Plastic is Cheap, Efficient, Polluting — And Here to Stay

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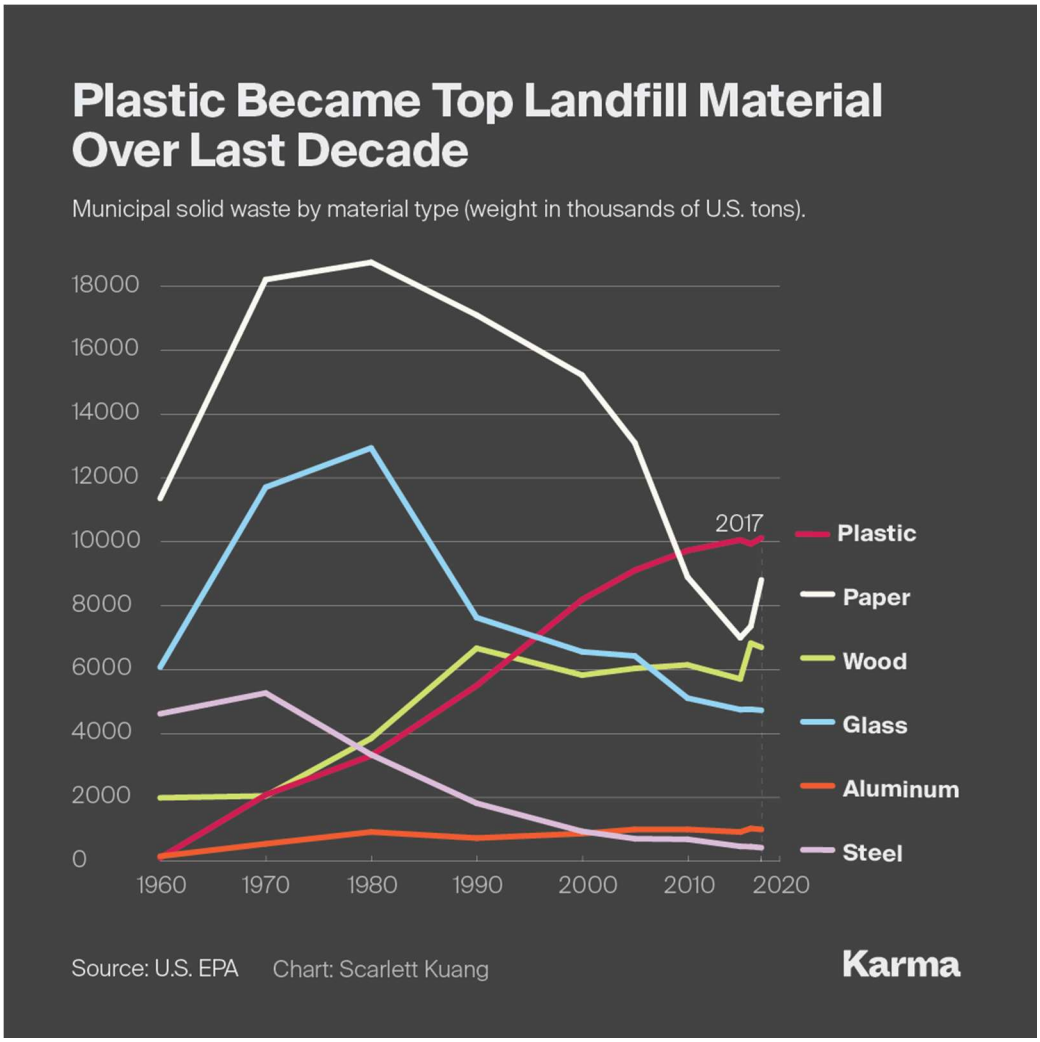
https://karmaimpact.com/why-plastic-is-here-to-stay/

TAKEAWAY: Plastic is an unprecedented environmental problem and a major contributor to greenhouse gas emissions. Yet not only is plastic here to stay, it may even become more prevalent in the future.

Inside a Nestlé facility in Lausanne, Switzerland, a revolution is underway. The global company that sells Pure Life water, Maggi noodles, Kit Kat bars, Nespresso pods and almost 2,000 other products is looking for ways to end its dependency on plastic packaging.

Nestlé's Institute of Packaging Sciences was started last year to help the company reach its goal of making all of its packaging reusable or recyclable by 2025. It's also seeking to cut by one-third the use of virgin plastics over that time by minimizing packaging and using recyclable material. The company says it's reduced its packing by 120,000 metric tons in the last five years — the equivalent of 10 Eiffel Towers.

Commendable, yes — but don't get excited yet about a future world without plastic. Despite the advances in sustainable packaging, consumer brands — whose plastics float in oceans, blow down streets and fill trash dumps — aren't abandoning the petroleum product that has shaped our society for decades.



