

C O M M E N T

MARINE PLASTIC POLLUTION: HOW GLOBAL EXTENDED PRODUCER RESPONSIBILITY CAN HELP

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Ocean plastic pollution is a growing challenge that has captured the attention and concern of governments, businesses, and the public alike. As images and videos of ensnared sea turtles, smothered corals, and beached whales with plastic bags filling their guts continue to emerge, the global movement to prevent plastic pollution grows.

Nearly nine million tons of plastic waste flow into our oceans each year,¹ arriving in many ways—ranging from polluted rivers and waterways² to the wastewater from our washing machines.³ A recent study has found that without immediate and continuous action, the annual amount of plastic entering the ocean could triple by 2040.⁴ Once in the ocean, this pervasive plastic pollution is nearly impossible to clean up. Plastic can now be found in almost every marine habitat on earth—from Arctic sea ice to the deepest ocean trenches⁵—and nearly 700 species have been documented to either ingest plastic or become entangled in it.⁶ We are only just understanding the impacts of plastic

ingestion on food webs, and what happens when plastic and the often-toxic chemicals associated with it end up in the bodies or guts of the seafood we eat.

If there is anything positive to say about such a broad and complex challenge, it is that there are multiple ways to tackle the problem. In addition to cleaning up plastic pollution, it is possible to prevent “leakage” of plastic waste from waste management systems into the natural environment; recycling infrastructure can be improved and expanded; product design can be improved so that plastic packaging and products can be more readily recovered and recycled; consumption of unnecessary plastic can be reduced wherever possible (especially single-use plastic); and the loop can be “closed,” ensuring that the resources we use to create useful products are captured and recycled through the system indefinitely, in what is commonly called “the circular economy.” These solutions are not without their challenges, but they are already serving as a driver for innovation in systems and product design—and they also present an immense opportunity for companies and governments prepared for the change.

Legal and policy solutions are increasingly moving away from the piecemeal, product-by-product approach of single-use plastic bans and toward more comprehensive frameworks and solutions. While bans and taxes on plastic products have successfully reduced pollution of those items in some places,⁷ there is a limit to the political will and public attention required to implement bans and taxes on each product in a piecemeal fashion. Additionally, the need to manage plastic waste sustainably does not only apply to the top 10 most problematic types of products and packaging. Rather, policy approaches are needed to ensure that

1. Jenna R. Jambeck et al., *Plastic Waste Inputs From Land Into the Ocean*, 347 SCIENCE 768, 768-71 (2015), available at <https://science.sciencemag.org/content/347/6223/768>.
2. Christian Schmidt et al., *Export of Plastic Debris by Rivers Into the Sea*, 51 ENV'T. SCI. & TECH. 12246, 12246-53 (2017), available at <https://pubs.acs.org/doi/abs/10.1021/acs.est.7b02368>.
3. Niko L. Hartline et al., *Microfiber Masses Recovered From Conventional Machine Washing of New or Aged Garments*, 50 ENV'T. SCI. & TECH. 11532, 11532-38 (2016), available at <https://pubs.acs.org/doi/10.1021/acs.est.6b03045>.
4. Winnie W.Y. Lau et al., *Evaluating Scenarios Toward Zero Plastic Pollution*, 369 SCIENCE 1455, 1455-61 (2020), available at <https://science.sciencemag.org/content/369/6510/1455>.
5. Amy Lusher, *Microplastics in the Marine Environment: Distribution, Interactions, and Effects*, in MARINE ANTHROPOGENIC LITTER 245-307 (Melanie Bergmann et al. eds., Springer 2015), available at https://link.springer.com/chapter/10.1007/978-3-319-16510-3_10; see also David K.A. Barnes et al., *Accumulation and Fragmentation of Plastic Debris in Global Environments*, 364 PHIL. TRANSACTIONS ROYAL SOC'Y B 1985, 1985-98 (2009), available at <http://dx.doi.org/10.1098/rstb.2008.0205>.
6. Sarah C. Gall & Richard C. Thompson, *The Impact of Debris on Marine Life*, 92 MARINE POLLUTION BULL. 170, 170-79 (2015), available at <http://dx.doi.org/10.1016/j.marpolbul.2014.12.041>.

7. OCEAN CONSERVANCY, CALIFORNIA COASTAL CLEANUP DAY—LITTER DATA SUMMARY 2010-2017, <https://static1.squarespace.com/static/54d3a62be4b068e9347ca880/t/5a0237d7652deae895d2df1c/1510094808473/Calif+ornia+Coastal+Cleanup+Data+2010.2016.2017.pdf>.

all plastic products and packaging types are managed in a sustainable and circular manner.

