



Consumer Demand and Climate Change

Rethinking Consumer Demand For a Zero Waste World

Consumer demand drives greenhouse gas (GHG) emissions to our atmosphere.

The accumulation of greenhouse gas emissions in our atmosphere causes global temperatures to rise.

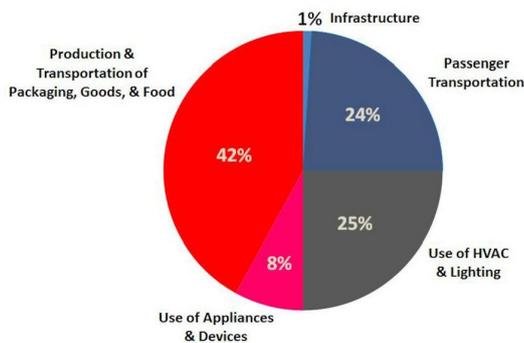
Even small increases in global temperatures cause sea levels to rise, crops to fail and excessive rain or drought.

By 2030, these climate changes will cause Manhattan and other parts of NYC to flood every five years rather than every 500 years.



Manhattan Flooded by Rising Sea Levels

System-Based View of Greenhouse Gas Emissions¹



"For every pound a consumer throws away, there's 70 pounds of upstream waste. We've got to reduce consumption and produce our products better."² Upstream is defined as the mining, logging, refining, manufacturing and transportation that occurs between these steps before consumption.

How consumer demand adds greenhouse gas emissions to our atmosphere:

The pie chart on the left is important because it shows that the production, transportation and use of consumer goods, packaging and food are responsible for approximately 50% of all global greenhouse gas emissions to our atmosphere.

This 50% of the carbon sources to the atmosphere can be reduced by programs, legislation and incentives that reduce generation of goods, packaging and food and increase reuse, recycling and composting rates. These are known collectively as zero waste systems.

¹Opportunities to Reduce Greenhouse Gas Emissions through Materials & Land Management Practices, U.S. Environmental Protection Agency Office of Solid Waste & Emergency Response, September, 2009 as Re-expressed by Maggie Clarke, PhD, 2019

²The Next Efficiency Revolution: Creating a Sustainable Materials Economy by John Young and Aron Sachs, Worldwatch Institute(1994). p. 13.

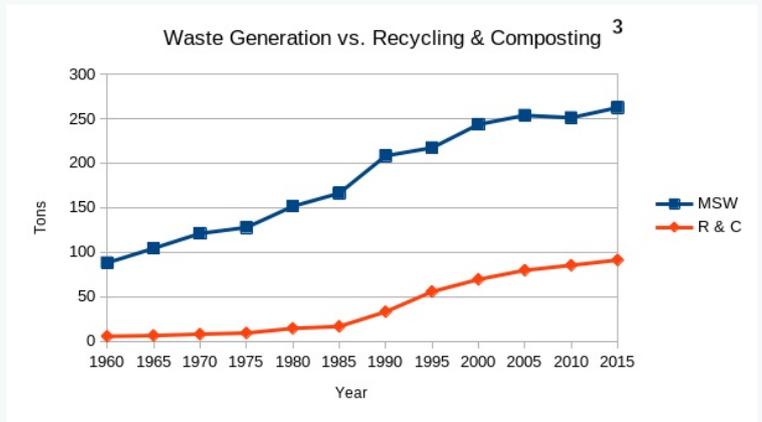
Municipal solid waste generation has tripled in the US since 1960.

Recycling and composting, which started to increase in 1990, has started to level off.

The line graph on the right shows clearly how recycling and composting efforts in the United States are not keeping up with municipal solid waste generation.

Of the 250 million tons of municipal solid waste generated in the year 2015 only 40%, 100 million tons, was recycled or composted. The remaining 60% was landfilled or incinerated.

We need to decrease the consumer demand for goods, packaging and food, in addition to increasing our reuse, repair, recycling and composting efforts.



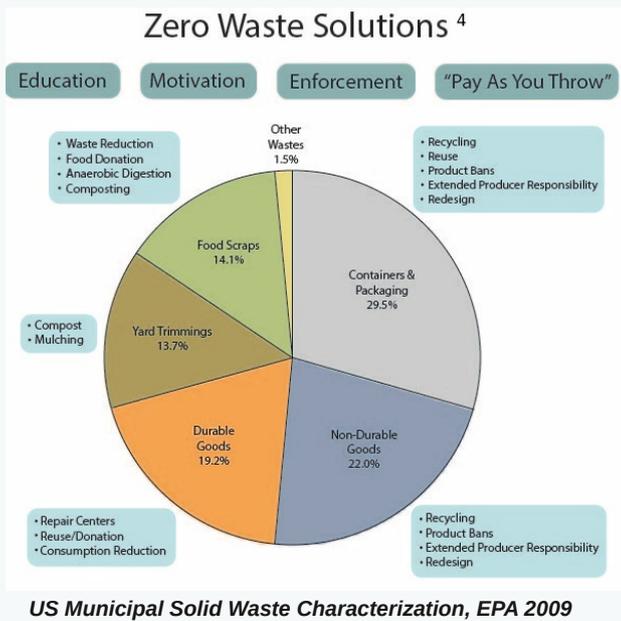
Recycling and composting efforts are not closing the gap with solid waste generation

The best path to Zero Waste requires reducing consumer demand combined with increasing reuse, repair, recycling, and composting

The graph to the left illustrates some of the most important programs that will reduce consumption and increase recycling and composting.

Consider, for example, the 29.5% of the total waste generated by the consumption of containers and packaging. Traditional recycling and reuse combined with product bans, extended producer responsibility and packaging redesign can reduce carbon emissions. Thus, policy measures are combined to reduce pre-consumer and post-consumer waste and curb emissions.

Any Green New Deal or climate change mitigation legislation must include funding for Zero Waste programs that reduce the totality of carbon impacts from consumer demand for products, food and the associated packaging, because half of carbon emissions can be reduced by Zero Waste solutions.



³Advancing Sustainable Materials Management 2016 & 2017 Tables and Figures. U.S. Environmental Protection Agency Office of Solid Waste Nov. 2019

⁴ Municipal Solid Waste in the United States, 2009 Facts and Figures. U.S Environmental Protection Agency Office of Solid Waste. Dec. 2010 Re-expressed by Maggie Clarke, PhD and Denville Cooper, 2019