



A portion of plastic bottle found on Mothecombe Beach at the mouth of the Erme Estuary in South Devon, England, on May 30, 2019. Photo: Dan Kitwood/Getty Images

Waste Only

How the Plastics Industry Is Fighting to Keep Polluting the World



[Sharon Lerner](#) July 20 2019, 4:30 a.m.

The students at Westmeade Elementary School worked hard on their dragon. And it paid off. The plastic bag receptacle that the kids painted green and outfitted with triangular white teeth and a “feed me” sign won the students from the Nashville suburb first place in a recycling box decorating contest. The idea, as Westmeade’s proud principal told a [local TV news](#) show, was to help the environment. But the real story behind the dragon — as with much of the escalating war over plastic waste — is more complicated.

The contest was sponsored by [A Bag’s Life](#), a recycling promotion and education effort of the American Progressive Bag Alliance, a lobbying group that fights restrictions on plastic. That

organization is part of the Plastics Industry Association, a trade group that includes Shell Polymers, LyondellBasell, Exxon Mobil, Chevron Phillips, DowDuPont, and Novolex — all of which profit hugely from the continued production of plastics. And even as A Bag’s Life was encouraging kids to spread the uplifting message of cleaning up plastic waste, its parent organization, the American Progressive Bag Alliance, was backing a state [bill](#) that would strip Tennesseans of their ability to address the plastics crisis. The legislation would make it illegal for local governments to ban or restrict bags and other single-use plastic products — one of the few things [shown](#) to actually reduce plastic waste.

<https://theintercept.com/2019/07/20/plastics-industry-plastic-recycling/>

A week after Westmeade’s dragon won the contest, the APBA got its own reward: The plastic preemption bill passed the Tennessee state legislature. Weeks later, the governor signed it into law, [throwing a wrench](#) into an effort underway in Memphis to charge a fee for plastic bags. Meanwhile, A Bag’s Life gave the Westmeade kids who worked on the bag monster a \$100 gift card to use “as they please.” And with that, a minuscule fraction of its vast wealth, the plastics industry applied a green veneer to its increasingly bitter and desperate fight to keep profiting from a product that is polluting the world.

A Bag’s Life is just one small part of a massive, industry-led effort now underway to suppress meaningful efforts to reduce plastic waste while keeping the idea of recycling alive. The reality of plastics recycling? It’s pretty much already dead. In 2015, the U.S. recycled about 9 percent of its plastic waste, and since then the number has dropped even lower. The vast majority of the 8.3 billion metric tons of plastic ever produced — [79 percent](#) — has ended up in landfills or scattered all around the world. And as for those plastic shopping bags the kids were hoping to contain: Less than 1 percent of the tens of [billions](#) of plastic bags used in the U.S. each year are recycled.

This is not to say that we shouldn’t try to properly dispose of the array of toys, single-use clamshells, bottles, bags, takeout containers, iced coffee cups, straws, sachets, yogurt tubs, pouches, candy bar wrappers, utensils, chip bags, toiletry tubes, electronics, and lids for everything that passes through our lives daily. We have to. But we are well past the point where the heartfelt efforts of schoolchildren or anyone else on the consumer end can solve the plastics problem. It no longer matters how many hoots we give. There is already way too much plastic that won’t decompose and ultimately has nowhere to go, whether it’s mashed into a dragon container or not.



A Chinese worker walks past piles of plastic bottles at a plastic bottle recycling station in Ji’nan city, in east China’s Shandong province, on May 4, 2017. Photo: Imaginechina via AP Images

China’s National Sword

China’s decision in 2017 to stop receiving the vast majority of plastic waste from other countries blew the flimsy lid off our dysfunctional recycling system. That year, when the Chinese government announced the National Sword policy, as it’s called, the U.S. sent 931 million kilograms of plastic waste to China and Hong Kong. The U.S. has been offloading vast bundles of scrap this way since at least 1994, when the Environmental Protection Agency began tracking plastics exports. The practice has served to both mask the mounting crisis and absolve U.S. consumers of guilt. But in fact, much of the “recycled” plastic scrap that the U.S. sent to China [appears](#) to have been burned or buried instead of being refashioned into new products.

Although China’s turnabout made the failure of the plastics recycling system suddenly and undeniably obvious, in truth the plastics problem has been with us as long as plastic has. Over the decades, as production has grown exponentially, we’ve never managed to repurpose even one-tenth of our plastic waste. Since the EPA began tracking plastics recycling in 1994, when the U.S. recycled less than 5 percent, the rate went

up only about 5 percent, peaking at 9.5 percent in 2014. Although there is no data before 1994, the rate was almost certainly even lower then. Some of that failure can be blamed on careless consumers, but much of the waste that is dutifully put into recycling bins and bags also gets landfilled and burned because there's no market for it.

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The plastics problem has been growing exponentially for decades. In 1967, when Dustin Hoffman's character in “The Graduate” was being advised to go into plastics, less than 25 million tons were produced each year. Even back then, the companies that made the plastic [were already aware](#) of the growing waste problem. Yet by 1980, production had doubled. Ten years later, it doubled again to 100 million tons, surpassing the amount of steel produced globally. Today, the plastics industry, estimated to be worth more than \$4 trillion, generates more than 300 million tons of plastic a year according to the most recent records — nearly half of which is for single-use items, meaning that it will almost instantly become trash.

With the institution of China's new policy in January 2018, the extent of the plastic waste crisis became dramatically more visible. Around the world, bales of used plastic that just a year earlier would have been destined for China began [piling up](#). In the U.S., some cities have [stopped their plastics recycling](#) programs altogether.

Without good alternatives, the U.S. is now [burning](#) six times the amount of plastic it's recycling — even though the incineration process releases cancer-causing pollutants into the air and creates toxic ash, which also needs to be disposed of somewhere. And poor people are stuck with the worst consequences of the plastics crisis. [Eight out of 10](#) incinerators in the U.S. are

in communities that are either poorer or have fewer white people than the rest of the country, and [residents](#) living near them are exposed to the toxic air pollution their combustion produces.