This Comment discusses one such approach to managing plastic waste in a more comprehensive and holistic manner, called extended producer responsibility (EPR). In this approach, manufacturers of a certain material or product are made responsible for the treatment, disposal, and recovery of those materials and products. EPR is not a new concept; lawmakers around the world have adopted EPR schemes for many types of waste materials and products. Most recently, this approach is increasingly being applied to plastic and other disposable, single-use products in pursuit of a circular economy for this sector. Here we present a review of current EPR schemes dealing with plastic and packaging worldwide and in the United States.

I. Overview of EPR

The concept of EPR brings manufacturers into the waste management space alongside government- and taxpayer-funded waste recovery and management systems. In so doing, EPR aims to shift the financial and management responsibility of plastic waste from governments and taxpayers and to more equitably share it with producers. While existing U.S. EPR schemes primarily focus on other products like tires, electronics, batteries, mattresses, and pharmaceuticals, there are several plastic- and packaging-related EPR proposals under discussion at the U.S. federal and state levels, and several countries around the world have implemented plastic-related EPR schemes in recent years.

The designs of EPR schemes in place around the world vary widely and apply to many product categories. Some models involve mandatory regulations, while others are voluntary agreements between governments and the targeted industries.⁸ Whether or not EPR is required by law in a given jurisdiction, there are two main approaches to how systems operate: (1) as collective producer responsibility systems, and (2) as individual producer responsibility systems.⁹ Most EPR programs are collective, in which a producer responsibility organization (PRO) implements EPR on behalf of a group of producers.¹⁰ Collective schemes allow producers to share costs and administrative responsibility.¹¹ In an individual system, each producer must self-enforce its EPR program.¹²

Some examples of EPR programs include take-back programs, where manufacturers collect used products from consumers for free, and container deposits/bottle bills, where consumers pay small fees when they purchase

beverages and receive refunds when they return the containers.¹³ Other programs establish waste recovery targets or demand fees to maintain and expand waste management infrastructure.¹⁴

II. EPR Programs Outside of the United States

As of February 2020, 63 countries have established some type of EPR program, with 30 of these countries implementing regulations specifically for plastic products and packaging.¹⁵ This list includes all 15 western European Union (EU) countries, several central European countries, and the majority of provinces in Canada, Japan, Korea, and Taiwan.¹⁶ Here, we focus on Canada and the EU, where EPR programs have existed since the early 1990s.¹⁷

A. Canada

Canada has implemented numerous EPR programs at the provincial government level, in collaboration with non-profits and interested stakeholders.¹⁸ Most provinces have enacted packaging-focused EPR programs covering plastic items such as bags, cutlery, and straws.¹⁹ Each province takes a different approach to how it allocates financial responsibility to the producers.²⁰ For example, in 2019, British Columbia used a 100% industry-funded system for recycling plastic waste; Saskatchewan had 75% industry funding, and Ontario had 50%.²¹

As one example of how a Canadian province has implemented EPR for plastic, we can look at British Columbia. In 2014, British Columbia became the first jurisdiction in Canada to implement an industry-led product stewardship model for plastic packaging.²² Producers of paper and packaging pay fees that fund the stewardship group Recycle BC, which is responsible for collecting and processing covered materials. Recycle BC's Packaging and Printed Paper Stewardship Plan implements a targeted 75% recovery rate for all covered products, including several types of plastic packaging.²³

13. Eco-Cycle, *Zero Waste: Producer Responsibility*, <https://www.ecocycle.org/zerowaste/overview/producer-responsibility> (last visited Oct. 12, 2020).

14. *Id.*

15. Carl Bruch et al., *Managing Marine Litter*, 50 ELR 10093, 10097 (Feb. 2020); 7 DEL. ADMIN. CODE §6403 (2020), Statewide Solid Waste Management Plan.

16. See Bruch et al., *supra* note 15.

17. Eco-Cycle, *supra* note 13.

18. News Release, Government of New Brunswick, Canada, Extended Producer Responsibility Program to Be Developed for Packaging and Printed Paper (Oct. 18, 2019), https://www2.gnb.ca/content/gnb/en/departments/elg/news/news_release.2019.10.0540.html.

19. Colin Staub, *Packaging EPR on the Way in Another Canadian Province*, PLASTICS RECYCLING UPDATE, Nov. 12, 2019, <https://resource-recycling.com/plastics/2019/11/12/packaging-epr-on-the-way-in-another-canadian-province/>.

20. *Id.*

21. *Id.*

22. Mark Youden & Maya Stano, *Making Producers Pay—From Product Stewardship to Innovative EPR Programs*, GOWLING WLG, May 31, 2019, <https://www.lexology.com/library/detail.aspx?g=e6ef9586-8a40-4e8e-9ea2-6ca499cbe927>.

