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## **FAILING THE FUTURE:** THE COMPLEX ROAD TO EFFECTIVE PLASTIC REGULATION IN THE U.S.

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“I just want to say one word to you, are you listening: plastics . . .  
there is a great future in plastics . . .”

—Mr. McGuire, *The Graduate*<sup>1</sup>

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<sup>1</sup> THE GRADUATE (Mike Nichols dir., 1967)

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## **I. Introduction**

The United States' plastic pollution problem presents both domestic and global challenges. As this paper illustrates, the inability of the U.S. to effectively regulate plastics negatively affects the environment and human health in the U.S. and in countries that must deal with plastic waste exports coming from the U.S. The paper explores plastic production, use, waste, and recycling in the U.S. and critically analyzes the significant challenges that the U.S. continues to experience in devising and implementing a cohesive and comprehensive plastics regulatory framework.

As with many other countries, successful industry lobbying efforts have contributed to the piecemeal approach to regulation. The challenges are compounded in the U.S., where the competitive nature of the federal system appears to have presented industry actors with a number of effective tools with which to prevent effective regulation in this space. Tactics adopted by industry actors range from marketing efforts that frame the problem as one that is purely individual rather than collective; the promotion of scientific studies that emphasize the deleterious economic effects of regulation without adequately addressing the serious environmental and human health problems of plastic pollution; and support of legal mechanisms at various levels to thwart grassroots efforts aimed at implementing effective change.

The paper begins by briefly outlining plastic production, use, recycling, and waste in the U.S., with an emphasis on the negative effects to the environment and human health. The paper then critically analyzes regulatory attempts at the federal, state and local levels. In light of the significant role of U.S. industry actors in framing the discussion regarding plastic pollution, the paper reviews key efforts that have prevented effective regulatory action. The paper concludes by making a

number of recommendations that the U.S. should implement to ensure the effective regulation of plastics.

## II. The Nature and Extent of the Plastic Problem in the U.S.

Plastic has profound, negative effects on the environment. Plastic pollution in the U.S. has negatively affected inland and coastal communities and has placed a social and economic burden on the most vulnerable communities.<sup>2</sup> Plastic has also endangered many U.S. marine habitats and wildlife and has contaminated water that humans rely on for food and their livelihoods.<sup>3</sup> Up to 1.25 million metric tons of plastic waste in the U.S. is estimated to have been littered or illegally dumped, with years of mismanaged plastic waste resulting in contaminated terrestrial freshwater.<sup>4</sup>

The problem is growing and the negative effects are expanding: incineration of plastics generates massive amounts of greenhouse gases and toxic ash. By 2030, estimates suggest that the U.S. plastics industry will eclipse the carbon footprint of existing coal-fired power plants.<sup>5</sup> Further, the U.S. fossil fuel industry is expanding its virgin plastic production, as its core business is limited by policies seeking to ameliorate the climate crisis.<sup>6</sup> The U.S. oil industry makes over \$400 billion annually from plastic production, and with a projected decline in the demand for petroleum for transport and increased uptake in electric vehicles, future profits in the sector are increasingly likely to come from virgin plastic production.<sup>7</sup>

Further, proposed large-scale investments in plastics production infrastructure are likely to cause an increase in the amount of single-use plastic goods produced, which will, in turn, cause the proportion of plastic in U.S. municipal solid waste to increase.<sup>8</sup> This means that it is likely, without effective intervention, that the

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<sup>2</sup> Oliver Milman, 'Deluge of plastic waste': US is world's biggest plastic polluter, THE GUARDIAN (Dec. 1, 2021), <https://www.theguardian.com/environment/2021/dec/01/deluge-of-plastic-waste-us-is-worlds-biggest-plastic-polluter>.

<sup>3</sup> *Id.*

<sup>4</sup> Mengqing Kan, *Dynamic flows and stocks of plastics in the United States and pathways towards zero plastic pollution by 2050* at 4. (Apr. 2021) (Ph.D. dissertation, University of Michigan) (on file with University of Michigan).

<sup>5</sup> See Marc Fawcett-Atkinson, *Your Plastic Recycling is Probably Getting Shipped to . . . Canada?*, SLATE (Aug. 1, 2021), <https://slate.com/technology/2021/08/us-canada-recycling-plastic-waste-trade-swap.html>; Alexander C. Kaufman, *Plastics Will Create More Climate Pollution Than Coal In U.S. By 2030, New Study Finds*, HUFFINGTON POST (Oct. 21, 2021), [https://www.huffpost.com/entry/plastics-pollution-climate\\_n\\_61718257e4b093143207dce9](https://www.huffpost.com/entry/plastics-pollution-climate_n_61718257e4b093143207dce9).

<sup>6</sup> Milman, *supra* note 2.

<sup>7</sup> See Laura Sullivan, *How Big Oil Misled the Public into Believing Plastic Would be Recycled*, NAT'L PUB. RADIO (Sept. 11, 2020), <https://www.npr.org/2020/09/11/897692090/how-big-oil-misled-the-public-into-believing-plastic-would-be-recycled>. Worryingly, the International Energy Agency estimates that plastic production is expected to drive 50% of the oil and gas industries growth until 2050. Fawcett-Atkinson, *supra* note 4.

<sup>8</sup> Diane M. Sicotte & Jessica L. Seamon, *Solving the Plastics Problem: Moving the U.S. from Recycling to Reduction*, 34 SOC'Y & NAT. RES. 393 (Aug 4, 2020), <https://www.tandfonline.com/doi/epub/10.1080/08941920.2020.1801922?needAccess=true>. For example, Chevron Phillips Chemical's has invested \$6 billion in a new plastic plant. As Jim Becker, Vice President of Sustainability for Chevron Phillips stated, "We see a very bright future

upward trajectory of plastic production will continue, going from 390,000 tons of plastic in 1960 to a staggering 35.68 million tons in 2018 according to the Environment Protection Agency (EPA).<sup>9</sup>

Interventions have, to date, been largely unsuccessful. Up until 1990, close to 100 percent of all U.S. plastic waste was landfilled.<sup>10</sup> There has been a slight improvement since then, with 75.83 percent of plastic waste in landfill as of 2017.<sup>11</sup> In 2015, for example, only nine percent of U.S. plastic waste was recycled (the global average), with approximately three million tons recycled and 24 million tons landfilled.<sup>12</sup> That same year, approximately six times as much municipal plastic waste was burned as was domestically recycled, leading to environmental and human health complications such as increased emphysema and asthma rates.<sup>13</sup>

Perhaps most apparent is the inability of the U.S. to effectively combat the continued high reliance on single-use plastic bags across much of the country. Americans use an estimated 100 billion single-use plastic bags every year and over a million plastic bags are used every minute with an average 'working life' of only 15 minutes per usage.<sup>14</sup> The jury is out as to whether the plastic bag problem will

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for our products." Sullivan, *supra* note 7. This expansion will not only see increased greenhouse emissions and poor air quality caused by the building of new petrochemical plants, but it also is clear that the U.S. oil and gas sector is poised to fight vigorously to defend its expansion, particularly in the regulatory space; Michael Corkery, *Federal Bill Seeks to Make Companies Responsible for Plastic Waste*, N.Y. Times (Dec 5, 2020), <https://www.nytimes.com/2020/02/10/business/recycling-law.html>.

<sup>9</sup> 390,000 tons of plastic was produced in 1960, 25,550,000 tons in 2000, over 31 million tons in 2015, and 35.68 million tons in 2018. Autum R Iverson, *The United States requires effective federal policy to reduce marine plastic pollution*, 1 CONSERVATION SCI. AND PRAC. 1, (June 2019), <https://www.proquest.com/openview/b50589133ec402863e57e4335e6431e4/1?pq-origsite=gscholar&cbl=4570192>; Chuiyan Mo, *Single-Use Plastics Regulations in the United States: An Overview*, COMPLIANCE GATE (Dec. 22, 2020), <https://www.compliancegate.com/single-use-plastic-regulations-united-states/>; Charles Pekow, *As the rest of world tackles plastics disposal, the U.S resists*, MONGABAY (May 17, 2021), <https://news.mongabay.com/2021/05/as-the-rest-of-world-tackles-plastics-disposal-the-u-s-resists/>.

<sup>10</sup> Sicotte & Seamon, *supra* note 8, at 396. Drink bottles, food wrappers and similar plastic products account for nearly a fifth of U.S. municipal solid waste. Samantha Maldonado et al., *Plastic bags have lobbyists. They're winning*, POLITICO (Jan. 20, 2020), <https://www.politico.com/news/2020/01/20/plastic-bags-have-lobbyists-winning-100587>.

<sup>11</sup> Sicotte & Seamon, *supra* note 8, at 396.

<sup>12</sup> See Iverson, *supra* note 9, at 4. Due to their chemical compositions, plastic wastes have proven difficult to recycle into high-value goods. Consequently, the demand for recycled plastics is much lower than the comparable demand for recycled paper, glass or metals. Sicotte & Seamon, *supra* note 8. Problematically, unlike aluminium - which can be recycled indefinitely - plastic can only be recycled seven to nine times before degrading beyond the point of viability. Margaret Kolcon, *Plastic Prohibition: The Case For a National Single-Use Plastic Ban in the United States*, 9 PENN ST. J.L. & INT'L AFF. 194, 201 (2021), <https://elibrary.law.psu.edu/jlia/vol9/iss2/9/>.

<sup>13</sup> Jan Dell, *Six Times More Plastic Waste is Burned in U.S than is Recycled*, PLASTIC POLLUTION COAL. (Apr. 30, 2021), <https://www.plasticpollutioncoalition.org/blog/2019/4/29/six-times-more-plastic-waste-is-burned-in-us-than-is-recycled>.

<sup>14</sup> Allyssa Rose, *A Solution to Plastic Pollution? Using International Law to Shape Plastic Regulation in the United States*, 26 HASTINGS ENVTL L. J. 127, 128 (2020), [https://repository.uchastings.edu/hastings\\_environmental\\_law\\_journal/vol26/iss1/7/](https://repository.uchastings.edu/hastings_environmental_law_journal/vol26/iss1/7/) (discussing the high use of plastic bag use in the U.S.); Hannah Seo, *The U.S. falls behind most of the world in plastic pollution regulation*, Env't Health News

continue to increase in the U.S.; plastic bag sales in 2020 reached an estimated \$1.4 billion. However, future demand for plastic shopping bags is expected to decrease due to greater reliance on reusable bags and the adoption of local bans, fees, and taxes (discussed later in this paper).<sup>15</sup>

The staggering challenges regarding single-use plastic bags alone mean it is not surprising that the U.S. is one of, if not the, world's largest generators of plastic waste. The average American is estimated to generate roughly 286 pounds of plastic waste per year.<sup>16</sup> For many years, messaging in the U.S. has suggested that the way to address the problem is through recycling efforts. However, recycling rates in the U.S. are low. For instance, data from 2014 indicates that the aggregate recovery rate for "plastic bags, sacks, and wraps" was 12.3 percent—a 1.2 percent decrease from the previous year.<sup>17</sup> In 2021, the U.S. discarded 51 million tons of plastic refuse (309 pounds per person) with a recycling rate of only five percent according to a report by Greenpeace—well below the global average.<sup>18</sup> Further, an increasing number of local councils no longer accept plastic waste for recycling because the cost of collecting and sorting the material is not financially viable.<sup>19</sup> The extent of the challenge was further made manifest when China refused to continue accepting plastic waste, which created significant supply problems for U.S. recycling companies that are yet to be resolved.<sup>20</sup>

Further, U.S. plastic production and concomitant pollution are global issues with world-wide environmental impacts. As the second-largest national consumer, the U.S. accounts for 20 percent of global plastic production and 19 percent of the consumption.<sup>21</sup> Plastic polymer production has grown substantially, reaching 58,000 metric tons in 2018, more than 124 times the total production output of

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(Oct. 4, 2021), <https://www.ehn.org/plastic-pollution-2655191194.html> (outlining the working life of plastic bags).

<sup>15</sup> Travis P. Wagner, *Reducing single-use plastic shopping bags in the USA*, 70 WASTE MGMT. 3, 4 (2017).

<sup>16</sup> Ian Tiseo, *Plastic waste in the United States – statistics & facts*, STATISTA (Feb. 8, 2023), <https://www.statista.com/topics/5127/plastic-waste-in-the-united-states/>.

<sup>17</sup> Wagner, *supra* note 15, at 4.

<sup>18</sup> Nina Lakhani, *Only 5% of plastic waste generated by US last year was recycled, report says*, THE GUARDIAN (Oct. 24, 2022), [https://www.theguardian.com/us-news/2022/oct/23/us-plastic-waste-recycled-2021-greenpeace?CMP=Share\\_iOSApp\\_Other](https://www.theguardian.com/us-news/2022/oct/23/us-plastic-waste-recycled-2021-greenpeace?CMP=Share_iOSApp_Other).

<sup>19</sup> Corkery, *supra* note 8.

<sup>20</sup> Wagner, *supra* note 15; Sullivan, *supra* note 6.

<sup>21</sup> Wagner, *supra* note 15; Statista Research Dep't, *U.S. Plastic Industry - statistics and facts*, STATISTA (Apr. 14, 2014) <https://www.statista.com/topics/7460/plastics-industry-in-the-us/#topicOverview>; CTR. FOR SUSTAINABLE SYS., UNIV. OF MICH., PLASTIC WASTE (2022) <https://css.umich.edu/sites/default/files/2022-07/CSS22-11.pdf>.

1950.<sup>22</sup> As a result of the growth of fracking in the U.S.,<sup>23</sup> net U.S. plastic resin exports are estimated to triple by 2030.<sup>24</sup>

Between 1988 and 2016, the U.S. was second in the world in exporting plastic waste (exporting 26.7 million metric tons to the global market, comprising 12.4 percent of global exports).<sup>25</sup> This plastic waste displacement sees waste gathered from affluent consumers and sent to distant ill-equipped, poorer communities.<sup>26</sup> In 2016 almost half of U.S. plastic waste was shipped overseas, with 88 percent of that going to states considered to have ineffective waste management systems.<sup>27</sup> By some metrics, the U.S. generates the most plastic waste per capita exports—approximately 225 shipping containers of plastic waste per day—to lesser-developed countries. These nations tend to ‘process’ such waste in unsafe facilities or burn the plastic waste, exacerbating environmental and health problems in that poorer country.<sup>28</sup> Before China’s National Sword policy prohibiting the importation of the world’s plastic waste was enacted in 2018, 2.26 million tons of U.S. plastic waste was exported and counted as recycled materials.<sup>29</sup> While the total amount of plastic waste generated in the U.S. is thought to have increased to approximately 39.9 million tons, U.S. waste exports appear to have shrunk to 1.19 million tons due to China’s import restrictions.<sup>30</sup> The refusal by China to take U.S. waste led to an increase in plastic waste sent to other countries, such as Vietnam and Thailand, that were willing to still accept such waste.<sup>31</sup>

There is, however, growing recognition that the problem needs to be addressed. U.S. Senator Jeff Merkley noted:

Many of us were taught the three R’s—reduce, reuse, and recycle—and figured that as long as we got our plastic items into those blue bins, we could keep our plastic use in check and protect our planet.