Globally, too, the problem is being dumped on the less fortunate and less powerful. Because the U.S. can no longer ship its plastic waste to China, much of that waste is going to Turkey, Senegal, and other countries that are ill-equipped to deal with it. In May, the most recent month for which data is available, the U.S. sent 64.9 million kilograms of plastic scrap to 58 countries. Thailand, India, and Indonesia — where more than 80 percent of waste is mismanaged, according to [data](#) published in Science — are among the [countries](#) that now find themselves [besieged](#) with U.S. plastic that's being illegally [dumped and burned](#).



A reservoir contaminated with plastic waste in Lhokseumawe, Indonesia, on March 22, 2019.

Photo: Zikri Maulana/SOPA Images/LightRocket via Getty Images

All the Plastics in the Seas

The terrifying news about plastic seems to be as inescapable as the plastic itself, tiny bits of which are now almost [everywhere](#). One study found these “microplastics” in the [Pyrenees mountain air](#) 100 miles from the nearest city. [Another](#) found that microplastics are being turned into sewage sludge and spread on fields that grow food. And, as we know from the plastic-filled whales that regularly [wash up dead](#), the oceans

are awash in plastic waste and now contain some 150 million tons of the stuff — a mass expected soon to surpass the weight of all the fish in the seas.

We humans also have plastic lodged in our [bodies](#). The substance often sold to us as protection from contamination is in both [food](#) and water. Bottled water, sales of which are [increasing](#) in part because people are seeking alternatives to contaminated local water supplies, now [contains](#) plastic as well. A [2018 study](#) found that 93 percent of bottled water samples contained microplastics. While all the big brands tested positive for microplastics, the worst was Nestlé Pure Life, which [claims](#) that its water “goes through a 12-step quality process, so you can trust every drop.”

It’s worth noting that in both [2017](#) and [2018](#), Nestlé ranked in the top three among brands whose plastic trash was most often collected in global cleanup efforts conducted by the environmental group Break Free From Plastic.

The confluence of terrible news has taken public outrage over plastic to a new level. Once regarded mostly as an eyesore or a nuisance, plastic waste is now widely understood to be a cause of [species extinction](#), [ecological devastation](#), and [human health problems](#). And because more than 99 percent of plastic is derived from oil, natural gas, and coal — and because its destruction also uses fossil fuels — environmental groups now recognize plastic as a major contributor to [climate change](#). Naturalist [David Attenborough](#) has likened the shift in public opinion over plastics to the process through which the public reached a consensus on the harms of slavery.

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Between extraction, refining, and waste management, the production and incineration of

plastics will add more than 850 million metric tons of greenhouse gases to the atmosphere this year alone — an amount equal to the emissions from 189 500-megawatt coal power plants, according to a [report](#) from the Center for International Environmental Law.

Recycled plastics — once seen as a sign of environmental virtue — is increasingly recognized as posing threats to our health. Plastics contain additives that determine its properties, including stability, color, and flexibility. Most of the thousands of these chemicals [aren’t regulated](#), but it’s clear that some of those additives, which end up in recycled plastics, are dangerous. One [study](#) found that half of recycled plastics in India contained a [flame retardant](#) associated with neurological, reproductive, and developmental harms.

Black plastic, used in everything from [children’s toys](#) to [kitchen utensils](#), food packaging, cellphone cases, and thermoses, appears to be particularly dangerous. The plastic is often sourced from recycled electronics that contain phthalates, [flame retardants](#), and heavy metals, such as cadmium, lead, and mercury. Even at very low levels, these chemicals can [cause](#) serious reproductive and developmental problems.

But most of the additives aren’t tracked or well studied. “The industry has no idea what they’re putting in the plastic and who’s putting it in,” said Andrew Turner, a British chemist who recently found toxic chemicals in 40 percent of the black plastic toys, thermoses, cocktail [stirrers](#), and utensils he [tested](#). In some plastic, he found the chemicals present at 30 times safety standards set by governments.

Even chemicals that are regulated often have limits set for electronics but not for recycled products. “You’ve got something that wouldn’t be compliant with the regulations as an electric item because its levels are too high, but because it’s turned into a fork, there’s nothing to stop it

from being used,” Turner said. Antimony, which Turner found in food containers, toys, and office supplies, “is restricted in drinking water, but not in electrical waste.” Turner and Zhanyun Wang, another scientist I spoke with who studies chemical additives to plastics, told me that they no longer use black plastic utensils. “Given the option, I’d prefer something white or clear,” said Turner, adding that he tries to avoid utensils made of any kind of plastic.

The solution to this global mess clearly has to be much bigger than personal cutlery choices. Among the organizations demanding that we push past the idea of recycling and require corporations to limit plastics production are [Greenpeace](#), the [Surfrider Foundation](#), [As You Sow](#), the [Rainforest Alliance](#) and [5Gyres](#), an organization started by a couple who sailed across the Pacific Ocean on a raft made out of discarded bottles. Fueled by a spike in consumer frustration with products that make them complicit in the problem, plastic-free [restaurants](#) and [grocery stores](#) are now emerging.

Taxes, bans, and fees on plastic products have been catching on around the world. In March, the European Union voted to [ban](#) single-use plastics by 2021. In June, Canada followed suit, with Prime Minister Justin Trudeau [vowing](#) to not just ban single-use plastics such as bags, straws, and cutlery, but also to hold plastics manufacturers responsible for their waste. One hundred and forty-one countries, including China, Bangladesh, India, and 34 [African countries](#), have implemented taxes or partial bans on plastics.

In the U.S., the Trump administration [has worked against international efforts](#) to crack down on plastic waste, so cities and towns are leading the way. While only eight states have enacted plastic restrictions, more than 330 local plastic bag ordinances have passed in 24 states. Some federal lawmakers have also recognized that federal action is necessary to beat back the mounting tide of plastic. “Plastics recycling is

not a realistic solution to the plastic pollution crisis. Most consumer plastics are economically impractical to recycle based on market conditions alone,” Rep. Alan Lowenthal and Sen. Tom Udall wrote in a [letter](#) to President Donald Trump in June, noting that the “spread of single-use plastic products has led to widespread pollution of plastic in the U.S. and has caused a growing financial burden on state agencies, local governments and taxpayers for remediation.”