23. *Id.*

8. EMMA WATKINS ET AL., INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, *EPR IN THE EU PLASTICS STRATEGY AND THE CIRCULAR ECONOMY: A FOCUS ON PLASTIC PACKAGING* (2017), https://zerowasteurope.eu/wp-content/uploads/2019/11/zero_waste_europe_IEEP_EEB_report_epr_and_plastics.pdf.

9. *Id.*

10. EUROPEAN COMMISSION—DG GOVERNMENT, *DEVELOPMENT OF GUIDANCE ON EXTENDED PRODUCER RESPONSIBILITY (EPR): FINAL REPORT 11*, 29 (2014), https://ec.europa.eu/environment/waste/pdf/target_review/Guidance%20on%20EPR%20-%20Final%20Report.pdf.

11. *Id.*

12. *Id.* at 29.

Recently, the plan was updated to include “packaging-like” and “single-use” products, expanding the covered products to items like plastic food containers, bubble wrap, plastic sandwich bags, and other food storage products, as well as single-use plastic items such as straws, stir sticks, utensils, plates, bowls, and cups. The British Columbia Ministry of the Environment monitors compliance by requiring producers to submit annual reports, and producers that fail to meet this target face fines.²⁴ As of 2019, the Recycle BC packaging and paper product recovery rate had exceeded the mandated target and was reported at 78%.²⁵

National and subnational governments in Canada remain committed to reducing plastic waste through EPR. In November 2018, Canada’s federal, provincial, and territorial ministers of environment implemented the Canada-Wide Strategy on Zero Plastic Waste.²⁶ One action item of this policy is to provide further guidance on EPR by December 2020.²⁷ More recently, Canadian Prime Minister Justin Trudeau announced in a 2019 press release that the government would “work with provinces and territories to introduce standards and targets for companies that manufacture plastic products . . . so they become responsible for their plastic waste.”²⁸

B. EU

The Member States of the EU have been notable leaders in developing EPR programs for plastic waste. The EU is “both the birthplace of EPR, and the cradle that nurtured it.”²⁹ EPR programs have been “a particular favorite of policymakers in Europe . . . , a continent which lacks both adequate landfill space and virgin metals and whose citizens are deeply concerned about contaminating the environment.”³⁰ European businesses’ and consumers’ interest in sustainability has led the EU to develop some of the most advanced EPR programs to manage and recycle plastic waste.

In January 2018, the European Commission adopted the European Strategy for Plastics in a Circular Economy, which transformed how “plastic products are designed, used, produced and recycled in the EU.”³¹ The EU also passed the Single-Use Plastics Directive 2019, which

requires all Member States to introduce EPR programs for certain single-use plastic products (food containers for immediate consumption, packets, beverage containers, cups, and carrier bags).³² The directive also introduces financial consequences for noncompliance by requiring all Member States to adopt “effective, proportionate, and dissuasive” penalties.³³

As of July 2020, 26 of the 28 EU Member States have implemented EPR programs for single-use plastic packaging and product waste such as bags, cups, and straws.³⁴ Although EU countries have taken a heterogeneous approach to packaging-related EPR programs, these programs incorporate certain standard features, including product take-back requirements, advanced disposal fees, and deposit refund systems.³⁵ Through these various programs and initiatives, the EU aims to recycle 50% of all plastics by 2025.³⁶

Despite these efforts, the EU’s plastic recycling programs have faced ongoing compliance and enforcement issues. Regulations implemented by various EU Member States have been hindered by “low demand for recycled plastics, low commodity prices and uncertainties about market outlets.”³⁷ Additionally, the varied approaches to EPR across the EU result in “differing implementation and performances,” which hinder governments’ and regulatory authorities’ ability to enforce EPR requirements efficiently and effectively.³⁸

III. EPR Programs in the United States

In the past five years, lawmakers in the United States have increasingly embraced EPR principles for non-plastic packaging and products through state-level action.³⁹ As of 2020, 33 states have enacted 119 EPR laws covering 14 product categories, including electronics, batteries, mattresses, and pharmaceuticals.⁴⁰ These programs have “increased recycling, created jobs, saved municipalities millions of dollars and reduced greenhouse gas emissions

24. *Id.*

25. RECYCLE BC, 2019 ANNUAL REPORT (2020), <https://recyclebc.ca/about-recyclebc/program-overview/annual-reports/>.

26. CANADIAN COUNCIL OF MINISTERS OF THE ENVIRONMENT, DISCUSSION PAPER: GUIDANCE TO FACILITATE CONSISTENT EXTENDED PRODUCER RESPONSIBILITY POLICIES FOR PLASTICS (2019), <https://www.ccme.ca/files/CCME%20EPR%20discussion%20paper%20EN%201.0%20secured.pdf>.

27. *Id.* at 2.

