

Plastics Threaten Global Climate at a Massive Scale During Each Point of Lifecycle, Report Finds

[Madison Dapevich](#) May. 17, 2019 11:25AM EST [Popular](#)



A man protests against the use of disposable plastics outside the Houses of Parliament on March 28 in London. John Keeble / Getty Images

Plastic pollution across the globe is suffocating our planet and driving Earth toward catastrophic climatic conditions if not curbed significantly and immediately, according to a new [report](#) by the Center for International Environmental Law ([CEIL](#)).

As first reported by [The Guardian](#), a review of greenhouse gas emissions (GHG) at each stage of the plastic lifestyle finds that increasing plastic and petrochemical industries expected to accelerate in the next ten years are threatening the ability to keep global temperature rise below 1.5°C degrees if the world does not immediately act. This year alone, the production and incineration of plastic will add more than 850 million metric tons of greenhouse gas to the atmosphere, equating to the pollution from 189 new 500-megawatt coal-fired power plants.

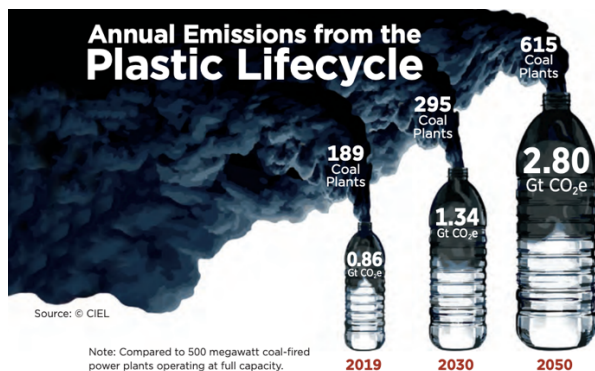
"Humanity has less than twelve years to cut global greenhouse emissions in half and just three decades to eliminate them almost entirely," said Carol Muffet with [CEIL](#). "The massive and rapidly growing emissions from plastic production and disposal undermine that goal and jeopardize global efforts to keep climate change below 1.5 degrees of warming."

Comparing GHG estimates against global carbon budgets and emissions commitments, the report finds that if plastic production goes as planned, emissions will reach 1.34 gigatons per year by 2030. By 2050, the production and disposal of plastic may generate 56 gigatons of emissions, accounting for as much as 14 percent of the planet's entire remaining carbon budget. The authors are quick to note their assumptions are conservative given the availability of data and the projection of plastic's climate impacts are

under a business-as-usual scenario. As such, realistic estimates suggest will actually be much higher.

"It has long been clear that plastic threatens the global environment and puts human health at risk. This report demonstrates that plastic, like the rest of the fossil economy, is putting the climate at risk as well. Because the drivers of the climate crisis and the plastic crisis are closely linked, so to are their solutions: humanity must end its reliance on fossil fuels and on fossil plastics that the planet can no longer afford," said Muffet.

GHG emissions are emitted during each stage of the plastic lifecycle. Nearly every piece of plastic begins as a fossil fuel where extraction and transport can contribute significantly to GHG emissions directly through methane leaks and flaring, as well as fuel combustion and energy consumption. In the U.S. alone in 2015, emissions from fossil fuel extraction and transport attributed to plastic production was as high as 10.5 million metric tons of CO₂ per year. The next phase, refining and manufacturing, is among the most GHG-intensive industries and are the fastest growing in terms of emissions.



Waste management processes contribute significantly to emissions levels because plastic is either landfilled, recycled or incinerated — each of which produces its own range of GHG emissions. Specifically, incineration is the primary driver of emissions from plastic waste management is expected to grow dramatically in the coming decades as society continues to use more and more plastic.

Lastly, plastics in the environment play a huge role on the climate as it degrades, continually releasing methane and other GHGs that increase as plastics break down further. Additionally, microplastics may interfere with the ocean's ability to absorb and sequester carbon while microplastics contaminating phytoplankton and zooplankton may interrupt their ability to properly fix carbon through natural processes.

"Our world is drowning in plastic, and the plastics industry has been overlooked as a major source of greenhouse gases. But there are ways to solve this problem. We need to end the production of single-use, disposable plastic containers and encourage a transition to a zero-waste future," [said](#) Courtney Bernhardt with the Environmental Integrity Project.

Report authors note that immediate action may curb these dramatic effects through the reduction of single-use, disposable plastic and the enforcement of ambitious targets to reduce GHG from all sectors including plastic production. The report also calls for the halting of new oil, gas, and petrochemical infrastructure and to pressure producers to act responsibly.

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