“Plastic packaging plays an important role in safely delivering high-quality food and drinks to consumers and reducing food loss and waste, so we need to carefully consider alternatives before making changes,” a Nestlé spokesperson told Karma. “Our vision is that none of our packaging, including plastics, ends up in landfill nor in oceans, lakes and rivers.”

It’s not just Nestlé. Companies are under pressure from activists calling for cutbacks in the use of the material because of the colossal environmental problem created by plastic and ways we use and dispose of it. An estimated 18 billion pounds of plastic gets dumped in oceans each year, according to the University of Georgia. The war on plastic has led to 13 U.S. states including California and New York to ban single-use plastic bags, with Washington State voting to join the fight last week.

“We essentially have garbage soup in all our oceans. The plastic doesn’t decompose, and it breaks into smaller and smaller pieces: It’s virtually impossible to clean up,” said Darby Hoover, a senior resource specialist with the environmental advocacy group Natural Resources Defense Council. “We need to get rid of fossil fuels to make plastic.”

Even so, the number of plastic production plants in the U.S. is rising: 13 new plants have opened since 2017 to produce polyethylene, one of the most common plastics, and 15 more are expected by decade's end, according to research firm S&P Global Platts. By 2050, about one-fifth of oil production is expected to go towards producing and manufacturing plastic, according to the World Economic Forum.

The reality is that modern manufacturing is fundamentally dependent on plastic — a material lighter and cheaper than many alternatives — despite the environmental damage.

Still, hundreds of companies have committed to finding alternatives to plastic where possible. The Ellen MacArthur Foundation's New Plastics Economy initiative has over 250 signatories and $200 million in investment, with companies such as Coca Cola, Nestlé, Unilever and Mars committing to improving their practices. Ford Motor Co., which estimates that the average car today uses 400 pounds of plastic, is exploring ways to produce plastic out of food byproducts, such as agave leftover from the production of Jose Cuervo tequila and coffee waste supplied by McDonald's.

And there are efforts to find a middle ground: Startups are exploring plant-based bioplastics made of materials such as wood chips, potato starch and seaweed. Venture capital investment in sustainable plastics has already amassed $42.3 million this year, a four-fold increase over the same period last year, according to Pitchbook data.

Progress is slow and hard to measure. Competing with the cheap price of plastic made by the subsidized fossil fuel industry is challenging. Further, some bioplastics take so long to break down in the environment that they are still a pollutant and can harm animals.

Besides switching to plant-based materials, companies are exploring improving the recyclability of plastic. Currently, the vast majority of it is tossed because sorting and processing are expensive and inefficient. Less than 20% percent of all plastic produced has been recycled worldwide, according to the University of California, and, in the U.S., that figure is less than 9% percent.

An estimated $4.6 billion of investment has gone into recycling improvement projects in the U.S. in the two years since China placed restrictions on the level of contaminated scrap materials it would accept, according to the American Chemistry Council, which represents the plastics industry. It estimates that these projects have the potential to divert 6.5 billion pounds of waste from landfills.

"PLASTIC HAS A PLACE IN A SUSTAINABLE FUTURE."

That includes companies such as Americas Styrenics, which is improving the recyclability of polystyrene; Agilyx, which is taking a variety of plastic polymers and breaking them back down into molecules so they can be used in manufacturing again;

and Veolia, which is using robotics and artificial intelligence to improve the sorting of plastic.

“The better the sorting is, the higher the probability of recycling is,” Dorothée Lenes, a program director of technical and performance Veolia’s Waste Management activities in France, told Karma.

Still, the market for virgin plastic made of fossil fuels is vast and responsible for making a host of consumer products more accessible to the middle class, from home furniture to prosthetics. Boosting its cause is the fact that its carbon footprint in ways is smaller than some substitutes like steel or certain plant-based bioplastics.

That is a fact that even companies working within the sustainability space acknowledge.

“Plastic is often vilified, but it isn’t the demon it’s made out to be,” said Eric Rosen, spokesman for TerraCycle, a New Jersey-based company whose Loop e-commerce platform sells common products such as Häägen-Dazs ice cream and Pantene shampoo in reusable containers often made of steel, but sometimes plastic. “Plastic has a place in a sustainable future.”

The plastics industry is focusing on improving sustainability. The chemical council is working to make all plastic recyclable or reusable by 2040.

“Plastic is going to remain an essential material for society, and we see a growing role for it going forward,” Keith Christman, the group’s managing director of plastics markets, told Karma. “Our transportation modes are going to be made of plastic to make them lighter weight, there will be more use of plastic in building and construction to improve energy efficiency.”

Veolia’s Lenes says that governments should boost recycling through financial incentives that make recycled plastic equal in cost to virgin material, which right now can be less expensive to produce.

“If we are talking about fossil fuels to make plastic, that kind of use should be reserved for something that we really don’t have a viable alternative for yet,” said Hoover of the Natural Resources Defense Council. “Where there are alternatives, we should be switching.”

(Photo by Sean Gallup/Getty Images)