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<sup>22</sup> Milman, *supra* note 2.

<sup>23</sup> Hydraulic fracturing or ‘fracking’ is a resource extraction technique that involves drilling into the earth’s surface, directing a high-pressure mixture of water, sand and chemicals at a rock layer in order to release the oil or gas contained inside. *What is Fracking and Why is it Controversial?*, BBC News (Oct. 26, 2022), <https://www.bbc.com/news/uk-14432401>.

<sup>24</sup> Christina Tangora Schlachter, *Regulation Trends on Plastic Bag Bans and Preemptions* (Dec. 2019), [http://www.christinaphd.com/wp-content/uploads/2019/12/SchlachterC\\_PlasticBag\\_Reg\\_2019\\_Dec.pdf](http://www.christinaphd.com/wp-content/uploads/2019/12/SchlachterC_PlasticBag_Reg_2019_Dec.pdf).

<sup>25</sup> See generally Iverson, *supra* note 9, at 3.

<sup>26</sup> Sicotte & Seamon, *supra* note 8, at 396.

<sup>27</sup> *U.S. Is a larger source of plastic pollution than previously thought, report finds*, YALE ENV’T 360 (Nov. 2, 2020), <https://e360.yale.edu/digest/u-s-is-a-larger-source-of-plastic-pollution-than-previously-thought-report-finds>.

<sup>28</sup> Ann Mallow, *Comprehensive Federal Legislation Addresses the Plastic Pollution*, PLASTIC POLLUTION COAL. (Mar. 24, 2021), <https://www.plasticpollutioncoalition.org/blog/2021/3/24/comprehensive-federal-legislation-addresses-the-plastic-pollution-crisis#%3A~%3Atext=Comprehensive+Federal+Legislation+Addresses+the+Plastic+Pollution+Crisis%2C-Plastic+Pollution+Coalition&text=There+are+over+350+million%2C91+percent+is+not+recycled>

<sup>29</sup> Dell, *supra* note 13.

<sup>30</sup> *Id.*

<sup>31</sup> See generally Milman, *supra* note 2.

But the reality has become much more like the three B's—buried, burned, or borne out to sea.<sup>32</sup>

And while American consumers have been aware of the deleterious impacts of plastic pollution since at least the mid-20th century, in recent years, public consciousness on plastic bag usage has shifted from considering them as a harmless convenience to a perception of plastic bags (and other single-use plastics) as an environmental scourge.<sup>33</sup> Scholarly consensus on the negative effects of plastic have galvanized this anti-plastic perception. This shift has also occurred as a result of greater availability, and promotion, of alternatives to single-use plastics that promote environmentally sustainable behavior. It is therefore feasible now, more than ever, to adopt anti-plastic policies.<sup>34</sup>

However, both U.S. consumers and producers of plastic have to date opposed prescriptive legal interventions due to concerns over hygiene, convenience, profits, and the vociferous opposition of the plastics industry embodied in trade associations.<sup>35</sup> Consequently, the U.S. is one of few countries to lack a coordinated federal plastic management regime as of 2023.<sup>36</sup> The remainder of this paper explores regulatory efforts at different levels of government, and industry efforts to thwart the effective implementation of plastics regulation. The paper highlights the fact that the federal government has traditionally ceded authority over decision-making regarding the best ways to regulate plastic to individual states and local communities.<sup>37</sup>

### III. Federal Responses to the Issue of Plastic Pollution

The U.S. federal government has largely been absent from the plastic regulatory landscape.<sup>38</sup> This is despite apparent bipartisan support, which has led federal governments across the political spectrum to recognize, and call for, the creation of a cohesive, national legislative response to plastic waste, as far back as the 1970s when bottle deposit bills were first being introduced across the country.<sup>39</sup> However,

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<sup>32</sup> Mallow, *supra* note 28.

<sup>33</sup> Wagner, *supra* note 15, at 9.

<sup>34</sup> *Id.*

<sup>35</sup> Anatasia M. Telesetsky, *Beyond Existing Legislated Efforts to Control Single-Use Plastics: A Proposal for Ending Fossil-Fuel Subsidies and Standardizing Single-Use Plastic Packaging*, 57 CAL. W. L. REV. 43, 47 (2021), <https://scholarlycommons.law.cwsl.edu/cwlr/vol57/iss1/10/>.

<sup>36</sup> *Id.*

<sup>37</sup> Seo, *supra* note 14; Telesetsky, *supra* note 35.

<sup>38</sup> Seo, *supra* note 14; Telesetsky, *supra* note 35; Caitlin Kim et al., *Regulating Plastic Bags*, THE REGULATORY REV.

(Dec. 18, 2021), <https://www.theregreview.org/2021/12/18/saturday-seminar-regulating-plastic-bags/>.

<sup>39</sup> Seo, *supra* note 14. A successful option for major companies to help secure the production of high-quality recycled plastic is to participate in bottle deposit return schemes. These programs boost recycling rates by giving consumers a financial incentive to return containers and enhance efficiency by effectively pre-sorting the most valuable plastics and eliminating contamination from dirty containers or other non-recyclable items. Deposit return schemes have also proven to be successful wherever they are implemented. According to the Container Recycling Institute, the ten

these efforts were opposed by beverage companies and plastics lobbyists who convinced federal legislators that federal intervention would result in prohibitive costs on the industry.<sup>40</sup> This has set the tone for the federal response to plastics ever since.

#### A. Piecemeal Attempts at Federal Regulation

Despite these challenges, there have been a number of federal legislative initiatives over the years introduced to address specific problems associated with plastic pollution. The Solid Waste Disposal Act of 1965 (SWDA)<sup>41</sup> perhaps most closely resembles an attempt at cohesive regulation at the federal level. The SWDA established a federal regulatory infrastructure for the U.S. The Act emphasizes the importance of effectively dealing with waste and sets out a national policy on this matter in the following terms:

The Congress hereby declares it to be the national policy of the United States that, wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. Waste that is nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment.<sup>42</sup>

The Act seeks to achieve these goals by prescribing minimum safety requirements to avoid substandard/unsafe landfilling and provides a framework for technical assistance to state and local governments, as well as a means by which to coordinate waste efforts.<sup>43</sup> Of particular note, the Act establishes the Office of Solid Waste within the EPA, and provides it with responsibilities and duties.<sup>44</sup> Coordination efforts are conducted through the Interagency Coordinating Committee on Federal Resource Conservation and Recovery Activities. The aim of this committee is to “[coordinate] all activities dealing with resource conservation and recovery from solid waste” under the EPA and “all other Federal agencies” under the Act.<sup>45</sup> These activities include research, development, and demonstration projects for resource conservation; energy or material recovery from solid waste; and technical or financial assistance for state or municipal planning.<sup>46</sup>

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US states with so-called bottle bills have 60% beverage container recycling rates, compared with 24% in states that do not. XiaoZhi Lim, *Why ‘The World’s Largest Recycling Plant’ Won’t Solve The Plastics Crisis*, HUFFINGTON POST (Oct. 31, 2020), [https://www.huffpost.com/entry/big-brands-betting-on-silver-bullet-solution-plastic-crisis\\_n\\_5f9c74d4c5b6cfec2f6d8f6a](https://www.huffpost.com/entry/big-brands-betting-on-silver-bullet-solution-plastic-crisis_n_5f9c74d4c5b6cfec2f6d8f6a).

<sup>40</sup> Corkery, *supra* note 8.

<sup>41</sup> *See generally* Solid Waste Disposal Act of 1965, Pub. L. No. 89-272 (codified at 42 U.S.C. § 6903 *et seq.*)

<sup>42</sup> *Id.* § 1003(b).

<sup>43</sup> *Id.* § 2003–04.

<sup>44</sup> *Id.* § 2001(a).

<sup>45</sup> *Id.* § 2001(b).

<sup>46</sup> *Id.*



The Act also authorizes the Administrator to carry out discrete functions such as prescribing regulations, exchanging information with and consulting federal agencies, technically and financially assisting states or regional agencies, utilizing resources of federal agencies for research and analysis, and delegating the inspection and enforcement functions relating to hazardous waste to the Secretary of Transportation.<sup>47</sup> Any regulations issued pursuant to the Act must be reviewed every three years,<sup>48</sup> and the Administrators must provide personnel teams known as 'Resource Conservation and Recovery Panels' that will offer technical assistance in relation to solid waste management, resource recovery and conservation.

The early utility of this Act in establishing a national framework for waste regulation was set out by Lester Blaschke, the Solid Waste Management Representative of the EPA in Seattle, as follows:

As a result of appropriations under this law, our Agency has been able to establish leadership at the Federal level, to assist states in developing state plans, to sponsor research, demonstrations and technical assistance at the local level, and to professionalize solid waste management by use of grants to universities for graduate curriculum and degree programs.<sup>49</sup>

Despite what appears to be the comprehensive nature of the Act, the SWDA has also been used as a basis from which to enact further legislation to address plastic pollution issues as and when they have been identified and gained traction at the federal level. The legislative amendments have sought, in particular, to reflect the increasing importance attached to the need to domestically manage plastic waste.<sup>50</sup> For instance, the Resource Recovery Act of 1970 sought to increase government intervention in plastic waste management, including support for the development of waste reduction and recycling technology, and the introduction of criteria for disposing of hazardous waste.<sup>51</sup> This amendment signified a shift in emphasis from disposal to recycling and recovery of energy and materials. The Act's goals were to establish solid waste management systems that preserve the quality of air, water and land resources; provide technical and financial assistance to states and local governments to plan and develop resource recovery and solid waste disposal programs; promote national research efforts to improve recovery and recycling as well as safe disposal; promulgate various guidelines regarding transportation, separation, recovery and disposal; and provide training grants relating to design operation and maintenance of solid waste disposal systems.<sup>52</sup>

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<sup>47</sup> *Id.* § 2002(a)(1)–(6).

<sup>48</sup> *Id.* § 2002(b).

<sup>49</sup> Lester E. Blaschke, *Analysis of the Resource Recovery Act of 1970 and Its Effect on Implementation of Solid Waste Management Programs*, 34 J. ENVTL. HEALTH 89, 89 (1971).

<sup>50</sup> Legislative attempts to address plastic waste have included: The Resource Recovery Act of 1970; the Resource Conservation and Recovery Act of 1976; the Hazardous and Solid Waste Amendments of 1984; and the Federal Facilities Compliance Act of 1991.

<sup>51</sup> Resource Recovery Act of 1970, Pub. L. No. 91-512, 84 Stat. 1227.

<sup>52</sup> Blaschke, *supra* note 51, at 89.

A later amendment, the Resource Conservation and Recovery Act of 1976, was enacted in response to Congress finding that the SWDA did not include adequate standard-setting and enforcement capabilities for sustainable plastic treatment.<sup>53</sup> The 1976 amendment also banned the operation of hazardous/unsafe landfills, outlined generally the implications of hazardous waste, recycling, and renewable energy, and mandated assistance from the federal government to local communities in waste management.<sup>54</sup>

Independently of the SWDA and related enactments, the federal government has made several attempts to regulate use of plastic bags. The most significant and direct approach at creating a national approach to the regulation of plastic bags was the Plastic Bag Reduction Act of 2009 (PBR Act). If it had been passed, the PBR Act would have amended Paper 31 of the Internal Revenue Code of 1986 (IRC) relating to environmental taxes.<sup>55</sup> The amendment would have added a new sub-paper to the IRC with the following provisions regarding plastic bags:

- A requirement that merchants pay an excise tax on single-use carryout bags;
- Provisions providing merchants who set up plastic bag recycling problems with the entitlement to claim a tax refund;
- The establishment of a “Single-Use Carryout Bag Trust Fund” to hold tax revenues;
- Payments made by the Secretary of the Treasury from the trust fund into the Land and Water Conservation Fund; and
- A requirement that the Comptroller General report to Congress on the efficacy of the program in reducing the use of single-use plastic bags.<sup>56</sup>

The ultimate aim of the PBR Act was to curtail single-use packaging in the U.S. in order to reduce environmental harm to ‘watershed and marine’ environments.<sup>57</sup>

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<sup>53</sup> The Resource Conservation and Recovery Act of 1976 was the first legislation that specifically focused on improving solid waste disposal methods. U.S. Env'tl. Prot. Agency, History of the Resource Conservation and Recovery Act, <https://www.epa.gov/rcra/history-resource-conservation-and-recovery-act-rcra#history> (last visited Apr. 21, 2023).

<sup>54</sup> U.S. Env'tl. Prot. Agency, *Summary of the Resource Conservation and Recovery Act*, <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act> (last visited Feb. 28, 2023).

<sup>55</sup> H.R. 2091, 111th Cong. § 2 (2009).

<sup>56</sup> *Id.*

<sup>57</sup> Rebecca Fromer, *Concessions of a Shopaholic: An Analysis of the Movement to Minimize Single-Use Shopping Bags from the Waste Stream and a Proposal for State Implementation in Louisiana*, 23 TULANE ENVTL L.J. 493, 513 (2010). H.R. 2091, 111th Cong. (2009); GovInfo, *H.R.2091 (IH) – Plastic Bag Reduction Act of 2009*, <https://www.govinfo.gov/app/details/BILLS-111hr2091ih> (last visited Feb. 28, 2023). The bill was introduced into the 1st session of the 111th U.S. Congress by Representative James P Moran on 23 April 2009. It was then referred to the Committee on Ways and Means and the Committee on Natural Resources. The bill was introduced into the 1st session of the 111th U.S. Congress by Representative James P Moran on 23 April 2009. It was then referred to the Committee on Ways and Means and the Committee on Natural Resources. H.R. 2091, 111th Cong. (2009).