Bottles of Pepsi Max travel along the production line at the Britvic PLC factory and warehouse in Leeds, U.K., on Jan. 23, 2017. Photo: Chris Ratcliffe/Bloomberg via Getty Images

Big Plastic Fights Back

Even the executives at a recent plastics industry conference admit how bad the crisis is — at least to one another. All we hear is “you’ve got to get rid of plastics,” Garry Kohl, of PepsiCo, said to his fellow members of the Plastics Industry Association at a conference in April. Gathered in the gilded ballroom of a Dallas hotel, the representatives of big plastics manufacturers, recyclers, raw materials providers, extruders, brand owners, and others in the plastics business grappled aloud about their role in the crisis. Especially difficult, said Kohl, who directs packaging innovation of PepsiCo’s snacks and foods, was the widely circulated picture of a dead plastic-filled [albatross](#). “This is very emotional for our senior leaders,” Kohl said, as the now iconic picture of the albatross — really just a few

feathers and a decaying beak arranged around an assortment of bottle caps, lighter parts, and plastic bits — flashed above him. “They’re all talking about the albatross.”

Patty Long, interim president and chief executive officer of the Plastics Industry Association, the group that convened the Texas meeting, also acknowledged the pain of being the public face of an industry held responsible for the devastation of the natural world. Long admitted that she squirmed her way through another social media phenomenon that, along with the albatross, has changed the course of the war over plastics: the [video](#) of the sea turtle with a plastic straw jammed in its nostril. Long isn’t the only one. Since it was posted in 2015, the eight excruciating minutes in which marine biologists yank at the plastic straw with pliers while the creature squirms and bleeds, has been viewed 36 million times.



In this photo provided by the U.S. Fish and Wildlife Service, a black footed albatross chick with plastics in its stomach lies dead on Midway Atoll in the Northwestern Hawaiian Islands on Nov. 2, 2014. Photo: Dan Clark/USFWS via AP

All in all, Long admitted, it had been a tough year, in which some 376 anti-plastics bills were introduced, and the perception of the plastics industry has continued to “spiral down exponentially.” The Plastics Industry Association is taking its cratering image

seriously, working to offset it with pro-plastics [presentations](#) for elementary and middle school students, a [plastics ambassadors](#) program and, so young people can “feel good about” working in the industry, Long said, a “[future leaders in plastics](#)” group.

But discomfort over the dead albatross, the bloody turtle, and industry’s public image notwithstanding, the companies that make billions from plastics have no intention of slowing down. Instead, the industry is gearing up for the fight of its life, which may explain why an expert in actual warfare gave the keynote at the plastics conference.

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In 2000, U.S. Navy Cmdr. Kirk Lippold guided his crew through a terrorist attack on the USS Cole, in which 17 sailors were killed and 39 injured. Now a crisis management consultant, Lippold told the audience at the Plastics Industry Association meeting a grueling story of mass casualties, near-death experiences, and a shrapnel-filled vessel taking on water. His tale, which ended with Lippold piloting his hobbled ship back into the open seas with the national anthem blaring, suggested that with enough fierce determination, the plastics executives too might be able to sail past the threats facing them.

At stake for them is not just the current plastics market now worth hundreds of billions of dollars annually, but its likely expansion. Falling oil and gas prices mean that the cost of making new plastic, already very low, will be even cheaper. The price drop has led to more than 700 plastics industry projects now in the works, including expansions of old plants and the construction of new ones by Chevron, Shell, Dow, Exxon, Formosa Plastics, Nova Chemicals, and Bayport Polymers, among other companies, according to a presentation from the regulatory affairs director

of the BASF Corporation at the plastics industry conference.

The growing output of new cheap plastic further undermines the industry’s own argument that recycling can resolve the waste crisis. It’s already impossible for most recycled plastic to compete with “virgin” plastic in the marketplace. With the exception of bottles made of PET (No. 1) and HDPE (No. 2), the rest of the waste is essentially worthless. Around 30 percent of both types of plastic bottles were sold for recycling in 2017, though some of those may have wound up being landfilled or incinerated. The recent fossil fuel boom makes it even cheaper to make new plastic and thus, even more difficult to sell the recycled product. This, in turn, makes the plastics companies’ push for recycling that much more implausible — and their battle to kill efforts to limit plastics production even more desperate.



While only eight states have enacted plastic restrictions, more than 330 local plastic bag ordinances have passed in 24 states. Photo: Getty Images

Banning Plastic Bans

Matt Seaholm, the executive director of the American Progressive Bag Alliance, seemed to relish his part in the fight. While others at the plastics industry conference tended toward hand-wringing and at least some acknowledgment of the problem of plastic waste, Seaholm was unapologetic in his antagonism of environmental groups that have been calling attention to it. In

Texas, Seaholm, the former national director of the Koch brothers-led Americans for Prosperity, positioned himself as the enemy of environmentalists.

“They hate what we’re doing,” Seaholm told his plastics industry colleagues at the conference with a mischievous grin. “We wear this as a badge of honor.” The fact that environmental groups oppose the APBA’s tactics, Seaholm added, is evidence that his lobbying group “must be doing something right.”

The APBA began pushing back against plastics restrictions around the country in 2011. Around 2015, the industry group upped its game. Rather than just opposing individual bans, the APBA began lobbying for state preemption laws. The approach, which another [Koch brothers-affiliated group](#), the American Legislative Exchange Council, has used to fight local action on other issues, including [pesticide](#) restrictions and [living wage](#) laws, prevents cities and towns from passing local plastic bans. In the past eight years, the American Chemistry Council has helped pass preemption bills based on [ALEC’s model](#) in 13 states. According to Seaholm, who joined the group in 2016, 42 percent of Americans now live in states where they can’t pass local bans on plastics.