28. News Release, Office of Prime Minister Justin Trudeau, Canada to Ban Harmful Single-Use Plastics and Hold Companies Responsible for Plastic Waste (June 10, 2019), <https://pm.gc.ca/en/news/news-releases/2019/06/10/canada-ban-harmful-single-use-plastics-and-hold-companies-responsible>.

29. Canadian Stewardship Services Alliance, EPR in the EU—A Recycling Revolution, <https://www.cssalliance.ca/epr-in-the-eu-a-recycling-evolution/> (last visited Oct. 12, 2020).

30. Aaron Ezroj, *Extended Producer Responsibility Programs in the European Union: In Search of the Optimal Legal Basis*, 20 COLO. J. INT’L ENV’T. L. & POL’Y 199, 200 (2009).

31. European Commission, *European Strategy for Plastics*, https://ec.europa.eu/environment/waste/plastic_waste.htm (last updated Mar. 31, 2020).

32. Council Directive 2019/904, art. 8, 2019 O.J. (L 155) 1, 12 (EU), [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0904; see also Circular Economy: Directive Banning Certain Single-Use Products and Oxo-Degradable Plastic Published in Official Journal](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0904;see%20also%20Circular%20Economy%20Directive%20Banning%20Certain%20Single-Use%20Products%20and%20Oxo-Degradable%20Plastic%20Published%20in%20Official%20Journal), PRAC. L. ENV’T, June 13, 2019, [https://uk.practicallaw.thomsonreuters.com/w-020-7885?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1/](https://uk.practicallaw.thomsonreuters.com/w-020-7885?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1/).

33. Council Directive 2019/904, *supra* note 32, at 15; *see also* Circular Economy: Directive Banning Certain Single-Use Products and Oxo-Degradable Plastic Published in Official Journal, *supra* note 32.

34. *See* Circular Economy: Directive Banning Certain Single-Use Products and Oxo-Degradable Plastic Published in Official Journal, *supra* note 32.

35. Plastic Smart Cities, *Extended Producer Responsibility*, <https://plasticsmartcities.org/products/producer-responsibility-initiative/> (last visited Oct. 12, 2020).

36. Victor Bell, Presentation to Rhode Island Task Force to Tackle Plastics (Jan. 17, 2018), <https://static1.squarespace.com/static/546d61b5e4b049f0b10b95c5/t/5c4a0e5b562fa72365a1a460/1548357213589/RI+DEM+Plastic+Task+Force.pdf>.

37. Kleoniki Pouikli, *Concretising the Role of Extended Producer Responsibility in European Union Waste Law and Policy Through the Lens of the Circular Economy*, 20 ERA F. 491, 491 (2020), available at <https://link.springer.com/article/10.1007/s12027-020-00596-9>.

38. WATKINS ET AL., *supra* note 8, at 19.

39. Eco-Cycle, *supra* note 13.

40. James Tucker et al., *The Last Straw? Recent Actions and Outlook for Single-Use Plastics*, 2020 WL 1452370 (Mar. 26, 2020).

by conserving resources.”⁴¹ Product stewardship programs for plastic waste may provide similar benefits. The Product Stewardship Institute, a national organization dedicated to advancing EPR in the United States, estimates that failing to recycle plastic packaging and products has cost the country “billions of dollars’ worth of valuable materials.”⁴²

Although lawmakers in the United States are introducing EPR regulations at a rapid pace—in 2019 alone, state governments passed 12 of 50 EPR bill proposals into law—only a few programs specifically address plastic packaging.⁴³ Currently, only three states have passed EPR laws related to plastics, and these laws only provide guidelines on how to implement future programs. There are no federal EPR laws in place.

The EPR state laws analyzed below reveal the diverging approaches states have taken to regulating plastic waste. This diversity may reflect both the unique political dynamics of each state and different theoretical approaches on how to best implement EPR.

A. Maine

In 2019, Maine passed a law directing the state’s Department of Environmental Protection (DEP) to draft an EPR scheme for packaging by the end of the year.⁴⁴ The law required that the program cover packaging “used to wrap or protect consumer goods . . . and packaging used in the shipping, storage, protection, and marketing of consumer goods.”⁴⁵

In March 2020, the DEP presented An Act to Support and Increase the Recycling of Packaging to the Maine Legislature.⁴⁶ If passed, the Act will establish a unique stewardship program for non-durable packaging.⁴⁷ Using a “shared compensation model,” the proposed law will hold companies responsible for the waste created by single-use packaging by reimbursing municipalities for the cost of recycling and discarding single-use packaging.⁴⁸ It funds these reimbursements by collecting annual fines from producers of single-use packaging. The fees depend on the recyclability of materials used, percentage of recycled content, toxicity, and total weight of sold single-use packaging. Any remaining funds would go toward education around recycling and building out recycling infrastructure.