However, the bill was ultimately not passed into law.<sup>58</sup> While this attempt failed, some commentators argue that more recent efforts provide justification for the establishment of a national regulatory framework. For instance, in her analysis of the Microbead-Free Waters Act of 2015 (MFW Act), Kolcon observes the following:

In 2015, Congress passed the Microbead-Free Waters Act, which “prohibits the manufacturing, packaging, and distribution of rinse-off cosmetics containing plastic microbeads.” According to the Food and Drug Administration, this bill was passed because of concerns that microbeads would not be filtered properly and would end up in lakes and oceans, where the beads would be mistaken for food by marine animals. The reasoning behind this bill is similar to the argument for banning plastic bags—plastic bags are mistaken for food by marine animals and eaten.<sup>59</sup>

The MFW Act directs the National Science Foundation, Department of Energy, EPA, and National Oceanic and Atmospheric Administration (NOAA) “to support research into advancing recycling technologies, plastic waste remediation, [and] the impact of microplastics on public health, and other related topics.”<sup>60</sup> These research efforts are important: as some commentators have noted, further research into microplastics raises the possibility that U.S.-based packaging companies could be forced to comply with “stricter regulations concerning plastic manufacturing in the future.”<sup>61</sup> The legislation is broad in its potential application: stricter regulation concerning plastic manufacturing is relevant to redesigning plastic products to minimize their degradation into microplastics when they become plastic waste, and increased recycling technologies and methods may limit the amount of plastic pollution, and therefore, microplastic pollution.<sup>62</sup>

Perhaps most surprisingly, attempts to regulate plastic at the federal level were also made during the Trump Administration when many environmental initiatives were otherwise shelved in an attempt to decrease federal regulatory authority.<sup>63</sup> For instance, the Save Our Seas 2.0 Act of 2020 (SOS 2.0 Act) received bipartisan support and authorized the EPA, the NOAA, and other bodies, “to establish a diverse set of new programs aimed at preventing plastic waste from reaching

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<sup>58</sup> *Id.*

<sup>59</sup> Kolcon, *supra* note 12, at 206.

<sup>60</sup> Jessica Paige, *What is the new US Plastic Waste Reduction and Recycling Act?*, PACKAGING GATEWAY (June 18, 2020), <https://www.packaging-gateway.com/features/what-is-the-new-us-plastic-waste-reduction-and-recycling-act/>.

<sup>61</sup> *Id.*

<sup>62</sup> See Eur. Env't. Agency, *Microplastics from textiles: towards a circular economy for textiles in Europe*, <https://www.eea.europa.eu/publications/microplastics-from-textiles-towards-a> (last visited Feb. 28, 2023) (regarding redesigning plastic products); Emma Schmaltz et al., *Plastic pollution solutions: emerging technologies to prevent and collect marine plastic pollution*, 144 ENVTL INT'L (2020) (regarding recycling technologies and methods).

<sup>63</sup> See Kim et al., *supra* note 38.

waterways” under provisions such as Section 2004.<sup>64</sup> As with many previous attempts at federal regulation in this space, the SOS 2.0 Act sought to empower state and local governments to better manage plastics and microplastics in runoff.<sup>65</sup> The Act included grants provided through the EPA Trash-Free Waters program with the aim of reducing plastic waste entering the stormwater systems.<sup>66</sup>

It further required the National Academies of Sciences, Engineering, and Medicine to investigate chemical recycling as a potential option.<sup>67</sup> The SOS 2.0 Act provides a total \$30 million annually to support local and non-profit authorities to improve microplastic-treatment.<sup>68</sup> It also established a new, independent Marine Debris Foundation, which will award up to one million dollars every two years for the development of technologies that aim to combat plastic pollution.<sup>69</sup> Finally, the Act authorizes funding for specific studies and pilot projects on topics including reuse opportunities for post-consumer plastic waste.<sup>70</sup>

The SOS 2.0 Act represents the largest U.S. federal investment toward minimizing plastic-waste contributions to date. It builds on the 2006 Marine Debris Research, Prevention, and Reduction Act, which established the NOAA Marine Debris Program,<sup>71</sup> as well as the original 2018 Save Our Seas Act, which enabled NOAA to declare marine-debris states of emergency that allow the use of federal funds for response and clean-up.<sup>72</sup> Perhaps most importantly, along with the Break Free from Plastic Pollution Act of 2021 (BFFPP Act), discussed below, it is one of the earliest pieces of legislation in the U.S. to adopt a ‘circular economy’ approach to the problem of plastic pollution.<sup>73</sup>

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<sup>64</sup> See S. 1982, 116th Cong. (2019); Julianne Jones, *U.S Congress Addresses Marine Plastics at Their Source*, STORMWATER REPORT (Feb. 3, 2021), <https://stormwater.wef.org/2021/02/u-s-congress-addresses-marine-plastics-at-their-source/>. [hereinafter SOS Act];

<sup>65</sup> See S. 1982, 116th Cong. § 3002 (2019)

<sup>66</sup> *Id.* § 2004

<sup>67</sup> *Id.*; Dharna Noor, *We Now Know How Exxon Secretly Fights Crackdowns on Plastic Pollution*, GIZMODO (July 3, 2021), <https://www.gizmodo.com.au/2021/07/we-now-know-how-exxon-secretly-fights-crackdowns-on-plastic-pollution>.

<sup>68</sup> S. 1982, 116th Cong. § 3002 (2019).

<sup>69</sup> *Id.*

<sup>70</sup> *Id.*

<sup>71</sup> Nat’l Oceanic & Atmospheric Admin., Marine Debris Program, <https://marinedebris.noaa.gov/who-we-are/marine-debris-foundation> (last visited Feb. 28, 2023). The Program is the parent organisation of the Foundation.

<sup>72</sup> The Act appears to address concerns over estimates that 11 million metric tons of plastic enter oceans per year, which is expected to triple by 2040. See generally, *U.S Congress*; Greta Moran, *The House Just Passed Another “Save Our Seas” Act. Here’s Why it Won’t*, THE INTERCEPT (Oct. 8, 2020), <https://theintercept.com/2020/10/07/save-our-seas-bill-plastics-pollution/>; Nat’l Oceanic & Atmospheric Admin., Marine Debris Program, <https://marinedebris.noaa.gov/who-we-are/marine-debris-foundation> (last visited Feb. 28, 2023).

<sup>73</sup> Perry Wheeler, *Plastics industry shows desperation ahead of Break Free From Plastic Pollution Act reintroduction*, GREENPEACE (Mar. 24, 2021), <https://www.greenpeace.org/usa/news/plastics-industry-shows-desperation-ahead-of-break-free-from-plastic-pollution-act-reintroduction/>.

### B. A New Comprehensive Approach to Federal Plastic Regulation?

With the Democratic Party winning the Presidential election and gaining control of Congress in 2020, there has been renewed hope for further, more comprehensive legislative reform. The Plastic Waste Reduction and Recycling Act 2021 was, for instance, introduced into the House of Representatives in early 2021 and is designed to guide the director of the Office of Science and Technology Policy to establish a plastic waste reduction and recycling program to improve the global competitiveness of the US recycling industry.<sup>74</sup> The bill had broad-based ambitions to provide a coordinated federal program that accelerates plastic waste reduction and supports recycling research and development.<sup>75</sup> The bill was significant for acknowledging past failures at the federal level, noting that “the United States has failed to invest in the development of domestic recycling markets, technology and materials to make the recycling process more available and efficient, and as a result, the United States recycles only 9 percent of its plastic waste.”<sup>76</sup> As Congresswoman Stevens noted in her support for the legislation:

We can no longer deny that we face a plastic waste crisis. In 2018, the U.S. woke up to the fragile predicament of our plastic waste management system. No longer able to ship our plastic waste to international markets, U.S. cities were forced to cut long-standing recycling programs. Instead, they had to resort to incinerating recyclables or tossing them in landfills...The Plastic Waste Reduction and Recycling Act will help develop a world-leading U.S. industry in advanced plastics recycling technologies, and unleash the innovative potential of our nation to address our plastic waste crisis and generate greater value from the plastics we do produce.<sup>77</sup>

Senator Whitehouse also introduced into Senate the Rewarding Efforts to Decrease Unrecycled Contaminants in Ecosystems Act (REDUCEAct) in June of 2021 in an attempt to “create a powerful new incentive to recycle plastic,” and to halt the “[flooding] of plastic waste” which presents a significant risk to the welfare of ecosystems and public health.<sup>78</sup> The Act anticipated that a fee on the production of virgin plastics would instill a sense of responsibility on the plastic industry for

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<sup>74</sup> Paige, *supra* note 63. The Act establishes research programs, a coordinating body for those research programs, a National Institute of Standards and Technology, National Science Foundation, and call on support from the EPA, Department of Energy, National Oceanic and Atmospheric Administration “[a]s part of the [p]rogram”, with fixed financial appropriations from each body. H.R. 2821, 117th Congress (2021).

<sup>75</sup> H.R. 2821, 117th Congress (2021).

<sup>76</sup> *Id.*

<sup>77</sup> Paige, *supra* note 63.

<sup>78</sup> Sheldon Whitehouse, *Whitehouse Unveils Reduce Act to Tackle Plastic Pollution*, <https://www.whitehouse.senate.gov/news/release/whitehouse-unveils-reduce-act-to-tackle-plastic-pollution> (last visited Feb. 28, 2023).

the associated costs and environmental damage, and more broadly, provide a stronger incentive for market utilisation of recycled plastics.<sup>79</sup>

The REDUCE Act also establishes an excise tax on virgin plastic resin and has sought to provide rebates for a range of exempt products, such as medicines and personal hygiene products, for which virgin plastic used for non-single use products would qualify.<sup>80</sup> The scheme provides that revenue from the tax on virgin plastic would be paid into a dedicated fund, where the funds would be applied in support of efforts to reduce plastic waste and encourage recycling activities.<sup>81</sup>

While all of these legislative efforts have focused on key aspects of plastic pollution,<sup>82</sup> the most wide-ranging federal regulatory effort in this space to date, and potentially the most significant, is the BFFPP Act which aims to address plastic pollution comprehensively at the federal level.<sup>83</sup> First introduced in 2020, and reintroduced in March 2021 by Senator Jeff Merkley (D-OR) and Representative Alan Lowenthal (D-CA), the BFFPP Act, if passed, would address plastic production, consumption and waste management.<sup>84</sup> Although the BFFPP Act does not mention the Basel Convention on Hazardous Wastes specifically, it includes as one of its many components a measure that would largely require the U.S. to comply with its rules.<sup>85</sup>

It is the most far-reaching bill to address the plastic pollution crisis ever introduced in Congress.<sup>86</sup> The BFFPP Act seeks to amend the SWDA to—among other things—“reduce the production and use of single-use plastic products and packaging;” “improve the responsibility of producers in the design, collection, reuse, recycling, and disposal of their consumer products and packaging;” and “prevent pollution from consumer products and packaging entering into animal and human food chains and waterways.”<sup>87</sup>

Though seemingly ambitious in nature and scope, the BFFPP Act offers little in the way of novel approaches to plastic regulation. Instead, it attempts to assemble in one place the best ideas from around the U.S. and the world.<sup>88</sup> The legislation includes measures that the sponsors argue will increase the nation’s meager recycling rates, such as a national “bottle bill” that would incentivize people to return their empty soda and water bottles by providing a 10-cent refund for each bottle. It would also require companies that produce and sell food service and

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<sup>79</sup> *Id.*

<sup>80</sup> *Id.*

<sup>81</sup> *Id.*

<sup>82</sup> Out of these three legislative efforts, only the SOS Act 2.0 appears to have been passed into law. See Sheldon Whitehouse: United States Senator for Rhode Island, *Bipartisan Save Our Seas 2.0 Act Signed Into Law*, <https://www.whitehouse.senate.gov/news/release/-bipartisan-save-our-seas-20-act-signed-into-law> (last visited Feb. 28, 2023); H.R. 7228, 116th Cong. (2019); and H.R. 5389, 117th Congress (2021–2022).

<sup>83</sup> See generally S. 984, 117th Cong. (2021).

<sup>84</sup> Seo, *supra* note 14; Pekow, *supra* note 9. Despite increasing efforts to provide a cohesive national regulatory framework to address plastic pollution, several legislative initiatives like the BFFPP didn’t make it out of committee in either house last year.

<sup>85</sup> Pekow, *supra* note 9.

<sup>86</sup> Mallow, *supra* note 28.

<sup>87</sup> S. 984, 117th Cong. (2021).

<sup>88</sup> Seo, *supra* note 14.

plastic packaging to pay for the waste collection, a burden that now falls primarily on taxpayers.<sup>89</sup>

It further seeks to “[stop] plastic pollution at the source.”<sup>90</sup> To achieve this, the BFFPP Act would ban single-use and other non-recyclable products, and promote investment in recycling and composting, in addition to primarily “[making] producers responsible for the end use of their products.”<sup>91</sup> The BFFPP Act further “proposes a framework to hold single-use plastic producers fiscally responsible for recycling products after consumer use and to phase out carryout plastic bags through a tax.”<sup>92</sup>

The Act also aims to reduce plastic production before it ever has a chance to pollute by phasing out unnecessary single-use plastic products, pausing new plastic facilities, holding companies accountable for their waste, and expanding reuse and refill programs.<sup>93</sup> Importantly, the Act sets minimum standards for states to abide by. This approach allows local governments to pursue, or keep, more aggressive policies and laws.<sup>94</sup>

If passed, it would be the first federal level law to phase out unnecessary single-use plastic products and would give effect to policies that attempt to comprehensively encourage sustainable plastic management.<sup>95</sup> The Act would reduce the production and use of single-use plastics in the U.S, limit the amount of exported plastics, and impose responsibility on the plastic industry for managing plastic waste.<sup>96</sup>

The Act also includes phase out rules for certain single-use products, creates a temporary moratorium on permits for plastic manufacturing facilities, and establishes a national standardized labelling system for recycling and compost receptacles, supported by the EPA.<sup>97</sup> Further—and importantly in light of increased restrictions on plastic waste exports—the Act also limits exports of plastic waste from the U.S.<sup>98</sup>

The principal aim of the Act is to impose accountability for sustainable waste management on plastic producers for their contribution to plastic pollution, through the imposition of rules regarding manufacture and distribution of plastics.<sup>99</sup> The Act reflects this intention through the introduction of an extended producer responsibility (EPR) policy.<sup>100</sup> The means by which the BFFPP Act proposes to

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<sup>89</sup> Corkery, *supra* note 8.

<sup>90</sup> Oceana: Protecting the World’s Oceans, *U.S Bill would Ban Unnecessary Single-Use Plastic, Pause New Plastic Production*, <https://usa.oceana.org/press-releases/us-bill-would-ban-unnecessary-single-use-plastic-pause-new-plastic-production/> (last visited Feb. 28, 2023).

<sup>91</sup> Seo, *supra* note 14.

<sup>92</sup> Kim et al., *supra* note 38.