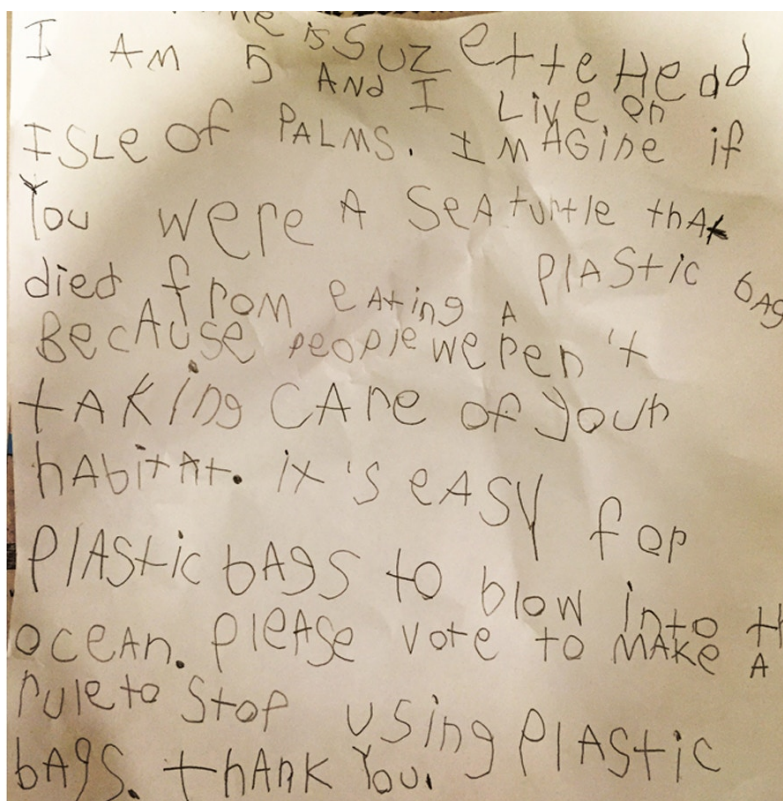
Other plastics industry lobbying groups, including ALEC’s American City County Exchange and the National Federation of Independent Business, have also argued for preemption, or “uniformity” as they call it, on the grounds that bans hurt businesses that use plastic. While presenting bans as bad for both businesses and poor people, who they claim will be disproportionately affected, the industry has also used campaign donations to make its case. Over the past year, the [Flexible Packaging Association](#), whose members include Dow, Exxon Mobil Chemical, SABIC, Chevron Phillips Chemical, and LyondellBasell, more than doubled its spending nationwide. The group significantly upped its contributions to

Tennessee lawmakers, for instance, in the year leading up to the passage of the bag preemption bill there.

While the APBA is fighting hard to push plastics preemption, the group's national spending is unclear because as a wholly owned entity of the Plastics Industry Association, there's no federal requirement to make its expenditures public. But state lobbying disclosures show that it has spent millions fighting bag bans. This advocacy of plastic bans puts Plastics Industry Associations members, including PepsiCo, Walmart, and the Carlyle Group, in an uncomfortable situation. All these brands have made public sustainability pledges that appear to be at odds with the group's fights against local laws limiting plastic.

Asked about the apparent dissonance between its sustainability pledge and participation in the Plastics Industry Association, Walmart provided an emailed statement saying that "Walmart's aspiration is to achieve zero plastic waste. We are taking actions across our business to use less plastic, recycle more and support innovations to improve plastic waste reduction systems." The statement also said that Walmart has "asked our suppliers to reduce unnecessary plastic packaging, increase packaging recyclability and increase recycled content, and to help us educate customers on reducing, reusing and recycling plastic."

PepsiCo and the Carlyle Group did not respond to requests for comment.



At left, Kathy Kent with her daughter, Suzette Head, collecting garbage on the beach. At right is Suzette's handwritten speech, which she delivered in front of the Isle of Palms, South Carolina, city council on May 26, 2015. Photos: Courtesy of Kathy Kent

Seaholm appeared not to care about the terrible optics of the industry's fight against efforts to protect the environment with plastic bans, which

he derided as "primarily driven by emotion." "They're doing it because it feels good,"

Seaholm told the plastics executives in Dallas. “They get to high-five each other.”

The Plastics Industry Vs. Two Little Girls

In Isle of Palms, South Carolina, the people who spearheaded the state’s first plastic bag ban in 2015 wouldn’t disagree that their effort was driven by emotion. Suzette Head and Mila Kosmos, who live in the small coastal town near Charleston, screeched with joy when their local ordinance passed. “I felt happy that the bags would be gone,” Mila, now 9, remembered recently.

The effort began with another emotion, when the two girls were in kindergarten: sadness. Suzette was at her local aquarium when a naturalist held up a jar with a gray swirl inside and asked what the kids thought it was. Suzette thought it was a jellyfish and said so. When she learned that it was, in fact, a plastic bag and that a turtle could die if it made the same mistake and ate the bag, she became distraught.

“Suzette loves animals,” her mother, Kathy Kent, explained. On their walk home from the aquarium after the demonstration, the two began talking about how they could stop people from throwing away plastic bags. “At first I said to her, Well, you just can’t change people,” said Kent. “But then I listened to myself and thought, Oh my God, what am I saying and quickly walked it back.” Without having any idea what exactly she was promising, Kent told her daughter that the two of them would do something to keep plastic bags from ending up in the ocean. Shortly afterward, they teamed up with Mila and her mother and several other Isle of Palms residents who were also upset about plastic. They’d walk the beach in the afternoons picking up bags and brainstorming. Eventually, they hit on the idea of drafting a petition to ban bags and walked door to door to get the support of several local shop owners.

“It was a piece of cake asking businesses to support us,” said Kent. “Everyone else knows that having a litter-free, clean beach is good for everyone and every business.” A little over a year after Suzette’s upsetting trip to the aquarium, the ordinance passed the city council in its first vote. Yet almost four years later, South Carolina is now considering [legislation](#) backed by the APBA that would not just ban future bag bans, but also undo the ordinance in Isle of Palms and 17 other local laws that have since restricted plastic in South Carolina.

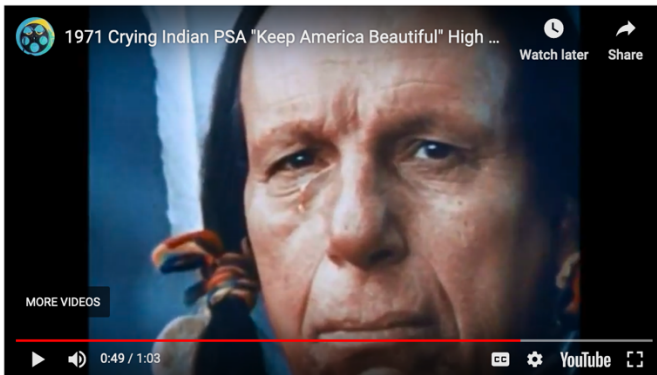
The Crying Indian

If the image of giant multinational corporations destroying little girls’ efforts to protect sea creatures is less than flattering, the plastics industry can take comfort in the fact that it has successfully defeated environmentalists’ attempts to hold it responsible for plastic with similar tactics before. The trick has been to publicly embrace its opponents’ concern for the environment while privately fighting attempts at regulation.

