

MIT ENVIRONMENTAL SOLUTIONS INITIATIVE

The MIT Environmental Solutions Initiative (ESI) (<https://environmentalsolutions.mit.edu>) advances science, engineering, policy and social science, design, the humanities, and the arts toward a people-centric and planet-positive future.

Founded in 2014, ESI's overarching goal is to accelerate solutions to the world's environmental challenges. To do so, ESI channels MIT's research and education capacity to advance science, invent technologies, and innovate policies for mitigating carbon emissions and adapting to a changing climate in the face of global development needs and growing pressures on natural resources. ESI also leverages MIT's proven convening power to engage with key stakeholders and decision makers in supporting the deployment of solutions worldwide.

Education

ESI's approach is fundamentally multidisciplinary, and studying the environment and sustainability is a hands-on, interdisciplinary, and cutting-edge experience at MIT. On campus, academic offerings are designed for students to learn alongside world experts, and coursework relates to real problems facing the planet. Beginning in a student's first year and throughout a graduate's career, the impact of an MIT education in the environment and sustainability (<https://environmentalsolutions.mit.edu/education>) can be felt worldwide.

Education priorities include an interdisciplinary undergraduate minor in Environment and Sustainability (<https://catalog.mit.edu/interdisciplinary/undergraduate-programs/minors/environment-sustainability>), as well as the infusion (<https://environmentalsolutions.mit.edu/sustainability-foundational-learning>) of environmental content into General Institute Requirements (<https://catalog.mit.edu/mit/undergraduate-education/general-institute-requirements>) and other foundational and mainstream subjects.

Research

ESI's priorities for research (<https://environmentalsolutions.mit.edu/research>) fall into three domain areas: climate science and solutions; solutions for a circular economy; and sustainable urban solutions. Each domain draws upon engineering; natural and social sciences; design; and arts and humanities to understand and address critical challenges.

ESI is pursuing collaboration with a diverse array of partners in industry, government, and civil society, with the aim of building robust research programs in all three priority domains. ESI's current programs include Plastics and the Environment; Natural Climate Solutions; Mining, Environment and Society; Cities and Climate Change, and Environmental Justice and Just Transitions.

Engagement

ESI's work extends far beyond the MIT campus. We engage in partnerships on the ground to stimulate local leadership and work on climate and environmental change, and to engage a broad public audience on climate science, impacts, and solutions. Ongoing projects include Here & Real (<https://environmentalsolutions.mit.edu/here-and-real>), the MIT Climate Portal (<https://climate.mit.edu>), the TILclimate Podcast (<https://environmentalsolutions.mit.edu/tilclimate-podcast>), the ESI Rapid Response Group (<https://environmentalsolutions.mit.edu/rapid-response-group>), and the Environmental Solutions Journalism Fellowship (<https://environmentalsolutions.mit.edu/esi-journalism-fellowships>). ESI also regularly holds events (<https://environmentalsolutions.mit.edu/events>) to expand and energize MIT's environment and sustainability community, and to inspire and connect the community with thought leaders from civil society, business, industry, and innovative research and education.

ESI is directed by Professor John E. Fernández. For more information, email ESI (esi@mit.edu).