The DEP’s program proposal takes a shared responsibility approach, which is unique from other U.S. proposals in that the municipalities remain in control over waste and

recycling. This model was chosen to make the proposal more beneficial for recycling service providers and local governments which are each struggling in the wake of a collapsed recycling market.⁴⁹ Producers can “offset these reimbursement costs by implementing independent recycling programs for their packaging; by reducing packaging sold into the state; or by redesigning packaging to make it more valuable as recyclable material.”⁵⁰ The law excludes small producers, which are defined as entities that generate less than one million dollars in annual revenues, generate less than one ton of plastic packaging supplied to Maine residents per year, or conducted all “sales in the State during the prior calendar year at a single point of retail.” The DEP will be responsible for creating a regulatory framework to enforce this program.

B. Vermont

In 2019, Vermont passed An Act Relating to the Management of Single-Use Plastics.⁵¹ Vermont’s law creates a working group (the Single-Use Products Working Group) tasked with researching how to improve the management of single-use products, including the potential proposal of an EPR program. If the working group suggests implementing EPR as a strategy to enhance plastic management, then

it must suggest key details of how the program could be structured: a list of products to be covered; financial incentives for producers to reduce the environmental impacts of their products; and how producers will be required to fund collection and recycling of their products using existing recycling infrastructure, where feasible.⁵²

C. Washington

In 2019, Washington passed a law titled An Act Concerning the Responsible Management of Plastic Packaging.⁵³ This bill requires the Department of Ecology (DEC) to report recommendations to the legislature on how to manage and dispose of plastic packaging.⁵⁴ By October 2020, the report must research the costs and savings of product stewardship programs and provide information about

41. *Id.*

42. Product Stewardship Institute, *Packaging & Plastics*, <https://www.productstewardship.us/page/Packaging> (last visited Oct. 12, 2020).

43. *Id.*

44. L.D. 1431 (H.P. 1041), 2019 Leg., 129th Sess. (Me. 2019), <https://mainelegislature.org/legis/bills/getPDF.asp?paper=HP1041&item=3&sn=um=129>.

45. *Id.*

46. L.D. 2104 (H.P. 1500), 2019 Leg., 129th Sess. (Me. 2019), https://www.mainelegislature.org/legis/bills/bills_129th/billtexts/HP150001.asp.

47. Cole Rosengren, *Maine Packaging EPR Bill, A National Bellwether, Could Reshape Municipal Funding*, WASTE DIVE, Feb. 12, 2020, <https://www.wastedive.com/news/maine-packaging-epr-bill-national-bellwether-recycling/571788/>.

48. *Id.*

49. *Id.*

50. Michael Green, *Over 250 State and Local Plastics Bills Pending—New FMI Resource Available to Assist*, FMI, Feb. 19, 2020, <https://www.fmi.org/blog/view/fmi-blog/2020/02/19/over-250-state-and-local-plastics-bills-pending-new-fmi-resource-available-to-assist>.

51. S. 113 (Act 69), 2019 Gen. Assemb., Reg. Sess. (Vt. 2019), <https://legislature.vermont.gov/bill/status/2020/S.113>.

52. Jared Paben, *Vermont Passes Sweeping Single-Use Plastics Ban*, RESOURCE RECYCLING, May 29, 2019, <https://resource-recycling.com/recycling/2019/05/29/vermont-passes-sweeping-single-use-plastics-ban/>.

53. H.B. 1204, 66th Leg., Reg. Sess. (Wash. 2019), <http://lawfilesex.leg.wa.gov/biennium/2019-20/Pdf/Bills/House%20Bills/1204.pdf>; see also S.B. 5397, 66th Leg., Reg. Sess. (Wash. 2019), <http://lawfilesex.leg.wa.gov/biennium/2019-20/Pdf/Bills/Senate%20Bills/5397.pdf>.

54. *Washington State to Conduct Plastic Management Study*, PACKAGINGLAW.COM, May 29, 2019, <https://www.packaginglaw.com/news/washington-state-conduct-plastic-packaging-management-study>.

existing stewardship organizations to develop a plastic waste management program.⁵⁵

This law significantly departs from the initially introduced bill. The initial bill prohibited plastic producers from selling plastic packaging in Washington unless they participated in a plastic packaging stewardship organization with an approved plan.⁵⁶ Lawmakers modeled this initial proposal after the British Columbia and European packaging EPR programs that require producers to fund and manage recycling infrastructure.⁵⁷ Producers could have satisfied participation obligations either individually or collectively with other producers, and the DEC had the authority to enforce the program by issuing expensive financial penalties.⁵⁸ Whether the DEC will recommend a similar program remains to be seen, but its recommendations must “be capable of being established and implemented by January 1, 2022.”⁵⁹