<sup>93</sup> Mallow, *supra* note 28.

<sup>94</sup> Seo, *supra* note 14.

<sup>95</sup> Oceana, *supra* note 92.

<sup>96</sup> *Id.*

<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> S. 984, 117th Cong. (2021).

<sup>100</sup> *Id.* See also Org. for Econ. Coop. and Dev., *Extended Producer Responsibility*, <https://www.oecd.org/env/tools-evaluation/extendedproducerresponsibility.htm> (last visited Apr. 10, 2023).

enforce EPR provisions include the imposition of minimum recycled content mandates for certain plastic products, the creation of a national container deposit system, and a single-use plastic product ban.<sup>101</sup> The EPR provisions impose fiscal responsibility on certain producers for the collection, management, recycling/composting of products post-consumption.<sup>102</sup> It also establishes minimum percentages of products for reuse/recycle/compost, and increases the minimum threshold for recycled content contained in beverage containers.<sup>103</sup>

A key component of the BFFPP Act is its obligations to “environmental justice,” requiring *inter alia* more rigorous study of the health and environmental impacts of plastic production technologies and practices.<sup>104</sup> These justice concerns are addressed directly through the following mechanisms:

- Holding corporations accountable for their pollution, and requiring producers of plastic products to design, manage, and finance waste and recycling programs.
- Pausing the creation of new plastic facilities and the expansion of existing plastic facilities until critical environment and health protections are put in place.
- Incentivizing businesses to make reusable products that can actually be recycled.
- Reducing and banning certain single-use plastic products that are not recyclable.
- Creating a nationwide beverage container refund program, and establishing minimum recycled content requirements for containers, packaging, and food-service products.
- Generating massive investments in domestic recycling and composting infrastructure.<sup>105</sup>

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<sup>101</sup> S. 984, 117th Cong. (2021).

<sup>102</sup> In this context, extended producer responsibility (EPR) refers to the policy approach of imposing the financial responsibility for plastic products on plastic producers, during the life cycle of the product. The BFFPP expressly provides for EPR under s 12101. This provision proposes that all “responsible [parties]” for a covered product or beverage (defined to include distributors, manufacturers, and retailers under sec. 12001(16)) have membership of a Producer Responsibility Organisation (PRO), and in so doing, satisfy certain performance targets. The responsibilities of producers under the BFFPP are included under section 12102 and 12103. S. 984, 11th Cong. (2021).

<sup>103</sup> *Id.*

<sup>104</sup> Environmental justice refers to the prioritisation of environmental protection in law and policy, supported by mechanisms that limit environmental harm. ScienceDirect, *Environmental Justice*, <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/environmental-justice> (last visited Feb. 28, 2023); Seo, *supra* note 14. The BFFPP provides for “environmental justice” expressly under Section 4 of the amendment.

<sup>105</sup> Mallow, *supra* note 28.



The BFFPP Act appears to address the correct areas for regulatory reform of plastic treatment.<sup>106</sup> Both activist groups and industry groups have praised the overarching aims of the BFFPP Act to reduce plastic waste and improve plastic recycling in the U.S.<sup>107</sup> However, there has been considerable criticism and opposition from plastic industry advocates against the potential economic harm and burdens on the plastic industry.<sup>108</sup> For example, the Vice-President of the American Chemistry Council (ACC) asserted that the BFFPP Act is misguided and harmful because it would lead to restrictions on employment and would nullify financial innovation.<sup>109</sup>

Similarly, while various NGOs have estimated that the Act could encourage plastic practices that would be in the public interests, they claim that the legislation does not provide sufficient economic incentives for those obligated under the framework to support the spirit of the legislation.<sup>110</sup> While the BFFPP Act includes provisions such as the “Clean Communities Program” and “Do Not Flush” labelling, which respond to contemporary issues in plastic waste, a number

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<sup>106</sup> See generally MENA Report, *United States: Following Major Report Revealing Many Plastics Recycling Labels are Misleading Consumers, Udall Calls on Congress to Pass Break Free From Plastic Pollution Act*, PROQUEST, <https://www.proquest.com/docview/2357642009?pq-origsite=primo&accountid=12528>. Plastic treatment refers to the technologies applied to plastic waste for either recycling or degradation. For an explanation of current technologies used for the purposes of treatment, see Fan Zhang et al., *Current technologies for plastic waste treatment: A review*, 282 J. CLEANER PROD. 124523 (2021).

<sup>107</sup> The organisation, #breakfreefromplastic, supported the Bill, recognizing it as supporting “successful state-wide laws across the U.S” on “practical plastic reduction”; proposing “strategies to realize a healthier, more sustainable, and ... equitable future”; and representing “the most comprehensive set of pollution solutions to the plastic pollution crisis ever introduced in Congress”. #breakfreefromplastic, #breakfreefromplastic *Pollution Act*, <https://www.breakfreefromplastic.org/pollution-act/> (last visited Feb. 28, 2023). Greenpeace argued in a public statement that the bill had “strong updated language to uphold environmental justice and to hold big plastic polluting corporations accountable for plastic crisis.” Kate Melges, *Congress: Support the Break Free from Plastic Pollution Act of 2021*, GREENPEACE (Mar. 25, 2021), <https://www.greenpeace.org/usa/congress-support-the-break-free-from-plastic-pollution-act-of-2021/>. Oceanic Global similarly supports the Act as “the most effective way to hold pollution industries accountable, ensure environmental justice, and slow climate change.” Oceanic Global, *The Break Free From Plastic Pollution Act*, <https://oceanic.global/projects/bffppa/> (last visited Feb. 28, 2023). Industry bodies, however, “[desperately]” objected to the Act’s introduction. Louis Gore-Langton, *Plastics industry lashes out at Break Free From Plastic Pollution Act, Greenpeace criticizes “desperate” attempts to derail the legislation*, PACKAGING INSIGHTS (Mar. 29, 2021), <https://www.packaginginsights.com/news/plastics-industry-lashes-out-at-break-free-from-plastic-pollution-act-greenpeace-criticizes-desperate-attempts-to-derail-the-legislation.html>; Plastics Industry Association, *Plastics Responds to Break Free Act*, <https://www.plasticsindustry.org/article/plastics-responds-break-free-act> (last visited February 28, 2023).

<sup>108</sup> Megan Quinn, *Break Free from Plastic Pollution Act reintroduced, plastics industry ramps up opposition*, WASTE DIVE (Mar. 25, 2021), <https://www.wastedive.com/news/break-free-from-plastic-pollution-act-reintroduced/597338/>.

<sup>109</sup> *Id.*; AM. CHEMISTRY COUNCIL, *ECONOMIC IMPLICATIONS OF A PERMIT “PAUSE”* 2–3 (May 2021), <https://www.plasticmakers.org/files/bf2b00ebffe10003f2f63a659f9ca430c77121b5.pdf>.

<sup>110</sup> Neil Seldman & Dan Knapp, *Break Free From Plastic Pollution Act is a Wolf in Sheep’s Clothing*, INST. FOR LOCAL SELF-RELIANCE (Apr. 9, 2021), <https://ilsr.org/breaking-free-plastic-bill-wolf-sheeps-clothing/>; see also Quinn, *supra* note 110.

of NGOs argue the measures do not go far enough and the Act, therefore, does not include adequate economic incentives to support the spirit of the legislation.<sup>111</sup>

Inadequate oversight in this context could contribute to non-compliance in producers' attempts to avoid financially onerous obligations. Further, as is typical of any attempt to legislate in this area of plastic regulation (and, more broadly, in the area of environmental protection), some commentators and industry actors claim the EPR framework could unduly contribute to economic hardship.<sup>112</sup>

An alternative to reliance on EPR as the main responsibility and accountability mechanism would be oversight through public regulators at the municipal or federal level. The argument in support of this approach is that public regulators do not have the same profit-making private interests in the plastic industry, which would provide for more impartial oversight, better enforcement, and, in the process, help to achieve the main objectives of the Act.<sup>113</sup>

While there are a number of potential benefits associated with the introduction of the BFFPP Act, it is unlikely to become law since the Act has no Republican co-sponsors.<sup>114</sup> The likelihood of the Act's implementation have also been harmed by the COVID-19 pandemic and increased reliance on plastic products, which has stalled momentum for the legislation.<sup>115</sup> While this is disappointing, the comprehensive nature of the legislative efforts suggest there is growing support for reform at the federal level. Further, while not all provisions are likely to be implemented, there may be some support for specific provisions. For instance, there is some hope for the introduction of mandatory standardized labels on recycling and composting bins to help people more effectively sort their used containers.<sup>116</sup> Further, the approach of the BFFPP Act to plastic pellets has been used in the Plastic Pellet Free Waters Act, which is co-sponsored by 12 senators.<sup>117</sup> At this stage, while progress is ongoing at the federal level, states and counties are likely to continue leading the way on plastic pollution regulation.<sup>118</sup>

#### IV. State and Local Plastic Initiatives

Local efforts to regulate plastic have been wide-ranging in the absence of a comprehensive federal regime. For instance, state-level regulation over plastic waste management, in general, far exceeds the federal government's current involvement in waste management (perhaps facilitated by the fact that many

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<sup>111</sup> H.R. 2238, 117th Cong. §§ 12402, 12305 (2021–2022).

<sup>112</sup> America's Plastic Makers, "Pausing" Plastic Permits Would Hurt American Jobs and Economic Growth, YouTube (June 8, 2021), <https://www.youtube.com/watch?v=6r9himDFNag>.

<sup>113</sup> Alex Truelove, *Comprehensive Bill Calls for U.S to Move Beyond Plastic*, PIRG (Mar. 25, 2021), <https://uspig.org/news/usp/comprehensive-bill-calls-us-move-beyond-plastic>.

<sup>114</sup> Corkery, *supra* note 8.

<sup>115</sup> Kim et al., *supra* note 38.

<sup>116</sup> Corkery, *supra* note 8.

<sup>117</sup> S.1507, 117th Cong. (2021–2022). While encouraging, the timeline for when the bill might be passed is still very unclear.

<sup>118</sup> Seo, *supra* note 14.

attempts at federal regulation have sought to empower local regulators in this area).<sup>119</sup>

As with many other parts of the world, these efforts have been most extensive as they relate to the regulation of single-use plastic bags, although efforts in other areas of plastic regulation are quickly developing. As of August 2019, eight states, 40 counties, and nearly 300 cities had adopted policies that either through a ban, fee, or combination thereof, look to reduce the consumption of single-use plastic bags.<sup>120</sup> U.S. states and local authorities have imposed taxes, introduced plastic bag bans and implemented other incentives to promote the use of reusable bags.<sup>121</sup> As of 2021, over 500 local plastic bag ordinances have been adopted in 28 states, and nine states have adopted state-wide plastic bag reduction laws.<sup>122</sup> The analysis that follows considers some of the key regulator efforts at the state and local level.

### A. State Initiatives

Maine was the first state to adopt ‘choice architecture’ as a means to reduce the consumption of single-use plastic bags state-wide, and to ban single-use polystyrene containers.<sup>123</sup> However, California,<sup>124</sup> New York,<sup>125</sup> and Hawaii<sup>126</sup> were the first three states to implement legislation that bans single-use plastic bags.

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<sup>119</sup> Wagner, *supra* note 15, at 3.

<sup>120</sup> Seo, *supra* note 14.; Rose, *supra* note 14, at 138. According to Zero Waste Campaign Director with U.S. Public Interest Research Group, Alex Trulove, “The amount of just individual pieces of legislation that have been introduced at the state and local level, in the last five years has, increased by an order of magnitude, maybe more.”

<sup>121</sup> Kim et al., *supra* note 38.

<sup>122</sup> Jennie Romer, *Roundup of Statewide Bag Laws and Preemption*, SURFRIDER FOUND. (Feb. 24, 2021) <https://www.surfrider.org/coastal-blog/entry/round-up-of-statewide-bag-laws-and-preemption>.

<sup>123</sup> Wagner, *supra* note 15, at 7. Choice architecture seeks to alter consumer behaviour without banning certain behaviours by encouraging a preferential selection. *See* Travis Wagner, *Municipal Approaches in Maine to Reduce Single-use Consumer Products* 25 MAINE POL'Y REV. 36 (2016). In the case of Maine, integrating “default choice architecture” into law (contained in LD 1102 for Maine’s approach) “seeks to alter consumer behaviour, without banning certain behaviours, by encouraging a preferential selection.” *Id.*

<sup>124</sup> California in 2014, effective from 2016, passed a Ban on plastic bags less than 2.25 mils in thickness and set a mandatory minimum 10-cent fee on all available carryout bags (whether paper, reusable, compostable plastic). The laws applied to retailers but whether it applied to restaurants was addressed locally. Romer, *supra* note 124.

<sup>125</sup> New York State’s ban on plastic bags took effect in 2020. Nat’l Conf. of State Legis. (NCSL), *State Plastic Bag Legislation* (Feb. 2021) <https://www.ncsl.org/research/environment-and-natural-resources/plastic-bag-legislation.aspx>. The New York state legislature (as part of the 2019 state budget and effective from March 1, 2020) banned all plastic carryout bags made from plastic film but there was no mandatory fee component. Rather municipalities could opt-in to 5-cent flat paper bag fee and the law applied to retailers only, pre-empting restaurants from the regulation’s ambit. Romer, *supra* note 124.

<sup>126</sup> Hawaii does not have a statewide plastic bag ban, but each county has prohibited the item. Romer, *supra* note 124.

These early movers were followed by Vermont,<sup>127</sup> Maine,<sup>128</sup> Oregon,<sup>129</sup> Delaware,<sup>130</sup> Washington D.C.,<sup>131</sup> Connecticut,<sup>132</sup> Washington state,<sup>133</sup> and New Jersey.<sup>134</sup>

California as a state has also banned single-use plastic straws given out at restaurants unless one is requested by the customer from January 2019,<sup>135</sup> while Vermont currently has the most comprehensive state-level plastic regulation covering bags, straws, drink stirrers and foam food packaging.<sup>136</sup> Hawaii's ban is based on single-use bag bans in its major counties, with bans in Kauai, Maui, Hawaii and Honolulu counties taking effect between 2011 and 2015.<sup>137</sup> However, it should be noted that Hawaii's ban is de facto in nature being administered at the individual local government level.<sup>138</sup> The remainder of this section explores the regulatory efforts in California and New York as the two largest states that have attempted comprehensive regulation in this area.

