Statement on Climate Change and Climate Research

According to the global temperature records analyzed by NASA Goddard Institute for Space Science (GISS), 2016 had the hottest average global surface temperature of any year on record. Human activities such as emission of greenhouse gases and particulate matter change long-term global and regional climates, contributing to damage to human health, industry, and property. Climate change—shifts in Earth’s climate including global temperature increases, severe changes in precipitation patterns, and an increase in frequency of extreme weather events—poses an immediate threat to the American people and economy.

As the representative body of the Graduate Student Council (GSC) of the Massachusetts Institute of Technology (MIT), which represents MIT’s 6,800 graduate students, we recognize the consensus in the scientific community that climate change is caused by human activity. The evidence to achieve this consensus has been reported by researchers across many disciplines, around the world, affirmed by rigorous processes of peer review. Climate change is a matter of growing public concern and the GSC commends local, national, and global efforts to reduce greenhouse gas emissions and to increase transparency and availability of climate-related research.

We urge policymakers to take action on issues raised by the scientific community and, given the scientific consensus, to take proactive steps to address the ongoing impact of climate change. Legislation informed by scientific evidence can better achieve its intended result. Government leaders should make use of the body of scientific evidence when drafting public policy, work to reduce America’s greenhouse gas emissions, and support research to understand the dynamics of climate change and reduce its underlying causes.

The GSC advocates for strong and sustained long-term levels of funding for both basic and applied climate research. Basic research on Earth’s climate provides the analytical tools and observational data that lead to increased understanding by policy makers and the public alike. Applied climate research supplements this understanding and has resulted in technological innovations such as renewable energy, carbon capture and sequestration, electric vehicle technology, new fuels for heavy industry and transportation, and other forms of clean power generation.

Each of these climate-related innovations can play a major role in combatting climate change and improving America's competitiveness and economic growth. A recent third-party study has found that a $12 billion investment through the Office of Energy Efficiency & Renewable Energy has yielded an estimated net economic benefit to the U.S. of more than $230 billion. Investing in carbon-free energy thus creates jobs in manufacturing, construction, plant operations and maintenance, and engineering. The clean energy economy is a growing and vibrant sector of the American economy, and due to investments in clean energy, renewable energy costs in areas such as LED lighting, electric vehicles, wind power, solar energy, and more have reduced substantially over the past 10 years. Policies that maximize this growth will create American jobs, improve American competitiveness, and grow the economy.

1. NASA news “ASA, NOAA Data Show 2016 Warmest Year on Record Globally”
We strongly support the right of researchers and staff at federal agencies to freely disseminate their scientific results without fear of reprisal from outside parties and funding sources. As this relates to climate science, the GSC strongly defends the independence of federal agencies and the scientific community engaged in climate research and climate policy from the interference of political and financial special interests. For these reasons, we strongly oppose any efforts to restrict the ability of the Environmental Protection Agency (EPA), NASA, and the National Oceanic and Atmospheric Administration (NOAA) to investigate and mitigate the effects of climate change, to lead science-based policy making, and to regulate carbon emissions.

We urge policymakers to tackle the challenges of climate change by participating in the global effort to reduce greenhouse gas emissions, by consulting the latest data on these matters from scientists and experts in their field, and by investing in technology that can both reduce the causes and mitigate the effects of climate change. These actions will protect American lives, property, and companies from the dangers of climate change, provide jobs and investment in high-tech industrial sectors and therefore greatly strengthen the American economy.

*Prepared by the External Affairs Board on behalf of the MIT Graduate Student Council.*

---