The double-edged strategy dates back to at least 1969, when an editorial in *Modern Plastics* magazine warned about the impending waste crisis. The big plastics makers were already aware of the problem. That year, DuPont, Chevron, Dow, and the Society for the Plastics Industry were among the groups represented at a conference on packaging waste. And when the first Earth Day was launched in 1970 in part to tackle that crisis, the industry was ready.

That week, demonstrators held an “ecology trek” in which they dumped their nonreturnable bottles at Coca-Cola’s headquarters. The activists had a solution to the mounting waste crisis: bottle bills that would put the onus for cleaning up the waste on manufacturers. Coca-Cola, which had been tipped off about the protests by the National Soft Drink Association, met the demonstrators with free soda and trash bins. The big beverage and packaging companies fought the bottle bill and

came up with a clever dodge that's still paying off today. Not only did they tar supporters of the bottle bills as radicals, but they also launched a massive PR campaign that seemed to incorporate some of the anger about the mounting garbage that had fueled the Earth Day protests while shifting responsibility for the waste away from the companies that created it and onto consumers.



In 1971, Keep America Beautiful, an anti-litter organization formed by beverage and packaging companies, including PepsiCo, Coca-Cola, and Phillip Morris, teamed up with the Ad Council to create the now-infamous [“Crying Indian” ad](#). Although the [“Indian”](#) who tears up when he sees a bag of litter thrown on the ground was really an Italian-American actor with a feather stuck in his hair, the ad's sneakier deception was that its expression of concern about pollution was brought to the airwaves by many of the same companies that produced the pollution. Even as their ad was inducing guilt in viewers for spreading trash, Keep America Beautiful's members were fighting legislation that could have done much to address the problem.

“What makes this all the more insidious is that these TV spots and other ads were presented as public service announcements — and thus appeared to be politically neutral — but, in fact, served the industry agenda,” said historian Finis Dunaway, who lays out the story of Keep America Beautiful's PR efforts in [“Seeing Green: The Use and Abuse of Environmental](#)

[Images](#).” “It was propaganda that did not appear propagandistic. It also shielded corporate polluters from blame by shifting responsibility onto individuals.”

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Future Earth Days would continue to emphasize consumers' personal responsibility for recycling, including the national commemoration of the 10th Earth Day in 1980, which was organized by Michael McCabe, a former legislative assistant who would go on serve as Joe Biden's communications and special projects director before spearheading [DuPont's defense](#) of a dangerous chemical used in many plastics, [PFOA](#). In 1990, the 20th anniversary celebration was marked by a celebrity-studded TV special that emphasized the importance of individuals' actions, including tree-planting and recycling, in protecting the environment.

To this day, [Keep America Beautiful](#) — which is still [led](#) by executives at beverage and plastics companies, including Dr Pepper, Dow, and the American Chemistry Council — continues to focus on [litterbugs](#), prodding errant citizens to better dispose of their plastic waste while many of its members fend off regulation of their production of that waste. Several of the group's [corporate partners](#) — including founding companies Coca-Cola and PepsiCo and their trade group, the [American Beverage Association](#) — have [opposed bottle bills](#) that have been shown to help solve the plastic waste problem.

Noah Ullman, chief marketing officer for Keep America Beautiful, disputes the idea that the organization was founded “as some kind of ruse. The intent was not there,” he said in a phone interview. Instead, Ullman wrote in an email to The Intercept, “the first objective of Keep America Beautiful was, and remains,

encouraging people to ‘put it in the bin.’ Preventing litter is the basis for everything else — it helps keep communities beautiful (which has a long list of social and economic benefits) and helps protect animals and our environment from solid waste ending up in unintended places.” Ullman said that the organization does not take a position on bottle bills, but noted that while bottle bills improve the collection rates of refunded materials, the “unintended consequence is that [it] devalues the rest of the waste stream for recycling (e.g. glass, cartons, milk jugs, etc.) and those items become less likely to be recycled.”

The American Beverage Association, which has opposed bottle bills in the past, provided The Intercept with a statement, saying, “We are not opposed to any ideas that will get us to better recycling rates in the future if they do not harm the comprehensive curbside recycling systems that consumers prefer.”

In an email, a representative of Coca-Cola wrote that the American Beverage Association represents the company’s views on bottle bills. The email also said that “at Coca-Cola, our focus is on helping to collect and reuse the equivalent of 100 percent of the bottles and cans that we put into the marketplace. This includes ensuring that all of our packaging is 100% recyclable and using at least 50% recycled content in our packaging by 2030.”

With their focus on recycling and nonprofit status, Keep America Beautiful and other anti-litter organizations funded by the plastics and beverage industry, including the [Recycling Partnership](#), offer companies both the opportunity to demonstrate concern about plastic pollution and a tax write off. The Coca-Cola Foundation gave \$640,000 to the Recycling Partnership to improve recycling in 2017, for instance. The organization “works with thousands of communities all across the country to provide access to cart-based recycling and education to help residents understand how to

recycle materials more and better, including paper, aluminum and steel cans, cardboard, cartons, glass and, yes, plastics,” according to an emailed statement from the organization.

While working to improve recycling and create end markets for recycled plastic, the Recycling Partnership also presents a particularly rosy view of recycling. In May, the group sent out an [email](#) that announced that “87% of People Think Recycling is Important,” while failing to mention the reality of single-digit recycling rates. The group’s other [funding partners](#) include ExxonMobil, Keurig, Dr. Pepper, Dow, the International Bottled Water Association, the American Beverage Association, and the American Chemistry Council.

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In its statement, the Recycling Partnership noted that only half of Americans who have access to convenient recycling do everything they could. The statement also said that the group is working to create and support end markets for recycled plastic.

But according to Jan Dell, an engineer who worked as a corporate sustainability consultant before creating The Last Beach Cleanup, an organization that confronts plastics pollution, the Recycling Partnership and other nonprofits supported by the plastics industry are using misleading information to ease concerns that otherwise might lead consumers to stop buying plastic. “They’re trying to create the perception that there’s a viable way to recycle most plastic waste into new products,” said Dell, “and that’s simply not true.”