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<sup>127</sup> The state of Vermont (adopted 2019, effective from July 1, 2020), applying to restaurants and retailers, imposed a ban on plastic bags other than polypropylene bags with stitched handles and a mandatory 10-cent fee on paper bags with no fee mandated for reusable bags. *Id.*

<sup>128</sup> Legislation (An Act To Eliminate Single-use Plastic Carry-out Bags) prevents merchants from supplying single-use carryout bags at the point of sale or otherwise making the bags available to the customers but does have exemptions for certain categories of plastic and paper bags. *See, e.g.,* Maine Legis., *129th Maine Legislature, First Regular Session (2022)* [https://mainelegislature.org/legis/bills/display\\_ps.asp?ld=1532&PID=1456&snum=129](https://mainelegislature.org/legis/bills/display_ps.asp?ld=1532&PID=1456&snum=129).

<sup>129</sup> Oregon adopted laws, effective from January 1, 2020 that, applied to merchants and restaurants, banned plastic bags under 4.0 mils in thickness; imposed a mandatory 5-cent fee on all available carryout bags whether paper or reusable. Romer, *supra* note 124.

<sup>130</sup> Legislators wanted to encourage the use of reusable bags so merchants as per the statute must have an at-store recycling program that allows for the return of plastic bags and all plastic carryout bags need to display a recycling message on them. *See, e.g.,* Legiscan, *Delaware House Bill 130 (Prior Session Legislation) (2022)* <https://legiscan.com/DE/bill/HB130/2019>

<sup>131</sup> Legislation designed to protect the aquatic and environmental assets of the region, banned the use of disposable non-recyclable plastic carryout bags; put a fee on all other disposable carryout bags provided by certain merchants; and establishes the Anacostia River Cleanup and Protection Fund. *See* NCSL, *supra* note 127.

<sup>132</sup> Connecticut (adopted 2019, the fee element effective August 1, 2019, the ban being effective from July 21, 2021) and decreed a mandatory minimum 10-cent fee on all film plastic bags; banned from July 2021 plastic bags under 4.0 mils in width. However, there is no mandatory fee on paper or reusable carryout bags. Romer, *supra* note 124.

<sup>133</sup> Washington state (adopted 2020, effective from January 1, 2021), applying only to retailers, has banned plastic bags under 2.25 mils, which increases to 4.0 mils after 4 years and imposes a mandatory 8-cent fee on all available carryout bags (whether paper or reusable, increasing to a 12-cent fee after 4 years operation. *Id.*

<sup>134</sup> Kolcon, *supra* note 12, at 208. The New Jersey legislature adopted laws in 2020 that till 2022 ban statewide plastic bags used by retailers and restaurants, expanded Polystyrene foam and straws; prohibits single-use plastic and paper and film plastic. Romer, *supra* note 124.

<sup>135</sup> California Assembly Bill 1884; Anna Chen, *New California laws on Straws and Soda*, *Krost* (Oct. 10, 2018) <https://www.krostcpas.com/restaurant-newsletter/new-california-laws-straws-soda>.

<sup>136</sup> Romer, *see* alternative citation: National Caucus of Environmental Legislators, 'Vermont enacts Most Comprehensive Single-Use Plastic Ban in the Nation', July 8, 2019, <https://www.ncelenviro.org/articles/vermont-enacts-most-comprehensive-single-use-plastic-ban-in-the-nation/>.

<sup>137</sup> *State Plastic*, *supra* note 133.

<sup>138</sup> Kolcon, *supra* note 12, at 208.

## B. California

California was the first state to ban most single-use plastic bags in 2014. This took effect in 2016.<sup>139</sup> California state law originally pre-empted local governments from charging a fee for plastic bags at checkout but did not prohibit bans.<sup>140</sup> This partial restriction resulted in the adoption of 110 local plastic bag bans in California often coupled with a fee on paper bags.<sup>141</sup> The ordinances covered 43 percent of California's population, which gave rise to a citizen-ballot initiative passed in November 2016 that adopted the first ever state-wide law in the U.S. banning the distribution of all single-use plastic shopping bags and levying a 10-cent fee on paper bags.<sup>142</sup>

The Democrat-majority led Californian Legislature hoped to transform the entire recycling chain by banning single-use plastic materials.<sup>143</sup> However, intense lobbying from container manufacturers, retailers, and the plastic industry, accompanied with legislative mismanagement, jeopardized the proposal for two years consecutively.<sup>144</sup> Identical Assembly and Senate bills introduced during this period sought not only to regulate single-use plastic bags, but they called for a 75 percent reduction in single-use plastic packaging, utensils, straws, containers and other foodware dumped into landfills.<sup>145</sup> Had the bills passed, they would have required that these products be completely recyclable or compostable by 2032, whether sold in stores or online in California.<sup>146</sup>

As previously noted, the proposal attracted intense opposition from the plastics industry. Dart Container Corp. donated to 75 lawmakers, including 20 of the 24 Assembly members who abstained from the bill.<sup>147</sup> The lobbying group Californians for Recycling and the Environment, spearheaded by packaging manufacturer Novolex, reported spending \$3.3 million over the first 18 months of the two-year session to oppose the two bills.<sup>148</sup> Many retailers and manufacturers also opposed the bills, including Target and General Mills.<sup>149</sup> A significant challenge in enacting recycling laws in California is that recyclable replacements

<sup>139</sup> Wagner, *supra* note 15, at 2. See CalRecycle, *Single-Use Carryout Bag Ban (SB 270): Proposition 67: November General Election*, <https://calrecycle.ca.gov/plastics/carryoutbags/>.

<sup>140</sup> A.B. 2449, 2021-2022 Leg., Reg. Sess. (Cal. 2022). See also Jennie R. Romer & Leslie Mintz Tamminen, *Plastic Bag Reduction Ordinances: New York City's Proposed Charge on All Carryout Bags as a Model for U.S. Cities*, 27 TUL. ENV'T. LAW J. 2, 241 (2014), <https://journals.tulane.edu/elj/article/view/2334>.

<sup>141</sup> Wagner, *supra* note 15, at 2.

<sup>142</sup> *Id.* at 4.

<sup>143</sup> A.B. 842, 2023-2024 Leg., Reg. Sess. (Cal.). See also Debra Kahn, *If California won't enact a plastic waste overhaul, will anyone?*, POLITICO (Sept. 15, 2020), <https://www.politico.com/news/2020/09/13/california-plastic-waste-overhaul-412807>

<sup>144</sup> Kahn, *supra* note 144.

<sup>145</sup> A.B.1 1080, 2019-2020 Leg., Reg. Sess. (Cal.); S. B. 54, 2019-2020 Leg., Reg. Sess. (Cal.).

<sup>146</sup> Rachel Becker, *Legislature narrowly rejects nation's toughest restrictions on plastics*, Cal Matters (Sept. 1, 2020), <https://calmatters.org/environment/2020/09/california-legislature-plastics/>.

<sup>147</sup> Kahn, *supra* note 145.

<sup>148</sup> *Id.*

<sup>149</sup> Catherine Boudreau & Debra Kahn, *Businesses back plans to bill them for recycling, drawing skepticism*, POLITICO (Feb. 22, 2022), <https://www.politico.com/news/2022/02/22/businesses-recycling-00010440>.

may not actually be recycled if there is no market for them, and their compostable counterparts may not break down without the high temperatures of an industrial composting facility.

### C. New York

New York's plastic regulatory efforts are largely contained in Titles 27 and 28 of the Environmental Conservation Law. Title 27 (Plastic Bag Reduction, Reuse and Recycling) outlines provisions for in-store recycling programs where customers may return clean plastic carryout bags and film plastic to the store.<sup>150</sup> The recycling program details specific requirements, including, the following words displayed on the bag, in a manner visible to a consumer: "PLEASE RETURN TO A PARTICIPATING STORE FOR RECYCLING."<sup>151</sup> Title 28 of the Environmental Conservation Law, introduced through Title 28 of New York Senate Bill 1508 of 2019, goes even further by imposing a ban on plastic bags. The framework provides that no person required to collect tax can distribute any plastic carryout bags to customers unless they are exempt bags.<sup>152</sup> Exempt bags are those used solely for the following purposes:<sup>153</sup>

- for wrapping uncooked meat, fish, or poultry;
- to package bulk items such as fruit, vegetables, grains or candy;
- to contain food sliced or prepared to order; and
  - to contain a newspaper for delivery to a subscriber.

The provision also exempts the following bags:<sup>154</sup>

- bags sold in bulk to a consumer at the point of sale;
- trash bags;
- food storage bags;
- garment bags;
- bags prepackaged for sale to a customer;
- plastic carryout bags provided by a restaurant, tavern or similar food service establishment, as defined in the state sanitary code, to carryout or deliver food; or
- bags provided by a pharmacy to carry prescription drugs.

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<sup>150</sup> N.Y. Env't Conserv. Law § 27-2703 (2023).

<sup>151</sup> *Id.* § 27-2705.

<sup>152</sup> *Id.* § 27-2803.

<sup>153</sup> *Id.* § 27-2801.

<sup>154</sup> *Id.*

In addition to the ban, Title 28 allows individual counties the option of placing a five-cent fee on each paper carryout bag provided by a person required to collect tax to a customer in the state.<sup>155</sup> Importantly, the state of New York has taken sole jurisdiction over all of these regulatory mechanisms, pre-empting local authorities from imposing their own frameworks.<sup>156</sup> These efforts precluded the adoption of city-wide ordinances that would have imposed bag fees in an attempt to create state-wide solutions to the problem.<sup>157</sup>

New York has also established the New York State Plastic Bag Task Force (NYSPBTF) to develop a “statewide plan to address plastic bag pollution.”<sup>158</sup> However, there are no reporting requirements under the bill, and the NYSPBTF notes that most single-use plastic bags are improperly discarded.<sup>159</sup> As a result, the City of New York alone is reported to spend above \$12 million annually “to clean up and properly dispose of plastic.”<sup>160</sup>

#### D. Local Initiatives

The state initiatives outlined above have often built on, or sought to coordinate, local efforts. Local governments in the U.S. hold primary responsibility with respect to managing municipal solid waste and many initiatives have, as a result, arisen from this level of government.<sup>161</sup> However, local governments generally lack authority to enforce producer responsibility for plastic waste.<sup>162</sup> To compensate for this, local ordinances have sought to support “strategies seeking to reduce . . . consumption of single-use bags” at the point of retail sale, and through the imposition of charges for single-use plastic bags.<sup>163</sup>

The introduction of local ordinances banning and/or taxing single-use plastic bags in the U.S. is substantial and occurs at various levels of government.<sup>164</sup> As of

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<sup>155</sup> *Id.* § 27-2805.

<sup>156</sup> *Id.* §§ 27-2809, 27-2713.

<sup>157</sup> The New York city council also adopted a city-wide ordinance, requiring a minimum five-cent charge by retailers for each plastic and/or paper bag, although Governor Cuomo pre-empted the ordinance the day before the bag fee was to become operative. His opposition was based on inadequate assessment of the plastic bag problem, Cuomo’s interest in a “better state-wide solution”, and substantial criticism on the “deeply flawed” financial and tax implications of the ordinance. However, the state passed a state-wide ban on single-use plastic bags in April 2019, which bans plastic bags “entirely” and exempts takeaway and fresh produce bags. Individual counties are also at liberty to enact paper bag taxes, the revenue from which would be invested to support communities’ plastic recycling and reuse practices. Despite the intricacies of this ban and the state’s trial-and-error approach, the New York example demonstrates a nationwide plastic regulation regime “may indeed be possible.” Rose, *supra* note 14, at 137.

<sup>158</sup> N.Y. State Plastic Bag Task Force, *An Analysis of the Impact of Single-Use Plastic Bags: Options for New York State Plastic Bag Legislation* (Jan. 2018), [https://www.dec.ny.gov/docs/materials\\_minerals\\_pdf/dplasticbagreport2017.pdf](https://www.dec.ny.gov/docs/materials_minerals_pdf/dplasticbagreport2017.pdf).

<sup>159</sup> *Id.* at 15.

<sup>160</sup> Rose, *supra* note 14, at 136.

<sup>161</sup> Wagner, *supra* note 15, at 10.

<sup>162</sup> *Id.*

<sup>163</sup> *Id.*

<sup>164</sup> *Id.*

September 2017, 271 local government ordinances banning and/or taxing single-use plastic bags in the U.S. were operational, in addition to local government ordinances “[promoting] voluntary reduction in bags” through various educational and social policies.<sup>165</sup>

Individual cities have also imposed their own taxes or bans. San Francisco and Seattle have banned single-use plastic, while Washington DC and New York both tax and ban plastic bags.<sup>166</sup> Washington DC’s 2009 ban has led to a 50 percent reduction in single-use plastic bags.<sup>167</sup> In Seattle, a ban on plastic shopping bags, which excluded food-service establishments such as restaurants, coupled with a five-cent fee on paper shopping bags, took effect in 2012.<sup>168</sup> Based on waste characterizations, between 2010 and 2014 the amount of plastic bags in residential waste declined in Seattle by nearly 50 percent in spite of a 10 percent increase in the city’s population.<sup>169</sup>

Seattle also became the first city in the U.S. to ban single-use plastic straws, utensils and cocktails—beginning on July 1st, 2018—while banning plastic straws is under active consideration by the Hawaiian state legislature.<sup>170</sup> Miami Beach and Fort Myers, Florida have banned plastic straws while Oregon offers a plastic straw only upon request.<sup>171</sup> A number of municipalities including San Diego, San Francisco, Berkeley, Santa Monica, Davis Richmond, New York City, and Portland have all enacted expanded polystyrene bans.<sup>172</sup> Local regulatory efforts have also developed in various municipalities, which tend to rely on a combined “ban” and “tax” approach, such as in San Francisco and Seattle.<sup>173</sup>

While there are increasing efforts to deal with plastic pollution at every level of government in the U.S., industry opposition continues to challenge the implementation of a comprehensive and cohesive regulatory approach. The section that follows explores some of the industry tactics used to resist effective regulation in this area.

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<sup>165</sup> *Id.*

<sup>166</sup> NCSL, *supra* note 127.

<sup>167</sup> Kolcon, *supra* note 12, at 209.

<sup>168</sup> Metro. Wash. Council of Gov’ts, *Plastic Bag Report 2012 Update: Final Draft 9/27/12* (Sept. 27, 2012) 21

<https://www.mwcog.org/file.aspx?&A=js%2BrLzJ%2FgwrZYgFZZtOBbga9ufMVd9AxfhL3ZeNGFQA%3D>.

<sup>169</sup> Wagner, *supra* note 15, at 7.