D. California

In 2020, California policymakers proposed one of the most aggressive attempts to regulate plastics through an EPR scheme: the California Circular Economy and Plastic Pollution Reduction Act.⁶⁰ The bill would have required producers of single-use packaging and of priority single-use products to attain specified goals.⁶¹ However, on September 1, 2020, the bill did not receive enough votes and died in the legislature.⁶²

The bill was a particularly bold attempt to implement an EPR scheme for plastics, because it would have required producers of single-use packaging and priority single-use products to reduce the packaging and the products, respectively, to the “maximum extent feasible.”⁶³ The producers would have needed to ensure that all single-use packaging and priority single-use products manufactured on or after January 1, 2032—and offered for sale in California—were recyclable or compostable.⁶⁴ On the retail side, the

bill would have authorized the California Department of Resources Recycling and Recovery (CalRecycle) to post lists of compliant and noncompliant packaging and product types or categories.⁶⁵

If passed, the bill would have undoubtedly had nationwide impacts on producers, retailers, and wholesalers who offered products and packaging in one of the United States’ largest markets.⁶⁶ Ambitious proposals like California’s have helped push the conversation around EPR for plastic packaging in the United States farther than ever before—and have helped to inform similarly ambitious legislation at the federal level.

While the EPR proposal did not make it out of the legislature, the state of California continues to display a strong appetite for legislation addressing the challenge of plastic pollution. The California Beverage Container Recycling and Litter Reduction Act was passed and signed by the governor on September 24, 2020,⁶⁷ in order to reduce the state’s reliance on foreign markets for its recycled products and to boost domestic recycling markets.⁶⁸ Among other requirements, this Act requires that after January 1, 2030, plastic containers have, on average, no less than 50% post-consumer recycled plastic content—enacting the first U.S. minimum recycled content standard for plastic beverage containers.⁶⁹

While not an EPR program, this action is notable in that it signals a continued interest in solutions that bring the producers to the table—in this case, regulating product design to incentivize and achieve a more circular economy. As the state continues to seek solutions to this growing problem, Californian producers, retailers, wholesalers, and consumers should anticipate more bills regulating plastic.

California residents may also see a ballot initiative on the November 2022 ballot entitled the California Recycling and Plastic Pollution Reduction Act.⁷⁰ This ballot initiative would require CalRecycle to adopt regulations reducing plastic waste, including to:

- (1) require that single-use plastic packaging, containers, and utensils be reusable, recyclable, or compostable, and to reduce such waste by 25%, by 2030; (2) prohibit poly-

55. *Id.*

56. Cathy Siegner, *Washington State Bill Would Make Manufacturers Responsible for Plastic Waste*, FOOD DIVE, Mar. 1, 2019, <https://www.fooddive.com/news/washington-state-bill-would-make-manufacturers-responsible-for-plastic-wast/549153/>.

57. *Id.*

58. Violators of the Act could be administratively fined up to \$1,000 USD per violation per day. The DEC could also assess a civil penalty up to \$10,000 USD per day on any person who intentionally, knowingly, or negligently violates the Act.

59. *Washington State to Conduct Plastic Management Study*, *supra* note 54.

60. California Legislative Information, *SB-54 Solid Waste: Packaging and Products (2019-2020)—Text*, https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB54 (last visited Oct. 12, 2020).

61. *Id.* (update to CAL. PUB. RES. CODE §42041(a)). The bill had defined “single-use packaging” to mean plastic packaging that is routinely recycled, disposed of, or discarded after its contents have been used or unpackaged and that is typically not refilled by the producer. *Id.* (update to CAL. PUB. RES. CODE §42042(a)(8)). Priority single-use products include food service ware (e.g., plates, straws, etc.) made partially or entirely of plastic. *Id.* (update to CAL. PUB. RES. CODE §42042(a)(4)).

62. California Legislative Information, *SB-54 Solid Waste: Packaging and Products (2019-2020)—History*, https://leginfo.ca.gov/faces/billHistoryClient.xhtml?bill_id=201920200SB54 (last visited Oct. 12, 2020).

63. California Legislative Information, *supra* note 60 (update to CAL. PUB. RES. CODE §42050(a)(1)(A)).

64. *Id.* (update to CAL. PUB. RES. CODE §42050(a)(1)(B)).

65. *Id.* (update to CAL. PUB. RES. CODE §42055; *see also* §42042(a)(3), (6) (defining packaging and product categories)).