A plastic bag sits in a Manhattan street on May 5, 2016. Photo: Spencer Platt/Getty Images

The “Recyclable” Scam

Much of the plastic waste that is amassing in the oceans, buried in landfills, and scattered throughout nature is “recyclable,” which is to say that it could, in theory, be refashioned into new products. Companies have latched on to the hopeful term to make their latest plastic products more palatable. [Starbucks](#), for instance, has lavished praise on itself for its “recyclable lid” rolling out in six cities this summer, which the company [predicted](#) will eliminate a billion straws. But because the lids are made from polypropylene (also known as No. 5 plastic), and there is very little market for recycled polypropylene, that number has no basis in reality. Only 5 percent of polypropylene was recycled in 2015 — and that was before China decided to stop taking our waste. Since then, the percentage recycled is likely much lower still, meaning that the vast majority of the 1 billion new “recyclable” Starbucks lids will end up where the old ones did — in landfills, trash heaps, incinerators, and the oceans.

In January, [Taco Bell](#) also crowed over its own new plastic lids, as if creating more plastic would somehow fix the plastics crisis. “Love the Earth? Yep, us too,” the company’s website announced, “which is why we’ve recently started to use recyclable cold cups and lids in all of our restaurants.”

Another company, Tempo Plastics, explicitly advertises its plastic pouches as “[guilt-free](#).” Although they’re made from high-density polyethylene, or No. 2 plastic — only 5.5 percent of which is [recycled in the U.S.](#) — the company’s new “[Harmony Pack](#)” will feature reassuring green arrows and the imprimatur of [How2Recycle](#).

A project of the Sustainable Packaging Coalition and recycling nonprofit called [GreenBlue](#) — whose board includes executives from Dow Chemical, Mars, Target, Amazon, and the [Delfort Group](#) — How2Recycle makes some plastic products seem far easier to recycle than they are. The Federal Trade Commission’s [Green Guide](#) makes it clear that “to misrepresent, directly or by implication, that a product or package is recyclable” is deceptive. In order to make unqualified claims that a product is recyclable, recycling facilities have to be available to at least 60 percent of the consumers to whom it’s sold. But the How2Recycle symbol is now affixed to several products that will be all but impossible for many consumers to recycle, including cups, plates, and containers made from plastics Nos. 3 through 7, all of which now have recycling rates close to zero.

Asked about the “guilt-free” pouch, Kelly Cramer, director of How2Recycle at GreenBlue, wrote in an email that the product was not “appropriately qualified” for the label and said that the organization would “reach out to this company immediately to rectify.” Regarding the pictures of plastic cups and plates that are not accepted by recyclers in most parts of the country but whose packaging bore the How2Recycle label, Cramer said that the label referred to the bags that contained the cups and plates, which is recyclable if brought back to an in-store recycling program, but acknowledged that the plates and cups inside them were not recyclable.

Although How2Recycle provides “not recyclable” as well as “recyclable” labels, it is the member companies’ choice whether to apply

them, she said. “That member chose not to label the product,” Cramer said. “This is an area where we’ve given the member a choice to label the product or not. If we were too strict in our requirements, we wouldn’t have as many members join the program.”

Cramer argued that another product, cups made of polypropylene, or No. 5 plastic, may or may not qualify as recyclable — a question that is now being [litigated](#) in a federal court in California. Cramer said that GreenBlue is conducting research into the recycling rates of polypropylene and defended the How2Recycle program as a way to minimize waste that is a fact of modern life.

“We don’t want people to think that recycling alleviates all their consumption guilt. But the truth of the matter is that we all consume, and packaging protects products that have to be moved to be sold,” she said. “In the future, it would be beautiful if we had robust reuse or novel delivery systems to rethink the entire product packaging system. But we’re not there yet.”

Although recycling does little to alleviate the mounting plastics crisis, the promotion of it has proven extremely useful to the industry when local bans on plastic bans have been proposed. The American Chemistry Council recently rolled out local campaigns for [WRAP](#), or the Wrap Recycling Action Program, in several places where plastic bans have been proposed.

The public-private partnership run by the ACC, which encourages the recycling of plastic bags through 18,000 plastic film collection sites around the country and promotes the idea that plastic bags can be recycled, launched a [new effort](#) in Connecticut in 2017 that coincided with the state’s [consideration](#) of a tax on plastic bags. When Chicago was weighing a plastic bag tax in 2016, the ACC rolled out [WRAP there](#) too, announcing that locals can recycle plastic bags “at nearly 400 local grocery and retail stores.”

This year, in Florida, the ACC made another [local WRAP push](#) just as a state-level bill to [ban plastic straws](#) was [introduced](#).

The group teaches the public how to recycle plastic film — any plastic less than 10 mil thick — a process that turns out to be complicated enough to require its own educational organization. Most municipal recycling programs don’t accept shopping bags and other flexible plastic, which can snag machines. So WRAP [directs](#) consumers to bring it to local take-back centers, which collect the film and send it on to recyclers. The plastic first has to be washed and dried, according to WRAP, and even then only some of it can be recycled. The program can recycle the clear wrap you might put around food at home, as well as bags that contain most produce, groceries, and bread, but not candy-bar wrappers, six-pack rings, and the plastic bags that contain chips or frozen food.

But even as WRAP promotes the message that plastic film can and should be recycled, and [scolds](#) people who don’t put plastic bags in recycle bins, many of the used bags and other plastic waste it collects wind up being burned or sent to landfills. According to the most [recent](#) report on plastic film recycling published in July by the ACC, the amount collected in the U.S. and sold for recycling fell from 1.3 billion to 1.0 billion pounds between 2016 and 2017 — and that was before China’s restriction on plastic waste imports was fully implemented. The ACC report admitted that some of the bags wound up where they would have if they didn’t first make a brief stop in a bag-recycling bin. “Due to a lack of buyers — for the quality and amount of material available — towards the end of 2017, landfilling material started to be more economical (despite diversion or other environmental goals) than covering the handling and shipping costs of getting material to market.”