<sup>170</sup> Kristin Houser, *Seattle has become the first major US city to ban plastic straws*, WORLD ECON. FORUM (July 5, 2018), <https://www.weforum.org/agenda/2018/07/seattle-becomes-the-first-major-u-s-city-to-ban-plastic-straws>.

<sup>171</sup> Jannely Espinol, *Two Popular Florida Cities Are Banning Plastic Straws*, NARCITY MIAMI (Jan. 29, 2019), <https://www.narcity.com/miami/two-popular-florida-cities-are-banning-plastic-straws>; Rachel Kramer Bussel, *Portland, Oregon, Bans Restaurants From Automatically Giving Out Plastic Straws and Utensils*, DAILY MEAL (Dec. 17, 2018),

<https://www.thedailymeal.com/drink/portland-oregon-plastic-straw-law/121718>.

<sup>172</sup> Romer, *supra* note 124.

<sup>173</sup> NCSL, *supra* note 127.



## V. Regulatory Challenges: Industry Opposition

As the preceding discussion suggests, it is clear that, compared to most other developed states, plastic pollution regulation in the U.S. is complex, confusing, incomplete, uncoordinated, and, as a result, deficient. The nature of the U.S. political system, characterized by lack of bipartisanship, and competition between various levels of government, has contributed to failures within the system. However, two other important factors have caused particular challenges in the U.S. when it comes to devising and implementing comprehensive, effective plastic regulation regimes. First, as briefly mentioned in the introduction to this paper, the U.S. political system is prone to industry capture. This has been evident at all levels of government when it comes to plastic regulation. Second, and related to the first challenge, the use, often by industry actors, of 'pre-emption' laws means that efforts to stymie plastic pollution regulation have a greater chance of success in the U.S. than they might otherwise have in other countries.

### A. Political Influence and Division within the Scientific Community

The plastic industry is a significant part of the U.S. economy and, as a result, exerts considerable power when it comes to regulation. The proactive opposition of the U.S. plastics industry is perhaps the most significant, although—as is evident from the examples of Seattle and New York explored in this paper—not insurmountable obstacle in the U.S. to successful adoption of national and/or state-based plastic regulation.<sup>174</sup> Plastic producing and petrochemical companies have implemented an anti-plastic regulatory agenda that is fronted by trade associations, including the American Petroleum Institute and American Chemistry Council (ACC).<sup>175</sup> Exxon, for example, worked with the ACC to create model legislation on plastic issues and often would call for the government to study health impacts of any proposed plastic regulation significantly 'putting off' implementation of regulation. For example, the SOS legislation (which the ACC was instrumental in getting passed) main output was to call for a study on the issue of marine pollution, which delayed needed legislation action.<sup>176</sup>

Leading the charge against bag bans is the American Progressive Bag Alliance. This powerful organization represents the plastic bag industry, which employs nearly 25,000 workers in 40 states.<sup>177</sup> The Alliance relies on what NGOs consider

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<sup>174</sup> Rose, *supra* note 14, at 139.

<sup>175</sup> Noor, *supra* note 67. For example, the American Chemistry Council provided funding to support a campaign for anti-plastic bag charges, with a similar interruption by the industry against NYC's five-cent bag tax. Consistent with the industry's opposition on bag bans and taxes, the plastic industry emphasizes recycling to be the "best and only way" to reduce plastic waste, as contended by the project, 'Bag the Ban'. However, the miniscule recycling rates in the United States renders this intense support for recycling as "not convincing" and an ineffective policy response.

Rose, *supra* note 14, at 139.

<sup>176</sup> See Noor, *supra* note 67.

<sup>177</sup> Samantha Maldonado et al., *Plastic bags have lobbyists. They're winning*. POLITICO (Jan. 20, 2020), <https://www.politico.com/news/2020/01/20/plastic-bags-have-lobbyists-winning-100587>.

to be spurious scientific arguments to justify its opposition to banning plastic bags.<sup>178</sup> For instance, there is regular criticism from the alliance that plastic bans may not be a “truly environmental option” for sustainable plastic management, arguing that “single use” is not an accurate characterization of plastic bags.<sup>179</sup> These studies are used to put forward plastic bags as the more truly environmental option over paper bags. Executive Director Matt Seaholm also points to a 2017 Canadian study demonstrating that 78 percent of plastic bags have a second life—for example, packed school lunches or the disposal of pet waste in defense of the ongoing production and use of plastic bags.<sup>180</sup>

Industry lobby groups are generally able to ensure passage of bills favorable to their position at the state and federal level because of their significant financial contributions.<sup>181</sup> Since 2015 the American Plastic Association, for instance, funded 13 states with the goal of seeking to prohibit plastic bag bans.<sup>182</sup> States such as Idaho, Arizona, North Dakota, Minnesota, Oklahoma, Iowa, Missouri, Wisconsin, Michigan, Indiana, Mississippi, and Florida, have all, for instance, adopted laws that prevent local government imposition of plastic bag bans with the financial assistance of the American Plastic Association.<sup>183</sup> Cities such as Boulder and Aspen have implemented bag fees, although cities in Texas have struggled to successfully impose plastic bag bans.<sup>184</sup> While the plastics industry regularly argues that plastic bag taxes or fees disproportionately affect lower income communities,<sup>185</sup> several studies that have critically analysed these mechanisms have shown that the view lacks merit.<sup>186</sup>

In 2019, major producers and utilizers of single-use plastic created a ‘not for profit’ entity, the “Alliance to End Plastic Waste” (EPW Alliance). The EPW Alliance acknowledges that plastic is an environmental problem but highlights its ‘freshness and hygiene’ advantages.<sup>187</sup> Telesetsky argues that the focus of the EPW Alliance is to protect the corporate status quo focusing on “Infrastructure, Innovation, Education and Engagement, and Clean Up” and the need to “create value from plastic waste.”<sup>188</sup>

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<sup>178</sup> *Id.*

<sup>179</sup> Sarah Gibbens, *See the complicated landscape of plastic bans in the U.S.*, NAT'L GEO. (Aug. 16, 2019), [www.nationalgeographic.com/environment/article/map-shows-the-complicated-landscape-of-plastic-bans](http://www.nationalgeographic.com/environment/article/map-shows-the-complicated-landscape-of-plastic-bans). Telesetsky, *supra* note 35.

<sup>180</sup> Maldonado et al., *supra* note 179.

<sup>181</sup> *Id.*

<sup>182</sup> Schlachter, *supra* note 24, at 12. The American Chemistry Council (formerly the American Plastics Association) has been actively involved in lobbying against the introduction of plastic bag bans. Perry Wheeler, *Chemical and plastics industry and ALEC conspiring to block communities from acting on plastic pollution crisis*, GREENPEACE (Mar. 1, 2019), <https://www.greenpeace.org/usa/news/chemical-and-plastics-industry-and-alec-conspiring-to-block-communities-from-acting-on-plastic-pollution-crisis/>.

<sup>183</sup> *Id.*

<sup>184</sup> *Id.*

<sup>185</sup> Miho Ligare, *How Bag Bans Can Play a Role in Advancing Environmental Justice*, SURFRIDER FOUND. (June 28, 2021), <https://www.surfrider.org/news/how-bag-bans-can-play-a-role-in-advancing-environmental-justice>.

<sup>186</sup> Rose, *supra* note 14, at 140.

<sup>187</sup> Telesetsky, *supra* note 35, at 70.

<sup>188</sup> *Id.*

It is also clear that U.S. oil and natural gas companies understand that as the country moves towards more renewable energy supplies and encourages the growth in electric vehicles, plastic production will provide an alternative growth market. Judith Enck, former EPA regional administrator and founder of advocacy group Beyond Plastics, noted: “The fossil fuel industry is losing their transportation fuel market and they’re losing their electricity market, so they have shifted to plastic production in a big way.”<sup>189</sup> For example, there is significant evidence suggesting that Exxon has actively sought to “combat regulation of plastics.”<sup>190</sup> Video evidence has uncovered not only a “behind-the-scenes campaign” against plastic regulation, but that Exxon has, “employed the same tactics. . . previously used to derail climate policies,” aiming to defeat effective regulation of plastic.<sup>191</sup>

### B. Promotional Campaigns: Individual vs Collective Responsibility

Large oil and gas companies have also successfully managed to shift the burden of combatting the plastic problem on to individuals, through popularizing terms such as “carbon footprint.” An example of this is the famous ad campaign that aired in the U.S. during the 1970s with the slogan “People Start Pollution. People can stop it.”<sup>192</sup> This is despite the fact that major companies such as Coca-Cola, PepsiCo and Nestle were recently named the world’s top plastic polluters for the third year in a row, and accused of “zero progress” on reducing plastic waste.<sup>193</sup> In particular, Coca-Cola was ranked the world’s top plastic polluter by Break Free From Plastic in its annual audit, after its plastic beverage bottles were the most frequent in litter sites.<sup>194</sup> Despite each company disputing the “zero progress” claim, Coca-Cola, PepsiCo, Nestle and Unilever were found to be responsible for half a million tons of plastic pollution in six developing countries each year, according to a survey conducted by NGO Tearfund.<sup>195</sup>

The Plastic industry in the U.S. has also implemented campaigns like ‘Bag the Ban’ which advertises recycling as the best way to reduce plastic waste.<sup>196</sup> Whilst recycling is beneficial and does mitigate the issue of plastic pollution, it is important

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<sup>189</sup> Noor, *supra* note 67. For example, the most common plastic, polyethylene, is projected to increase in volume by 40 percent by 2028.

<sup>190</sup> Lawrence Carter, *Inside Exxon’s playbook: How the oil giant works through front groups to head-off regulations on toxic chemicals and plastics*, UNEARTHED (July 1, 2021), <https://unearthed.greenpeace.org/2021/07/01/exxon-undercover-pfas-plastic-chemicals/>.

<sup>191</sup> *Id.*

<sup>192</sup> Arwa Mahdawi, *Most plastic will never be recycled – and the manufacturers couldn’t care less*, THE GUARDIAN (Sept. 16, 2020), <https://www.theguardian.com/commentisfree/2020/sep/15/most-plastic-will-never-be-recycled-and-the-manufacturers-couldnt-care-less>.

<sup>193</sup> Karen McVeigh, *Coca-Cola, Pepsi and Nestlé named top plastic polluters for third year in a row*, THE GUARDIAN (Dec. 7, 2020), <https://www.theguardian.com/environment/2020/dec/07/coca-cola-pepsi-and-nestle-named-top-plastic-polluters-for-third-year-in-a-row>.

<sup>194</sup> *Id.*

<sup>195</sup> *Id.*

<sup>196</sup> American Recyclable Plastic Bag Alliance, *Bag the Ban*, <https://www.bagtheban.com/> (last visited Apr. 21, 2023).

to note that governments, even in developed countries like the United States, find it difficult to properly recycle plastic. Only 15 percent of plastic bags are properly recycled and therefore such policies are not sufficient to effectively manage current plastic outputs.<sup>197</sup>

Despite historical focus on how individuals and communities can sustainably manage plastic via grassroots recycling efforts, the notion of grassroots recycling has been characterized as an “ideal” perpetuated by the plastics industry to direct the responsibility for plastic pollution on consumers.”<sup>198</sup> The U.S. public has been told that recycling is an activity to be carried out vigorously. The advent of ‘wishcycling,’ described as an “insidious phenomenon” that perpetuates recycling as a “blanket solution to our single-use plastics addiction” is based on public perception that the plastics they recycle are subsequently ‘recycled.’<sup>199</sup> While the public has become fixated on recycling practices at a microcosm, the plastics industry “exponentially increased” plastic pollution.<sup>200</sup>

U.S. plastic producer companies have long been aware that “[keeping] plastic out of landfills and the environment” could not be achieved through recycling, supported with “serious doubt” from the 1970s that “[recycling] plastic can never be. . . (economically) viable.”<sup>201</sup> Records from as early as 1973 suggest the plastic industry understood that plastic recycling was not scalable.<sup>202</sup> As Thomas noted, “If the public thinks that recycling is working, then they are not going to be as concerned about the environment.”<sup>203</sup>

## VI. Using the Legal System: Pre-emption Laws

Industry efforts have also focused on thwarting localized efforts at sustainable plastic management through the support of state-wide pre-emption laws. At the time of writing, such laws have been implemented in 18 states.<sup>204</sup> Pre-emption laws, in the context of plastic regulation, are defined as laws which “prohibit municipalities from adopting local ordinances that further regulate a particular (plastic) product, namely bans or fees on carryout plastic bags.”<sup>205</sup> These pre-emption laws are a mechanism through which the plastics industry “fight[s] back with sophisticated legislative manoeuvres [via] state pre-emption of local plastic reduction laws.”<sup>206</sup> The proliferation of pre-emptions laws against local regulation

<sup>197</sup> D.W. Laist, *Impacts of marine debris: entanglement of marine life in marine debris including a comprehensive list of species with entanglement and ingestion records in MARINE DEBRIS: SOURCES, IMPACTS, AND SOLUTIONS* 99–139 (J.M. Coe & D.B. Rogers, eds., 1997).

<sup>198</sup> Seo, *supra* note 14.

<sup>199</sup> Earth Day, *End Plastic Pollution: A third of the US has laws preventing plastic bans*, (Jan. 24, 2020), <https://www.earthday.org/a-third-of-the-us-has-laws-preventing-plastic-bans/>.

<sup>200</sup> Seo, *supra* note 14.

<sup>201</sup> Sullivan, *supra* note 6.

<sup>202</sup> Seo, *supra* note 14.

<sup>203</sup> Sullivan, *supra* note 6.

<sup>204</sup> Seo, *supra* note 14.

<sup>205</sup> PlasticBagLaws.org, *Preemption Laws* (2021), <https://www.plasticbaglaws.org/preemption>.