66. The U.S. Court of Appeals for the Ninth Circuit has upheld certain state laws that have a legitimate local interest and are limited to regulating sales or uses within the state. *See Chinatown Neighborhood Ass’n v. Harris*, 794 F.3d 1145, 1147, 45 ELR 20143 (9th Cir. 2015) (upholding California law that prohibited the possession, sale, trade, or distribution of shark fins in California); *Rocky Mountain Farmers Union v. Corey*, 730 F.3d 1070, 43 ELR 20216 (9th Cir. 2013) (upholding California law that encouraged use of certain fuels); *Association des Eleveurs de Canards et d’Oies du Quebec v. Harris*, 729 F.3d 937, 950 (9th Cir. 2013) (upholding law that prevented sales of certain foie gras in California).

67. A.B. 793, 2019-2020 Leg., Reg. Sess. (Cal. 2020), https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB793.

68. *Id.* §1(a)(5).

69. E.A. (Ev) Crunden, *California Governor Signs Nation’s First Recycled Content Requirement for Plastic Beverage Containers*, WASTE DIVE, Sept. 25, 2020, <https://www.wastedive.com/news/california-legislature-waste-bills-ep-recycled-content/584416/>.

70. Reducing Plastic Pollution May Be on California’s Ballot This November, SURFRIDER FOUND., Jan. 29, 2020, <https://www.surfrider.org/coastal-blog/entry/new-california-voter-initiative-to-address-plastic-pollution>.

styrene container use by food vendors; and (3) tax producers of single-use plastic packaging, containers, or utensils by January 1, 2022, and allocate revenues for recycling and environmental programs, including local water supply protection.⁷¹

The ballot initiative would also enact a fee of no more than one cent per item of single-use plastic foodware or single-use plastic packaging.⁷² The funds from this fee, estimated at a few billion dollars annually, would be distributed to, among others, the California Natural Resources Agency to administer and implement programs intended to reduce waste, increase recycling, and restore habitats.⁷³

E. Federal

The federal Break Free From Plastic Pollution Act (BFFPPA) was introduced in the U.S. House of Representatives in early 2020 “to reduce the production and use of certain single-use plastic products and packaging.”⁷⁴ In addition to many other policy solutions to reduce plastic pollution, it contains an EPR section mandating that “responsible part[ies]” (i.e., manufacturers and distributors of “covered products”) be fiscally responsible for collecting, managing, and recycling or composting the products after consumer use.⁷⁵ “Covered products” include packaging, food service products, paper, single-use products, and certain beverage containers.⁷⁶

Crucially, the BFFPPA requires that responsible parties establish a PRO (consisting of one or more responsible parties), which in turn will submit a producer stewardship plan by February 1, 2022.⁷⁷ The plan contains minimum performance targets (measured by the weight of the covered product):

- (A) by December 31, 2027—
 - (i) 65 percent of all covered products, except paper, reused or recycled;
 - (ii) 75 percent of all beverage containers and paper covered products recycled; and
 - (iii) 50 percent of all industrially compostable covered products composted; and
- (B) by December 31, 2032—

- (i) 80 percent of all covered products, except paper, reused or recycled;
- (ii) 90 percent of all beverage containers and paper covered products recycled; and
- (iii) 70 percent of all industrially compostable covered products composted.⁷⁸

As drafted, the BFFPPA also requires a national deposit requirement on beverage containers.⁷⁹ That money, collected by retailers, would be returned to consumers upon returning the containers.⁸⁰ Non-refunded monies would go into a federal fund to assist with collection infrastructure.⁸¹ Major beverage retailers would have to install and operate reverse vending systems to promote the collection of containers.⁸²

The BFFPPA also considers a carryout bag tax, which would be placed on the distribution of available carryout bags (paper bags and non-reusable bags).⁸³ The revenue from the tax would be collected in a federal trust fund, which, in turn, would provide grants for reusable carryout bags and recycling, reuse and composting infrastructure, and litter cleanup.⁸⁴ This federal proposal is yet another example of the building momentum behind EPR for plastic products in the United States.

IV. Enforcement and Compliance Considerations for Successful EPR Programs

Successful EPR programs require permanent monitoring and control by public authorities.⁸⁵ A lack of enforcement mechanisms encourages free-riding, illegal landfilling, and transparency issues related to products’ cost and traceability. Compliance issues are more prevalent in collective EPR schemes, because “responsibility is shared and it is easier for producers to circumvent their respective obligations.”⁸⁶

The U.S. EPR landscape for plastic packaging and products is still developing, and compliance and enforcement details for many of the proposals summarized above remain to be finalized. That said, there are several key elements that producers and governments should incorporate into monitoring and compliance procedures to ensure the success of an EPR program while putting as minimal a burden on both parties as possible⁸⁷: (1) reporting require-

71. California Secretary of State, *Initiatives and Referenda Cleared for Circulation*, <https://www.sos.ca.gov/elections/ballot-measures/initiative-and-referendum-status/initiatives-referenda-cleared-circulation/> (last visited Oct. 12, 2020).

