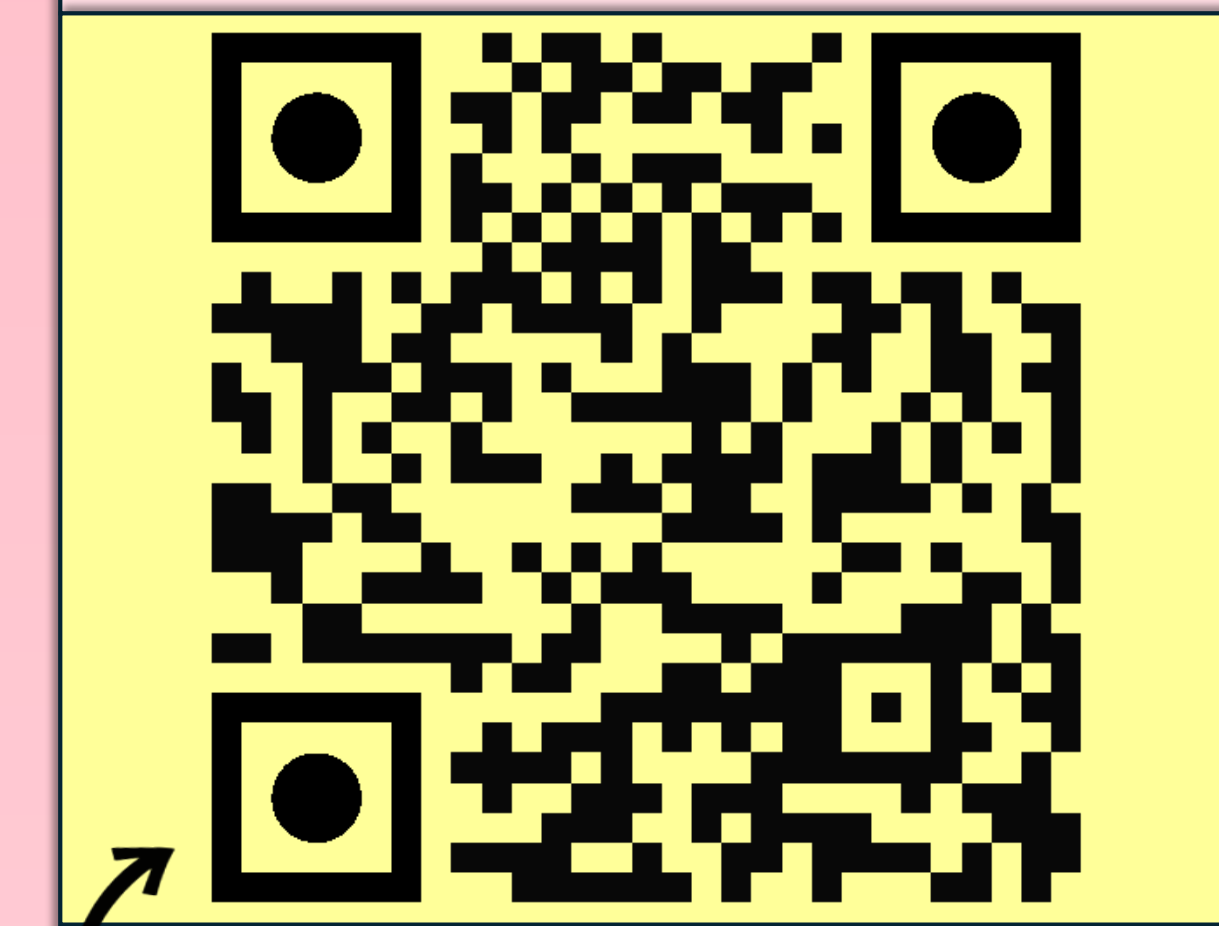


Introduction

Food waste is an **underrecognized contributor to climate change** and an important environmental health issue. When discarded food decomposes anaerobically in landfills, it generates methane, a potent short lived climate pollutant that accelerates climate related temperature and weather shifts. These environmental impacts disproportionately harm marginalized communities.



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Discussion

Organic waste produces methane and carbon dioxide during landfill decomposition, making everyday disposal a strong driver of climate change. **These emissions intensify heat, flooding, and air quality hazards** that disproportionately affect racial and ethnic minority communities already facing structural inequities. While this work is limited to secondary data, the literature highlights the need to reduce methane producing waste streams and promote household level waste reduction as a practical public health strategy.

- **Organic waste becomes a substrate for microbial activity, producing methane and CO₂ during decomposition.**
- **Methane's warming potential is over 25× stronger than CO₂, accelerating climate driven hazards.**
- **Overconsumption and rapid disposal amplify both direct landfill emissions and indirect emissions from production and transport.**
- **Many minority communities face disproportionate exposure to extreme heat, coastal flooding, and polluted air.**
- **Structural inequities (housing, resources, healthcare access) worsen climate related health impacts.**

Methods

This is a literature review of methane generation from organic waste, indicators of global climate change, and health consequences of climate driven environmental exposures. It evaluates behavioral and systemic factors influencing food waste generation using environmental health, climate equity, and systemic injustice frameworks. **Evidence was combined to assess how individual and household practices may reduce the volume of organic material entering landfills and lessen upstream demand on the food system.**

Results

Reducing household food waste can meaningfully lower methane emissions by limiting organic landfill inputs. Practices such as preparing appropriate portion sizes, improving food storage, and using leftovers demonstrate measurable potential to reduce waste and mitigate emissions. These behaviors offer accessible opportunities for households to **lessen multiple health risks.**

FOOD WASTE HARMS THE PLANET



Conclusion

Food waste reduction is both a climate mitigation strategy and a public health equity intervention. This aligns with existing literature linking waste reduction to lower methane emissions while adding emphasis on its relevance to environmental justice. **Empowering households to adopt waste reducing behaviors can reduce environmental burdens** and support broader environmental health and climate resilience goals.

Quick Stats

26.5 million tons of food waste is produced every year.

81% of people could save \$1,500/year by wasting less.

40-50% of U.S. food waste comes from households.

55% of people believe throwing away food does no harm.