It’s not clear what happened to the 300 million pounds of film that were sold for recycling in 2016 but not in 2017. Because the ACC doesn’t

report the total amount of plastic film collected, what proportion of the collected film that represents is also obscure. Nor is it clear why the ACC has not yet reported the 2018 numbers. But even within the 1 billion pounds of plastic film the ACC categorized as “recycled,” much is likely either burned or landfilled. According to the report, 378 million pounds of the film were exported, and the ACC said in an emailed statement to The Intercept that it doesn’t know what happened to the waste after that point.

Although the ACC doesn’t put an exact number on the total amount of bags that were burned or landfilled, a recent [call to action](#) from a group of plastics recyclers called Recycle More Bags does. The document, which came out in May and called for legislation that would require that new plastic bags contain recycled material, noted that “600 million pounds of plastic bags collected for recycling in North America in 2018 was landfilled or incinerated due to lack of end-markets.” A later version of the document changed the figure to “hundreds of millions of pounds.”

“Based on the two industry reports, it looks like we may have incinerated and disposed of the same amount of plastic film and bags that were reprocessed,” said Dell.



Workers sort recycling material at the Waste Management Material Recovery Facility in Elkridge, Md., on June 28, 2018. Photo: Saul Loeb/AFP/Getty Images

Recycling or Burning?

One of the latest solutions industry is offering to the plastics crisis isn’t recycling exactly. While many questions remain about what exactly the Hefty EnergyBag program is, it is making it clear how expensive and difficult it is to find a use for plastic waste.

In April, 49 years after protesters kicked off the first Earth Day by dumping single-use waste at Coca-Cola’s doorstep, Dow Chemical was a “[forest green sponsor](#)” of Omaha’s Earth Day event, despite the fact that it is the largest plastics manufacturer in the world. With a \$5,000 gift, Dow’s [Hefty EnergyBag program](#), a joint effort of Dow and Reynolds Consumer Products, was one of the two biggest donors for the event. Held in Omaha’s lush Elmwood Park, the day’s festivities were as green and wholesome as any corporate sponsor could want. Native American folk music played as locals strolled the grass from table to table learning about urban beekeeping, rain barrels, [microchickens](#), and tree planting. Children stroked a soft gray rabbit. And dozens of environmentally concerned Nebraskans participated in an outdoor yoga class, bending and stretching in the sun along with their neighbors.

Dow and Hefty first rolled out the program on Earth Day 2016 as a way for Omaha residents to dispose of plastic forks and knives, chip bags, and other single-use plastics that the city hadn’t been able to process. They just had to put the plastic trash into special orange Hefty bags, put them out on the curb, and the city would pick up and recycle the trash. “They were very definitely calling it recycling,” recalls Richard Yoder, a local sustainability consultant. But Yoder and other Omahanians soon learned that rather than being melted down into reusable plastic, the contents of their bags were being burned in an incinerator in Missouri that had a [history](#) of Clean Air Act violations.

Last year, after Yoder argued at a [local debate](#) over the program that calling the Energybag program recycling was misleading, Hefty stopped using that term. Yet, in labored language, the company's [website](#) still pitches the program as an environmental good, or "a groundbreaking initiative that collects hard to recycle plastics." The Hefty EnergyBag program "complements existing recycling programs," according to Ashley Mendoza, a spokesperson for Dow. "Our long-term vision is to keep more plastics out of landfills by collecting them for recycling or recovery if they cannot be reused."

After the [Global Alliance for Incinerator Alternatives](#) called out the Omaha program for creating more pollution, the Dow and Hefty initiative also stopped sending the orange bags to the incinerator. Since then, the plastic waste has been put to several purposes, including being compressed into fence posts and railroad ties and going "to a Canadian firm that made some sort of decking," according to Dale Gubbels, CEO of [FirstStar Recycling](#), the Omaha company partnering with Dow and Hefty on the project.

Because no one has learned how to remove additives from plastic, products made from recycled waste can release toxic chemicals as they degrade.

While Dow and Hefty promote the program as a way to convert plastic into "valuable energy sources," it isn't cheap, according to Gubbels. The expense has apparently disappointed some initial proponents, who expected the program to pay for itself. "I have to try to convince them if you want to recycle, you have to recognize that you've got to pay for it," he said. All in all, he added, the program, which was pitched as an energy-efficient solution to plastic waste, has proven "far more challenging than anyone had envisioned when this thing got started." According to an email from Mendoza, "The price of the Hefty® EnergyBag® orange bags cover the cost of running the program."

Scientists point out another hitch in the energy bag plan: Because no one has learned how to remove additives from plastic, products made from recycled waste, such as the railroad ties, fence posts, and decks made from Omaha's plastic, can release toxic chemicals as they degrade. "Until we do a better job of eliminating the hazards in its first use, you're going to have problems managing the toxicity in every subsequent use," said Pete Myers, a biologist and the founder and chief scientist of [Environmental Health Sciences](#). "Some of the types of plastics that they're proposing to recycle contain chemicals connected to a 50-year decline in sperm count, to type 2 diabetes, and to breast and prostate cancer. These are serious problems and we don't know enough about the exposures to make it safe for the child sitting on that deck."

When asked about this possibility, Gubbels said he hadn't considered it and didn't have expertise in toxic chemicals. In any case, Gubbels has been spreading Omaha's plastic waste around. He sent one recent load to Renewlogy, a plant in Salt Lake City, Utah, that heats the plastic and extracts energy from it, and said he plans to send a load to a similar plastic-to-energy facility in Texas called New Hope Energy.

The Myth of "Chemical Recycling"

Renewlogy and New Hope are two firms offering what the plastics industry is putting forward as the newest solution to plastic waste: so-called chemical recycling. According to the [American Chemistry Council](#), expanding plastics recovery into this realm could "result in billions of dollars of economic output." Yet even the technology's biggest proponents acknowledge that no one yet knows how to efficiently and economically convert plastic into its component parts and then back into fuel. If all the non-recycled plastics in the U.S. were converted to oil, "we could create enough fuel to power 9 million cars each year," the Chevron Phillips sustainability director, Rick Wagner, argued in a recent [article](#) in *Plastics*

Recycling Update magazine. That transformation would also allow Chevron, the [second-largest](#) plastic manufacturer in the world, to shrug off its responsibility for the massive quantities of pollution now choking the globe. But even Wagner admits that we're still far from knowing how to chemically recycle. It's sort of like [going to Mars](#), Wagner wrote. "We're not quite there yet. Not tomorrow, but someday. Hopefully soon." Mendoza described pyrolysis, the method used by the Renewlogy plant to which Hefty EnergyBag waste has already been sent, as "a potential next step toward advanced recycling."

