Upstream

Reuse is a climate and plastics solution

Highlights

- Reusable food service ware beats single-use alternatives through every environmental measure (climate, water, land use, waste, pollution, etc.)
- Over their life-cycle, reusables have lower greenhouse gas emissions compared to disposable alternatives.
- Reuse helps reduce overall pollution, chemical exposure, and litter.
- Reuse can help 'turn off the tap' for single-use plastics
- Reuse services create good local jobs

On a planet of 7 billion people and growing, products that are designed to be used for just a few minutes before they become waste is not sustainable. We are never going to be able to recycle or compost our way to a sustainable future. The throw-away economy treats both people and the planet as disposable.

Plastic packaging is the leading cause for increased demand for single-use plastics, representing 40% of the total production of plastic products.[1] If plastic production and use continue to grow, as planned, emissions could reach 1.34 gigatons per year by 2030 – equivalent to emissions released by more than 295 new (500-megawatt) coal-fired plants.[2]

The expansion of the plastics industry is fueling a petrochemical infrastructure buildout. At least 42 facilities opened since 2019, or are under construction or in the permitting process. They threaten the release of an additional 55 million tons of greenhouse gasses - the equivalent of 27 coal-fueled power plants.[3] The impacts are the highest in Black & Brown, low-income, and Indegenous communities.

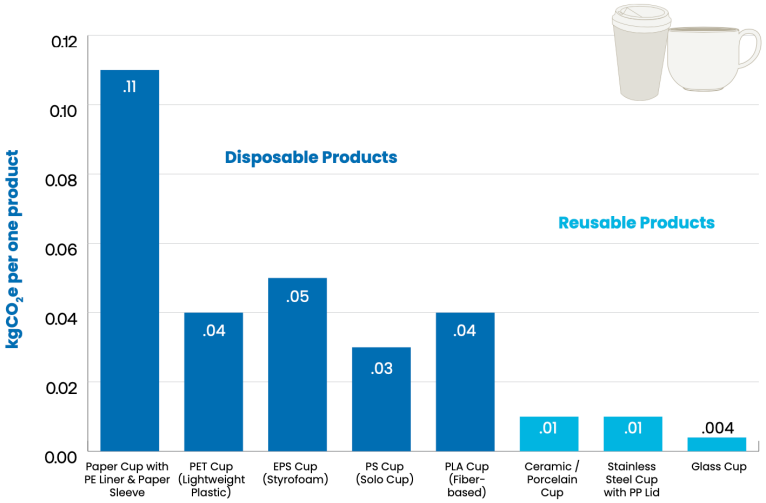
As of 2015, there was 150 million metric tons of plastic in our oceans,[4] and the problem is growing. Plastic food and beverage packaging is a major contributor, making up nearly 70% of all litter found on streets and in waterways.[5] But, banning single-use plastics leads to regrettable substitutes – other disposables that often have different, but substantial environmental impacts.[6] The problem isn't just plastic, it's single-use itself.

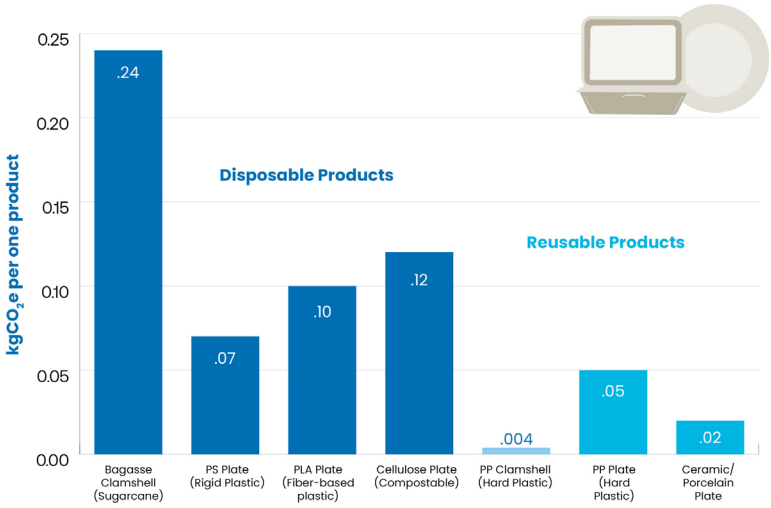
Single-use disposable products produce large amounts of greenhouse gasses over their life-cycle, from extraction to end-of-life disposable. For example, the CO_2 emissions of 360 compostable fiber clamshells used once are 85.5 $kgCO_2$, while one polypropylene reusable clamshell used 360 times causes 1.27 $kgCO_2$ emissions.[7] The carbon impacts of the compostable clamshells are therefore 68 times greater than the reusable alternative.[8]

How does reusable foodware solve the climate and plastics crisis?

Reusable food service ware beats single-use alternatives through every environmental measure (climate, water, land use, waste, pollution, etc.). Reusables always hit a break-even point where they outperform the disposables, and the benefits to the environment accrue with each additional use past that point.

Reuse protects the climate. Over their life-cycle, reusable food and beverage packaging has lower greenhouse gas emissions compared to disposable alternatives. For example, the CO_2e impacts of disposable paper, plastic, and bioplastic cups are 3 to 10 times greater than reusable ceramic, stainless steel, and glass.[9]





Non-toxic reuse helps reduce overall pollution, chemical exposure, and litter and can greatly improve the overall living conditions of a community, while reducing overall litter and waste management costs for local businesses and government.

Reuse can help "turn off the tap" for single-use plastics, as it reduces the demand for single-use products. It can reduce the need to expand production operations that disproportionately affect Black, Brown, and Indigenous communities who are often living on the fenceline of industry.

Reuse services create good local jobs. Replacing just 20% of single-use packaging with reusable alternatives offers an opportunity worth at least $10 billion.[10] The logistics of reusables collection, washing, and redistribution provides safe local jobs, whereas disposable-related jobs are in the other locales where extraction, production, and disposable takes place.

Endnotes

1 Plastic & Climate: The Hidden Costs of a Plastic Planet. Center for International Environmental Law (CIEL). May 2019. Accessed April 12, 2022.
2 id.
3 Ocean Conservancy and McKinsey Center for Business and Environment, Stemming the Tide: Land-based strategies for a plastic-free ocean (2015). Cited in Ellen MacArthur Foundation, The New Plastics Economy (2016). Accessed March 4, 2022.
4 id.
5 ReThink Disposable Resources. The 2011 "Taking Out the Trash" survey. Accessed March 31, 2022.
6 Reuse Wins Report, by Upstream. 2021. Accessed on March 4, 2022.
7 id.
8 id.
9 id.
10 id.