<sup>206</sup> Angela Howe, *What's the Score on Plastic Pollution Laws and Preemption of Local Ordinances?*, SURFRIDER FOUND. (May 28, 2019), <https://www.surfrider.org/coastal-blog/entry/whats-the-score-on-plastic-pollution-laws-and-preemption-of-local-ordinance>.

of plastic waste demonstrates the effectiveness of the plastics industry over the government-based efforts in this area. These tactics have proven particularly effective against plastic bag bans via local ordinances, as the bans “have their roots in grassroots activism.”<sup>207</sup>

Pre-emption laws against local ordinances on municipal solid waste present a significant barrier to sustainable plastic management at the state level.<sup>208</sup> These laws prohibiting all local ordinances that ban or impose fees on single-use plastic products have been successfully adopted in states including Arizona, Colorado, Florida, Idaho, Indiana, Iowa, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, and Wisconsin.<sup>209</sup>

Four other states also proposed pre-emption laws in 2019, with the pre-emption bills for South Carolina and Alabama narrowly failing.<sup>210</sup> This creates a definite divide between states that have banned single-use plastic products and states that have banned the bans. Indeed, so successful has this tactic been that more states have banned the bans than have banned plastic bags.<sup>211</sup> Business owners drive the implementation of pre-emption laws. For example, in Michigan, the Michigan Restaurant & Lodging Association was the primary force behind passing the ban.<sup>212</sup> Despite Minneapolis City Council voting 10-3 in support of implementation of a plastic bag ban, the state legislature’s introduction of a pre-emption law—and subsequent dismissals of state bills to end the pre-emption law—prevents the state from acting environmentally consciously with respect to plastics.<sup>213</sup> Similarly, when Coral Gables, a city of 51,000 people in Florida, wanted to ban polystyrene from their restaurants and grocery stores, the Florida Retail Federation challenged that decision. A Florida appeals court ruled the city could not enact such a ban due to a 2016 state rule that prevented cities from regulating polystyrene.<sup>214</sup> The

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<sup>207</sup> Sixth Int’l Marine Debris Conf., *Pre-emption of Local Plastic Pollution Ordinances at the State Level Threatens Effective Marine Debris Regulation*, <https://internationalmarinedebrisconference.org/index.php/preemption-of-local-plastic-pollution-ordinances-at-the-state-level-threatens-effective-marine-debris-regulation/>.

<sup>208</sup> *Id.*

<sup>209</sup> Kolcon, *supra* note 12, at 209–10; Romer, *supra* note 124.

<sup>210</sup> Gibbens, *supra* note 181.

<sup>211</sup> Institute for Energy Research, *Eight States Ban Plastic Bags, but More Prohibit Local Bans*, (Oct. 8, 2020), <https://www.instituteforenergyresearch.org/uncategorized/eight-states-ban-plastic-bags-but-more-prohibit-local-bans>; *see also* NCSL, *supra* note 127.

<sup>212</sup> Michigan Restaurant & Lodging Association, *Legislative Victories*, <https://www.mrla.org/legislative-victories.html> (last visited Apr. 21, 2023); Press Release, Michigan Restaurant & Lodging Association, *The Michigan Restaurant Association Halts Plastic Bag Ban* (Dec. 28, 2016), [https://www.mrla.org/uploads/1/2/1/3/121332115/press\\_release\\_-\\_sb\\_855.pdf](https://www.mrla.org/uploads/1/2/1/3/121332115/press_release_-_sb_855.pdf); Lori Riverstone-Newell, *The Rise of State Preemption Laws in Response to Local Policy Innovation*, 47 PUBLIUS J. FEDERALISM 403, 411 (2017).

<sup>213</sup> Kolcon, *supra* note 12, at 210.

<sup>214</sup> Gibbens, *supra* note 181. Similarly, in 2008, Laredo, Texas, attempted to ban a plastic ban bill in Laredo, proposed in 2008 and opposed by the plastic industry. Six years later, the bill was reintroduced and passed in Laredo (supported by multi-billion cotton and cattle industries which opposed plastic bags that fouled machines and were consumed by cows). The passing of the bill saw a 75% reduction in the number of plastic bags in collected refuse. In 2018, the Supreme Court

Governor of Pennsylvania, Tom Wolf, provided a concise statement on the appropriateness of pre-emption laws following his veto against the pre-emption law implementation in his state: “the commonwealth should only on rare occasions preempt the rights of local governments to implement laws and policies that it believes are in its best interest.”<sup>215</sup>

It is clear that pre-emption legislation has often been used to effectively obstruct local efforts against the burgeoning plastic pollution problem in their municipalities. As David Ayer, Earth Day Network’s End Plastic Pollution campaign manager, observes: “[i]n much the same way as big tobacco and the gun lobby have acted, plastic industry groups are subverting local democracy by buying up state legislators.”<sup>216</sup>

Jennie Romer—an attorney for the environmental NGO Surfrider Foundation—observes the plastic industry is heavily funding the pre-emption strategy and it is proving successful. Eight additional states—Texas, Colorado, Arizona, Idaho, Minnesota, Michigan, Wisconsin and Florida—are considering introducing such measures in the near future. Matt Seaholm, the executive director of the American Progressive Bag Alliance, outlined their strategy when it comes to influencing local ordinances: “[w]e engage at a local level to provide information to local officials on the merits of any type of an ordinance that is being proposed.”<sup>217</sup>

To fight back against pre-emption restrictions, legislators have drafted anti-pre-emption laws permitting cities to reinstate bans and fees on plastic items. To date, eight states have introduced anti-pre-emption bills, though none have yet been signed into law.<sup>218</sup>

## VII. Exporting U.S. Plastic Waste and the Basel Convention

The United States is the second largest exporter of plastic waste globally.<sup>219</sup> Each year, approximately 80 percent of mixed plastic produced in the United States is sent abroad.<sup>220</sup> From 1992 until 2018, the major importer of these mixed plastics was China, which bought 45 percent of the world’s plastics designated for recycling until—as noted earlier—the country refused to accept such waste.<sup>221</sup>

The UN’s Basel Convention on Hazardous Waste (Basel Convention) attempts to manage the adulterating of lands and seas with novel polluting entities via

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of Texas disallowed the ban, citing a 1993 law that prevented Texan cities or counties from banning a container or package. The decision also struck out eleven other local Texas bag bans.

<sup>215</sup> Kolcon, *supra* note 12, at 211.

<sup>216</sup> EarthDay.org, *supra* note 201.

<sup>217</sup> André Ricardo Araújo Lima et al., *Microplastics in the Marine Environment: Sources, Distribution, Biological Effects and Socio-Economic Impacts*, 9 FRONTIERS IN ENV’T SCI. 59, 67 (2021); Gibbens, *supra* note 181.

<sup>218</sup> *Id.*

<sup>219</sup> Kara Lavendar Law et al., *The United States’ Contribution of Plastic Waste to Land and Ocean*, 6 SCI. ADVANCES 16 (2020).

<sup>220</sup> Dominique Mosbergen, *Why Southeast Asia Is Flooded With Trash From America And Other Wealthy Nations*, HUFFINGTON POST (Mar. 8, 2019), [https://www.huffpost.com/entry/malaysia-plastic-recycling\\_n\\_5c7f64a9e4b020b54d7ffdee](https://www.huffpost.com/entry/malaysia-plastic-recycling_n_5c7f64a9e4b020b54d7ffdee).

<sup>221</sup> Kolcon, *supra* note 12, at 202.

regulating the global trade in hazardous wastes.<sup>222</sup> The U.S. signed the treaty in 1992 and the Senate consented, but the U.S. never officially became a party to the Convention because Congress failed to pass the required legislation.<sup>223</sup> No administration has pushed the issue since then. The U.S. remains the only major industrialized nation not to have joined and, as a result, to not have fully implemented the Convention. This is despite strong public support for the Convention amongst both the Republican and Democratic parties.<sup>224</sup> Critics argue that the failure of the U.S. to fully join the Basel Convention is obstructing proper global plastic waste management.<sup>225</sup> This makes the challenges of plastic regulation in the U.S. particularly concerning, as the issue has significant global impacts.

In 2019, the U.S. also opted not to join the updated Basel Convention, a legally binding agreement aimed at preventing and minimizing plastic waste generation that was signed by about 180 other countries.<sup>226</sup> According to the Basel Action Network, a Seattle-based NGO “[focusing] on the toxic waste trade,” the U.S.’s conduct in exporting large quantities of waste is inconsistent with Basel—particularly the 2021 global rules, which limit the transboundary shipment of plastic—by sending substantial quantities of waste to countries such as Malaysia (9,800 tonnes) and Vietnam (2800 tonnes). Moreover, plastic waste exports from the U.S increased from 2020 to 2021, from 25,200 to 25,700 metric tons, notwithstanding Basel.<sup>227</sup> The American Chemistry Council (ACC), representing the plastics industry, incurred significant expenditure lobbying against the Basel Convention’s implications for U.S plastic management.<sup>228</sup> In response to Basel signatories adopting the plastics rule, the ACC argued that the rule may unintentionally create difficulty for low-income nations to export recyclable plastics to regions for appropriate treatment.<sup>229</sup>

The ACC’s objection was based on the view that the new rules would create a regulatory burden, precipitating shipping delays, logistical issues and increased costs.<sup>230</sup> The Institute of Scrap Recycling Industries (ISRI), a major trade

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<sup>222</sup> Pekow, *supra* note 9.

<sup>223</sup> *Id.*

<sup>224</sup> *Id.*

<sup>225</sup> *Id.*

<sup>226</sup> Seo, *supra* note 14.

<sup>227</sup> As of January 1, 2021, transboundary movement of plastic waste is subject to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. In summary, this amendment categorises the majority of plastic waste as either subject or not subject to the Basel Convention. The first two categories extend to shipments of non-hazardous plastic waste, and the second includes hazardous plastic waste. Shipments of plastic waste within either category cannot occur without written consent of the importer’s agreement to accept the imports, before the exporter departs. The third category includes pre-sorted, uncontaminated and cleaned plastic that is planned to be sustainably recycled.

<sup>228</sup> Camilla Hodgson, *Manufacturers lobby to weaken UN global plastics treaty proposal*, FINANCIAL TIMES (Feb. 25, 2022), <https://www.ft.com/content/a7d272c8-a1e0-4975-92de-88c99d763157>.

<sup>229</sup> Pekow, *supra* note 9.

<sup>230</sup> Emma Howard, *Oil-backed trade group is lobbying the Trump administration to push plastics across Africa*, UNEARTHED (Aug. 30, 2020), <https://unearthed.greenpeace.org/2020/08/30/plastic-waste-africa-oil-kenya-us-trade-deal-trump/>; see also OpenAustralia, *Hazardous Waste*

association representing the U.S. recycling industry, also lobbied against the new rules on the basis that they would restrict U.S. exports, jeopardize legitimate trade and exacerbate marine litter by preventing plastic from reaching recycling facilities.<sup>231</sup> The ACC and ISRI claim that their objections to the new Basel restrictions are also based on the concerns that African and other developing countries will be limited in their ability to properly manage plastic waste due to their underdeveloped infrastructure and lack of capacity to export materials to other countries.<sup>232</sup> Further, no U.S. legislation is currently pending, notwithstanding that prominent Senate Republicans favored it in the past—even during the Trump administration, the Republican Party never officially opposed it. Senator Lindsey Graham (R-SC) stated: “. . . somebody’s got to do something. We’re the biggest fish in the sea,” and suggested that the U.S. needs to either ratify Basel or a successor.<sup>233</sup>

The Biden administration has yet to take a position, though the EPA has stated that it “is evaluating its priorities as the administration’s political appointees continue to join the agency. Any discussion of ratifying the Basel Convention would be done in coordination with other agencies.”<sup>234</sup> A U.S. State Department spokesperson, who asked not to be named, emailed Mongabay, saying that the “Biden-Harris Administration continues to consider issues relating to ratification of the convention.”<sup>235</sup>

At present, U.S. exports of hazardous materials are governed by the Resource Conservation & Recovery Act, but its ambit does not apply to most plastics. However, U.S. shippers are bound to comply with the laws of nations receiving materials.<sup>236</sup> As of the time of writing, the U.S. sends some of its plastic waste to Africa and Asia, where much of it is incinerated (see below Figure 1).

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(*Regulation of Exports and Imports*) Amendment Bill 2021; Second Reading (2021), <https://www.openaustralia.org.au/debates/?id=2021-06-24.25.2>.

<sup>231</sup> Howard, *supra* note 233.

<sup>232</sup> *Id.*

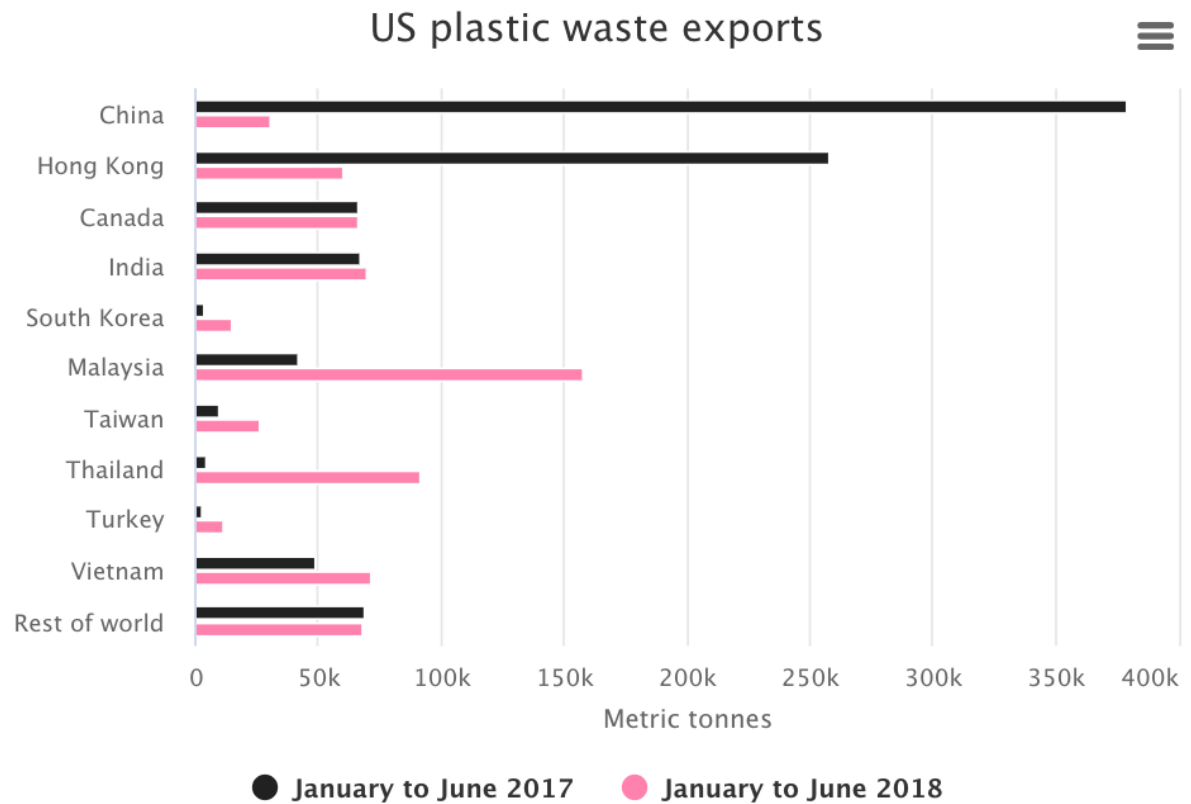
<sup>233</sup> Pekow, *supra* note 9.