The idea that plastic can be broken down into its elements, which can then be turned into fuel, waxes, and lubricants has been around for decades. But such waste-to-fuel plants have never proven economically or environmentally viable. According to a 2017 [report](#) of the Global Alliance for Incinerator Alternatives, most of the waste-to-fuel projects in the U.S., Canada, and Europe, which used either pyrolysis or a related technology called gasification, were closed or canceled before even getting off the ground. Among the impediments cited in the report were the inability to meet energy efficiency and pollution control goals. "In general, costs are higher and more uncertain than project proponents foresee and revenues are lower and more uncertain," the report noted.

Waste-to-fuel plants have never proven economically or environmentally viable.

The environmental and financial viability of the latest energy-to-fuel plants is also unclear. When asked about the efficiency of the facilities used by the Hefty EnergyBag program, Mendoza wrote in an email that "material efficiency of a pyrolysis processing unit is dependent on the technology used and the types of materials fed into the facility." Mendoza also wrote that "Dow has a vital interest and responsibility in making plastic materials beneficial throughout their lifecycle. We are working to improve the entire system where our products are used in order to

maximize resource efficiency and the benefits derived from using our products."

Neither New Hope or Renewlogy, two of the nine companies in the American Chemistry Council's [industry alliance](#) for chemical recycling, would reveal what volume of plastics their plants require to produce fuel. Renewlogy did not respond to numerous emailed interview requests. But the company's [website](#) says that between Omaha's waste and that collected through a similar Hefty EnergyBag program in the city of Boise, a million pounds of plastic were "diverted" in 2018. A video on the site also describes Renewlogy's process as cost-effective and "proven clean." The New Hope plant in Texas issued a press release announcing that it will have a capacity to process 150 tons of plastic a day, but the company declined to comment on that facility's efficiency. "It's a brand-new industry and there are some things we can't communicate about," said Lee Royal, who answered the phone there. "How we do business is probably not something we'd like to share just now."

In an emailed statement, the American Chemistry Council defended the value of chemical recycling, noting that "these technologies can produce a wide range of products beyond fuel, including higher value chemicals and other feedstocks" and that such products "have much greater value in the marketplace than in a landfill."

The big open questions about the efficiency, safety, and economic viability of the chemical recycling process — and the admissions from its proponents that they haven't figured out how to make it work — haven't stopped the chemical industry from passing laws facilitating funding of the scheme. Texas recently became the [sixth state](#) to pass legislation (supported by Chevron Phillips Chemical, Exxon Mobil, and the American Chemistry Council) that would pave the way for new chemical recycling facilities.

Some of these laws have been designed to ensure that the facilities will be subject to minimal regulation. By categorizing them as manufacturing plants rather than solid waste disposal sites, chemical recycling operations may be exempted from limits on nitrogen oxide, sulfur dioxide, carbon monoxide, particulate matter, heavy metals, and greenhouse gases that are imposed on solid waste sites.

Nevertheless, chemical recycling facilities are already being promoted — and, in some cases, funded — as sustainable fixes for the plastics problem. In [Oregon](#), a waste management company is pushing to get its plastic-burning plant classified as renewable energy. And in Ashley, [Indiana](#), a new chemical recycling plant is being financed with \$185 million in green bonds from the state, funds that are earmarked for environmentally beneficial projects. Brightmark Energy, the company behind it, says its [mission](#) is to “rise up and meet the needs of our planet.”

Some have objected to the use of taxpayer money to back a process that has repeatedly failed financially when it’s been tried in the past. “Every one of these pyrolysis facilities has depended upon government largesse to even try to get off the ground,” said Andrew Dobbs, campaign director at Texas Campaign for the Environment, a group that opposed the Texas bill. “So-called chemical recycling doesn’t make economic sense. It’s a highly expensive and energy-intensive process that’s competing with burying things in a hole in the ground. On the other end, they’re producing fuel, which is competing with natural gas when natural gas is dirt cheap. The only way they’re going to make that work is for the costs to be paid by someone else.”

According to the email from the American Chemistry Council, chemical recycling “facilities are being developed by venture capital and investment firms, which is a vote of confidence in the financial promise of these technologies and business models.” The email

also noted that “Chemical recycling technologies are developing very quickly and — like other technologies including wind and solar — will become more efficient as they reach commercial scale.”

Whether it can meet its goal of turning 288 tons of plastic per day into 778 barrels of diesel blend stocks, 418 barrels of naphtha blend stocks, and 360 barrels of industrial wax, this latest take on plastic recycling will, like all chemical recycling plants, use fossil fuels to convert fossil fuel products into additional fossil fuels. They will also almost surely ease the way for the continued production of even more plastic.

“This is all just a huge, incredibly expensive distraction,” said Denise Patel, U.S. program director at the Global Alliance for Incinerator Alternatives. While China’s decision to stop taking U.S. plastic finally revealed the country’s plastics problem, the idea of chemical recycling — fanciful as it may be — could undermine public urgency about it, according to Patel. “China’s decision is an opportunity for cities to examine waste and double down on reducing,” she said. “Instead, these projects are exacerbating the problem by giving people the idea that there is a solution and it’s OK to keep buying them.”

At the industry conference in Texas, no one asked whether it was OK to keep producing more plastic. After the pictures of injured sea creatures were gone and an accountant spoke to the executives about how to best take advantage of Trump’s cuts to the top tax brackets, attendees learned about the bright prospects for their industry. Exports of the world’s most popular plastic, polyethylene, will not just continue, but will likely experience “healthy growth” over the next several years, as a presentation from the investment research firm IHS Markit explained. Nor was there much question where all that new plastic will be sold. An increasing share is expected to go to Asian countries other than China, since the growing awareness of plastics pollution in Europe and North America may

slightly weaken markets there. The only real question about the proliferation of a product we know to be heating the planet, amassing all

around and within us, and poisoning water and air around the world, is what new techniques its producers will adopt to make it seem fine.

Correction: July 20, 2019, 4:05 p.m. ET

An earlier version of this story misstated the amount in green bonds financing a chemical recycling plant in Ashley, Indiana. It is \$185 million, not \$85 million.

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