warming. Make sure the car you buy is the most efficient one that suits your needs.
- Take public transit, walk, or bicycle. If you can't, combine trips and carpool.

FOOTNOTES

[1] The World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) established the Intergovernmental Panel on Climate Change (IPCC) in 1988. The role of the IPCC, a panel of the world's leading scientists, is to assess the risk of human-induced climate change on a scientific, comprehensive, objective, open and transparent basis. [2] *Climate Change 2001: Impacts, Adaptation and Vulnerability—Contribution of Working Group II to the Third Assessment Report of IPCC*. Intergovernmental Panel on Climate Change. www.grida.no/climate/ipcc_tar/wg2/index.htm [3] *The State of the World Population 2001. Footprints and Milestones: Population and Environmental Change*. United Nations Population Fund. www.unfpa.org/swp/2001/english/index.html [4] *Beyond Economic Growth*. World Bank Institute's Development Education Program (DEP). www.worldbank.org/depweb/beyond/beyondbw/begbw_14.pdf [5] *Automakers' Corporate Carbon Burdens: Reframing Public Policy on Automobiles, Oil and Climate*. July 2002 report from Environmental Defense. www.environmentaldefense.org/documents/2220_AutomakersCorporateCarbonBurdens.pdf [6] *The State of the World Population 2001. Footprints and Milestones: Population and Environmental Change*. United Nations Population Fund. www.unfpa.org/swp/2001/english/index.html

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