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How Public Policy Is Addressing Climate Change in the Boston Area

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The world has experienced an alarming acceleration of climate change over the last several years – including effects ranging from recurrent large wildfires to severe flooding to abnormal weather patterns. Coastal areas are particularly vulnerable, with experts predicting that these regions will experience extreme heat waves, rising sea levels, and more frequent destructive storms.

> "The Gulf of Maine is warming faster than 99.9% of other large bodies of water on the planet, and so the coastal zones here are ground zero for climate change."
>
> –BRIAN HELMUTH PROFESSOR OF ENVIRONMENTAL SCIENCE AND PUBLIC POLICY, NORTHEASTERN UNIVERSITY SCHOOL OF PUBLIC POLICY AND URBAN AFFAIRS

Boston, being a coastal city, has already begun to address the expected outcomes of climate change by investing in massive efforts to prevent and mitigate its most severe impacts as well as slowing its progression. This is thanks in large part to expansive initiatives spanning public, private, and nonprofit stakeholders across the greater Boston area as well as an ambitious climate bill signed into law in 2021. Plans include reducing greenhouse gas emissions, promoting renewable energy, and enabling energy efficiency in addition to efforts to meet the needs of vulnerable populations impacted by climate change.

Master of Public Policy and Master of Public Administration students have the opportunity to facilitate real change by investigating climate issues and proposing solutions. In addition to core coursework in research methods, analysis, and policy frameworks, MPP students can benefit from a Sustainability and Climate Change Policy concentration that provides a Boston-area lens on problems and solutions that can be integrated into team and individual projects.

Ongoing Sustainability and Resilience Projects

Boston's plan for coastal resilience, Climate Ready Boston, is a highly detailed initiative incorporating both short- and long-term strategies. Each potential intervention involves careful studies of flood risk, proposals for engaging various stakeholders, and design and engineering assessments. Potential solutions to address rising sea levels along the coast include options for construction of and adaptations to infrastructure, as well as human-made environmental features. Some of the specific options include:

- Additional barriers and levees
- New elevated walkways
- Modifications to train lines and highways
- Human-constructed wetlands
- Expanded beaches

A partnership with the U.S. Army Corps of Engineers will further assist with evaluation and lay the groundwork for federal funds.

Boston, with a goal of being carbon neutral by 2050, also introduced a sweeping emissions reduction strategy in 2019 to help achieve this goal. In addition to instituting net zero carbon requirements for new buildings, city owned buildings are becoming more energy efficient by installing equipment for solar power. Related programs promote zero- and low-emission vehicles and create more options for alternative transportation like walking, biking, and commuting via trains and buses.

Finally, a zero-waste initiative introduced programs that reduce construction and demolition waste, expand recycling and composting options, and reduce or eliminate single-use and hard-to-recycle items. Since these efforts require a heightened awareness of the need to reduce waste, this initiative also includes plans for public education and community partnerships as a means of promoting cultural change.

Of course, these initiatives require significant federal, state, and local funding. The private sector, especially real estate developers, is also pitching in through a fund that will help finance the projects, many of which will protect real estate from flooding and other disasters. These investments will ensure land remains usable and retains value.

There is a common mantra in this area of public policy and activism: "all climate change is local." Much of the work being done in Boston aligned with this idea, and takes the idea of global threats requiring local solutions very seriously.

> "There's no way to really disentangle climate threats from land use change, from improper development, from historical factors affecting communities."
>
> –BRIAN HELMUTH PROFESSOR OF ENVIRONMENTAL SCIENCE AND PUBLIC POLICY, NORTHEASTERN UNIVERSITY SCHOOL OF PUBLIC POLICY AND URBAN AFFAIRS

Climate Change and the Housing Crisis

It is well known that the impacts of climate change disproportionately affect certain populations – especially low-income people and people of color. The Boston area is already becoming unaffordable for many due to a lower rate of new home construction and high average home prices. As of November 2024, the median listing home price in greater Boston was nearly $1 million.

Storms, flooding, and fires that are caused by climate change may destroy or damage housing, displacing individuals and families and limiting access to healthcare, groceries, and other resources. In addition, those living in highly concentrated urban areas lacking trees and open green spaces are likely to experience the heat island effect. Heat islands – urbanized areas experiencing higher than average temperatures – occur when an area is lacking open spaces to disperse heat. Buildings, roads, and infrastructure, large and small, absorb and reemit heat much more than areas featuring water and vegetation. As average temperatures rise, the combination of heat and few places to cool off can be deadly for older individuals, children, and people with chronic health conditions.

Professor Helmuth recalls a program (conducted in partnership with Northeastern) called Wicked Hot Boston in which volunteers took temperature sensors around the city to measure the differences, eventually finding disparities of up to 15 degrees. "It really highlighted that the hottest places were the ones with the lowest vegetation and the highest amount of pavement cover – and those happen to be places that were traditionally redlined," he says. Students used their policy training to go beyond research and data collection: they arranged events that brought community members from these different areas together, discussed potential solutions, and played role-playing games to encourage a shared sense of empathy and understanding.

Learn about social justice and equity initiatives in Boston.

Learn at the Forefront of Climate Change Action

Experiential opportunities are a defining feature of Northeastern's Master of Public Policy and Master of Public Administration programs. Students have the opportunity to participate in a co-op program, gaining meaningful real-world experience with high-profile organizations. In the sustainability and environmental sector, this includes organizations such as the Global Council for Science and the Environment (GCSE), the Center for Strategic & International Studies, Control Risks, and Scenic America. The U.S. Senate and House of Representatives may also have opportunities for students to work on climate change projects.

Experiential learning does more than look good on a resume; these experiences enhance the holistic perspective and resilience strategies that students will need throughout their policy and administration career journey in sustainability and climate change.

> "None of this is solvable by one person. It's gotta be by a group of people, which invariably has to include members of the community you're trying to work with."
>
> –BRIAN HELMUTH PROFESSOR OF ENVIRONMENTAL SCIENCE AND PUBLIC POLICY, NORTHEASTERN UNIVERSITY SCHOOL OF PUBLIC POLICY AND URBAN AFFAIRS

Earning an MPP or MPA at Northeastern offers a unique opportunity to engage in projects that are at the cutting edge of efforts to combat climate change and improve urban sustainability. "Boston is way ahead of a lot of communities on the planet and, especially in the United States, is really a leader," notes Professor Helmuth. Where better to launch your career in public policy and administration?

About the Master of Public Administration and Master of Public Policy Programs at Northeastern University

Northeastern University, a top-50, R1 research institution, offers two interdisciplinary, community-focused degree options for professionals ready to make their mark in the world of public service. Northeastern's School of Public Policy and Urban Affairs offers these two degree programs. Our Master of Public Administration option is a career-oriented program designed to shape leaders who are ethical, efficient, and effective. Meanwhile, our Master of Public Policy (MPP) program equips future policymakers with the comprehensive research and analysis skills they'll need to best support the public good. Students in each program benefit from the world-class education, research opportunities, and expert faculty provided by Northeastern's College of Social Sciences and Humanities. Students may take classes online, in person, or in a blended/hybrid format. MPP classes are offered on our campuses in Boston, Arlington, and Beginning in Fall 2025 Oakland. MPA classes are available on our Boston, Arlington, and Oakland campuses.

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