<sup>234</sup> *Id.*

<sup>235</sup> *Id.*

<sup>236</sup> *Id.*



**Figure 1. U.S. Plastic Waste Exports: A Comparison 2017–18.**

This number is five times the U.S. imports in half the time.<sup>237</sup> This is a result of China’s move to stop importing low quality plastic scrap in 2018.<sup>238</sup> According to the BAN, in February 2021, the largest recipients consisted of Malaysia (9.8 million kilograms, or about 10,800 tons), Mexico (5.6 million kg; 6,200 tons), and Vietnam (2.8 million kg; 3,100 tons).<sup>239</sup>

Since Mexico signed the Basel Convention, U.S. shippers have needed to obtain consent before sending plastic scrap there. The U.S.-Canada agreement has also been amended to comply with Basel protocols.<sup>240</sup> However, the U.S. has also engaged in various attempts to continue dealing with unregulated plastic waste. This includes a “secretive agreement” with Canada, “[allowing]. . .unregulated

<sup>237</sup> Howard, *supra* note 231. U.S. exports in 2017 and 2018 were 3.68 billion pounds and 2.37 billion pounds of “scrap plastic” respectively. Statista, *Scrap plastic exports from the U.S. 2015-2021*, , <https://www.statista.com/statistics/1097245/us-scrap-plastic-exports/> (last visited Apr. 21, 2023).

<sup>238</sup> Joe Sandler Clarke & Emma Howard, *US plastic waste is causing environmental problems at home and abroad*, *UNEARTHED* (May 10, 2018), <https://unearthed.greenpeace.org/2018/10/05/plastic-waste-china-ban-united-states-america/>.

<sup>239</sup> Pekow, *supra* note 9.

<sup>240</sup> *Id.*

waste trade.”<sup>241</sup> Every day, about 160 tractor-trailers full of plastic waste cross the border between Canada and the United States, with about half going in each direction.<sup>242</sup> They are a key link in a scrap plastic trade worth \$18.8 million, but few details exist about what happens to these shipments on either side of the border—it is unclear if they are recycled, dumped in a landfill, sent overseas, or burned as fuel.<sup>243</sup> Whilst Canada’s role in this unregulated plastic trade may—as a Basel signatory—be illegal, it is difficult to identify whether the trade is in fact taking place because of a lack of reporting requirements.<sup>244</sup>

In 2019, U.S. exporters shipped more than one billion pounds of plastic waste to 96 countries, claiming it *should be* recycled.<sup>245</sup> Exports to Africa more than quadrupled in 2019 from the previous year.<sup>246</sup> For example, to overcome the uncertainties of demand for plastic, a lobby group representing Shell, Exxon, Total, DuPont and Dow, pushed the Trump Administration during the pandemic to exploit the lack of strong regulatory frameworks or oversight, and use a U.S.-Kenya Free Trade Agreement to expand the plastic and chemical industry across Africa.<sup>247</sup> This is because the developing world has become an important new market for plastic, as international companies sell single portions of products such as shampoo, soap, and lotion to low-income consumers in parts of Asia in individual packets.<sup>248</sup> It is also important to note that while the plastic industry points to a lack of waste management infrastructure in developing countries as a cause of ocean plastic pollution, Americans use dozens of times more plastic per capita than Indians, five times more than Indonesians, and nearly three times as much as Chinese.<sup>249</sup>

The ACC—including companies such as Shell, Exxon and Total—founded a one billion dollar initiative pledging to create “a world free of public waste.”<sup>250</sup> However, the same Council has publicly stated that “Kenya could serve in the future as a hub for supplying U.S.-made chemicals and plastics to other markets in Africa through his trade agreement.”<sup>251</sup> This has been interpreted by Kenyan environmentalists to mean that Kenya will become a mere plastic dump site.<sup>252</sup>

The U.S. has been looking for other Asian countries to accept export of its waste since China closed its doors to foreign recyclables. This is not a sustainable plan.

<sup>241</sup> Fawcett-Atkinson, *supra* note 4.

<sup>242</sup> Mark Fawcett-Atkinson, *The Secretive Scrap Plastic Trade Between Canada and the U.S.*, I-Sea (July 28, 2021), <https://www.i-sea.ca/canadas-plastics-problem/2021/8/16/the-secretive-scrap-plastic-trade-between-canada-and-the-us-1>.

<sup>243</sup> Fawcett-Atkinson, *supra* note 4.

<sup>244</sup> *Id.*

<sup>245</sup> Hiroko Tabuchi et al., *Big Oil Is in Trouble. Its Plan: Flood Africa With Plastic*, N.Y. TIMES (Aug. 30, 2020), <https://www.nytimes.com/2020/08/30/climate/oil-kenya-africa-plastics-trade.html>.

<sup>246</sup> *Id.*

<sup>247</sup> *Id.*

<sup>248</sup> Beth Gardiner, *A surge of new plastic production is on the way*, GREENBIZ (Jan. 17, 2020), <https://www.greenbiz.com/article/surge-new-plastic-production-way>.

<sup>249</sup> Beth Gardiner, *The Plastics Pipeline: A Surge of New Production Is on the Way*, YALEENVIRONMENT360 (Dec. 19, 2019), <https://e360.yale.edu/features/the-plastics-pipeline-a-surge-of-new-production-is-on-the-way>.

<sup>250</sup> Howard, *supra* note 233.

<sup>251</sup> Tabuchi et al., *supra* note 248.

<sup>252</sup> Howard, *supra* note 233.

These developing countries, such as Bangladesh and Laos, mismanage over 70 percent of their own plastic waste. The U.S.'s attempts to dump waste on developing countries has attracted international criticism.<sup>253</sup> Responding to these concerns, a global consensus was arrived at in May 2019 to restrict shipments of hard-to-recycle plastic waste going to economically developing countries.<sup>254</sup> Previously, the U.S. could send plastic recyclables to private entities within these developing countries without the nation's approval.<sup>255</sup>

These practices have had devastating consequences on the environment of developing countries, as seen in waste piling outside slums in Nairobi, the Pacific garbage patch, toxic air pollution in Louisiana's Cancer Alley, and carbon pollution wrecking the climate.<sup>256</sup> U.S. Democratic Senator Tom Udall has singled out for criticism the double-dealing of the ACC, which has pointed the finger more often than not at "rapidly developing countries in Asia" for the problem with marine debris and plastics in the ocean,<sup>257</sup> when in reality the true source of the plastic waste crisis stems from companies and corporations such as the ACC off-shoring their responsibilities for profit.<sup>258</sup>

### VIII. Conclusion

This paper has critically analyzed the haphazard and generally ineffective approach to plastic regulation in the U.S. In particular, the article has identified a lack of cohesion resulting from a lack of federal leadership in the area. Industry actors who oppose effective reform have used the lack of cohesion to prevent the effective implementation of plastic regulation in the country. Urgent reforms are necessary to combat plastic pollution in the U.S.—both for the benefit of the U.S. but also, importantly, to address global plastic pollution problems stemming from the U.S.

A number of approaches may be useful. First, bans have proven to be particularly effective where economic incentives, such as levies, are inadequate to

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<sup>253</sup> Dominique Mosbergen, *Here's Why America Is Dumping Its Trash in Poorer Countries: The filthy secrets of the multibillion-dollar global recycling industry*, MOTHER JONES (Mar. 9, 2019), <https://www.motherjones.com/environment/2019/03/heres-why-america-is-dumping-its-trash-in-poorer-countries/>; Hiroko Tabuchi & Michael Corkery, *Countries Tried to Curb Trade in Plastic Waste. The U.S. Is Shipping More*, N.Y. TIMES (8Mar. 12, 2021), <https://www.nytimes.com/2021/03/12/climate/plastics-waste-export-ban.html>; Shashank Bengali, *How heaps of U.S. plastic waste landed in Malaysia, broken down by workers earning \$10 a day*, L.A. TIMES (Dec. 29, 2018), <https://www.latimes.com/world/asia/la-fg-malaysia-plastic-2018-story.html>.

<sup>254</sup> Emily Holden, *Nearly all countries agree to stem flow of plastic waste into poor nations*, THE GUARDIAN (May 11, 2019), <https://www.theguardian.com/environment/2019/may/10/nearly-all-the-worlds-countries-sign-plastic-waste-deal-except-us>.

<sup>255</sup> Kolcon, *supra* note 12, at 204.

<sup>256</sup> Brian Kahn, *The Beginning of the End of the Plastic Era Is Here*, GIZMODO (Sept. 3, 2020), <https://www.gizmodo.com.au/2020/09/the-beginning-of-the-end-of-the-plastic-era-is-here/>.

<sup>257</sup> Frank Carini, *Lobbyist Blames Ocean State's Plastic Pollution on Asia*, ECORI NEWS (Jan. 25, 2019), <https://ecori.org/2019-1-24-plastics-over-reliance-suffocates-growing-waste-stream/>.

<sup>258</sup> Howard, *supra* note 233.

shift consumer behaviour in support of sustainable plastic management.<sup>259</sup> Bans are common regulatory tools used to protect public health when products are identified and specified in legislation as hazardous.<sup>260</sup> A number of other jurisdictions have implemented such bans successfully. For instance, China's ban on plastic bags specified that nonbiodegradable bags thinner than .025 millimeters must not be produced, sold, or used.<sup>261</sup> This level of specificity is important when it comes to ensuring the effectiveness of any proposed bans.

Other forms of regulation should, however, also be introduced so as to produce a nuanced approach to the problem. The adoption of clear obligations at the federal level, combined with the provision of tax incentives for compliance—as has been adopted in Ireland—and creating programs that industry can adopt and support, as was done in Rwanda, could help to resist industry opposition.<sup>262</sup>

Whilst state-wide bans on single-use plastics are an important tool in combating plastic pollution, a uniform approach at the federal level would be most beneficial in supporting sustainable practices across the U.S. This would reduce the potential for arbitrage that has been a common feature in the U.S. A good place to start would be the introduction of a plastic bag policy at the federal level that focuses on changing consumer behavior.<sup>263</sup> In this regard, the U.S. would do well to follow the example set by Europe where waste-reduction policies rely on a combination of government mandates and market-driven solutions.<sup>264</sup>

A 'multi-modal approach' that amalgamates "private environmental governance, international agreements, and individual behavior" to fill the gaps in inadequate state and federal legislative regulation may be useful in light of the complexity of the U.S. political system. A 'circular economy' for plastics, supported by business initiatives, and collaboration between private and public entities, is a key component of such an approach."<sup>265</sup>

More specifically, there are a number of reforms that the U.S. needs to implement to address the plastic pollution problem. First, the U.S. must handle its own waste. Of course, the easiest way to handle it is to stop producing as much of it.<sup>266</sup> However, as this paper has outlined, the plastics industry, as well as oil and gas companies are currently seeking to expand, rather than reduce, production.

To limit such actions, the U.S. needs to eliminate fossil-fuel subsidies that are propping up the continued growth in the single-use plastic industry.<sup>267</sup> This should be accompanied by a tax at the production level.<sup>268</sup> Alternatively, an attempt to allow consumers to "choose alternatives to single-use plastic products" so as to "[reduce] plastic consumption" suggests a tax at the consumption level is

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<sup>259</sup> Telesetsky, *supra* note 35, at 61.

<sup>260</sup> *Id.* at 60.

<sup>261</sup> Kolcon, *supra* note 12, at 217.

<sup>262</sup> Rose, *supra* note 14, at 141.

<sup>263</sup> *Id.* at 142.

<sup>264</sup> Sicotte & Seamon, *supra* note 8, at 400.

<sup>265</sup> Kim et al., *supra* note 39.

<sup>266</sup> Kolcon, *supra* note 12, at 224.

<sup>267</sup> Telesetsky, *supra* note 35, at 79.

<sup>268</sup> Kolcon, *supra* note 12, at 216.

preferential.<sup>269</sup> Evidence from similar tax implementations in Ireland suggest that these taxes are highly effective.<sup>270</sup>

Second, the U.S. should adopt packaging standardization across the commercial sector that is connected to the communities' capabilities to reuse and recycle. Too many consumer goods enter communities where there is no possibility of either reuse or recycling in support of circular economy principles. Consumers purchase goods with limited awareness of the fate of their waste, thinking the product must be recyclable because of the presence of "resin logos." Even for items that were once frequently recycled, landfilling is becoming more common due to the volatility of recycling markets and a surplus in recycled feedstock supplies with insufficient demand.<sup>271</sup>

Thirdly, plastic recycling capabilities should be pursued by coordinated government and industry efforts, particularly at regional levels, who already regularly cooperate in setting standards for product safety, functionality, or traceability. Governments and major industry consumers of single-use plastics must develop "uniform approaches to packaging" that decrease consumer waste.<sup>272</sup> In some places, fees and taxes on thin, single-use plastic shopping bags have been found effective in spurring shoppers to switch to reusable bags. If manufacturers respond to reduced demand by reducing plastic bag production, fees and taxes could be an effective waste reduction strategy.<sup>273</sup>

Absent federal regulation, which appears unlikely in the near future, state constitutions may represent a viable path forward for the regulation of plastic bags.<sup>274</sup> Provisions therein relating to "environmental protection" might allow judges to overturn state pre-emption laws which as we have seen, have been a major impediment to effective plastic regulation in a number of states.<sup>275</sup>

Further, in lieu of a national plastic regulatory framework, private environmental governance may provide a constructive alternative for sustainable plastic management. Under this model, corporations dealing with plastics are well-positioned to "efficiently redesign" products due to their market influence, and increase recycling of plastics. Coca-Cola's 2020 announcement for redesigning a "biodegradable plant-based packaging," as well as Unilever's public commitment to eliminating 100,000 tons of plastic packaging by 2025. This demonstrates how private environmental governance can facilitate large-scale changes in environmental policy, without the need for federal government intervention, albeit via "soft commitments," such as the New Plastics Economy Global Commitment. Accordingly, private environmental governance may be "instrumental" in systemic changes for plastic packing, supported by "long-term accountability" of corporations that subscribe to involvement in this approach.<sup>276</sup>

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<sup>269</sup> *Id.*

<sup>270</sup> *Id.*

<sup>271</sup> Telesetsky, *supra* note 35, at 79.

<sup>272</sup> *Id.* at 73.

<sup>273</sup> Sicotte & Seamon, *supra* note 8, at 399.

<sup>274</sup> Kim et al., *supra* note 39.

<sup>275</sup> *Id.*

<sup>276</sup> Telesetsky, *supra* note 35, at 65.