72. CALIFORNIA RECYCLING AND PLASTIC POLLUTION REDUCTION ACT OF 2020, INITIATIVE NO. 19-0028 (AS AMENDED), PROPOSED TEXT, CAL. PUB. RES. CODE §42382(a) (2019), <https://www.oag.ca.gov/system/files/initiatives/pdfs/19-0028A1%20%28Recycling%20Products%20%29.pdf>.

73. *Id.* §42382(k); California Secretary of State, *supra* note 71.

74. Summary of Break Free From Plastic Pollution Act of 2020, H.R. 5845, 116th Cong. (2020), <https://www.congress.gov/bill/116th-congress/house-bill/5845>.

75. *Id.*; BFFPPA §2(a) (added Solid Waste Disposal Act (SWDA) §12001(16)(B)), <https://www.congress.gov/bill/116th-congress/house-bill/5845/text>.

76. BFFPPA §2(a) (added SWDA §12001(6)(A)).

77. *Id.* (added SWDA §12105(a)).

78. *Id.* (added SWDA §12105(g)(2)(A)-(B)).

79. *Id.* (added SWDA §12104).

80. *Id.* (added SWDA §12104(b)(1)).

81. *Id.* (added SWDA §12104(a)(2)).

82. *Id.* (added SWDA §12104(e)).

83. *Id.* §3(a) (added I.R.C. §4056).

84. *Id.* (added I.R.C. §9512).

85. ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD) GLOBAL FORUM ON ENVIRONMENT, THE STATE OF PLAY ON EXTENDED PRODUCER RESPONSIBILITY (EPR): OPPORTUNITIES AND CHALLENGES (2014), <https://www.oecd.org/environment/waste/Global%20Forum%20Tokyo%20Issues%20Paper%2030-5-2014.pdf>.

86. *Id.* at 11.

87. PRODUCT STEWARDSHIP INSTITUTE, SUMMARY OF ELEMENTS OF PACKAGING AND PAPER PRODUCTS (PPP) EPR LEGISLATION (2020), https://cdn.ymaws.com/www.productstewardship.us/resource/resmgr/packaging_toolkit/Packaging_EPR_Elements_SUMMA.pdf.

ments mandated by regulatory agencies must be clear and actionable for producers; (2) reporting requirements must be consistent for all producers, including the type, frequency, and format of data they are required to submit; (3) annual producer reports should include an independent audit; (4) reported data must be consistent from year to year (with additions or changes made only to better meet performance goals and compliance standards); and (5) annual reported data must be clear, transparent, and made publicly accessible.

Additionally, several technological proposals have been put forth to help improve compliance procedures. First, the development of a single electronic register of producers for each jurisdiction would assist enforcement.⁸⁸ Each regulatory authority's web page could publish the registration form, along with a means to report non-registered producers.⁸⁹ Second, tracking plastic by barcode could promote greater accountability by making plastic waste more traceable.⁹⁰ This could enhance coordination efforts between customs, tax and trading officials, and environmental authorities and would make it easier to find and penalize noncompliant offenders.⁹¹ Coordinating enforcement actions in this way would also improve the cost-

effectiveness of enforcement. Finally, EPR programs could benefit from greater data collection and monitoring.⁹² The current lack of data makes it difficult to identify noncompliant producers.

V. Conclusion

There are many solutions to ocean plastic pollution. As a society, we will need to take multiple approaches to tackle this complex and pervasive problem. EPR programs for plastic packaging and products offer one key solution, seeking to manage and mitigate plastic waste from cradle-to-grave and incentivize returning these materials to the use phase through recycling or redesign.

While the United States does not currently have plastic-specific EPR programs in place, the number of proposals moving through state legislatures and the U.S. Congress, as summarized here, has significantly increased in recent years. It is abundantly apparent that the transition to a more circular economy must include the manufacturers of plastic products and packaging, and lawmakers must clearly define the compliance and enforcement processes for these producers.

88. RESOURCE EFFICIENCY & CIRCULAR ECONOMY PROJECT, OECD, EXTENDED PRODUCER RESPONSIBILITY AND THE IMPACT OF ONLINE SALES (2018), <https://www.oecd.org/environment/waste/policy-highlights-extended-producer-responsibility-and-the-impact-of-online-sales.pdf>.

89. *Id.* at 10.

90. CLARA SALINA, BARCODE VS. PLASTIC WASTE: A CITIZEN PROPOSAL (2014), <http://www.truevaluemetrics.org/DBpdfs/Waste/Clara-Salina-Barcode-vs-Plastic-Waste.pdf>.

91. *Id.* at 11.

92. WATKINS ET AL., *supra* note 8, at 19-20.