

Introducing a Voluntary Extended Producer Responsibility Scheme for the New Plastics Economy

Hannah Yang

Introduction

Ocean plastic pollution is a large-scale problem that stems from multiple points of the plastics life cycle, ranging from design, production, use, disposal, and environmental leakage. Voluntary extended producer responsibility (EPR) is an important tool to address the plastics problem. EPR focuses resources directly on the disposal and pollution aspects of plastic waste, while still implicating the upstream production decisions. It provides a more immediate solution to addressing pollution, allows flexibility for innovation and efficiency, and allocates responsibility on those best equipped to address the problem. I propose that New Plastics Economy (NPE) is a non-profit organization that provides a workable platform for building out a voluntary EPR scheme, however, its success would depend on careful control mechanisms to ensure accountability of the participants and the organization itself. This proposed voluntary EPR scheme for NPE is just a starting point and a single piece of a much larger puzzle. It leaves open the door for international and local regulators to implement longer-term solutions.

The Plastics Problem

Plastics have many benefits; they are lightweight, provide sterile packaging, and help extend the shelf-life of products, among others.¹ Because they are cheap to manufacture, plastics are treated as disposable after just one short use.² However, society's management of plastic waste is a growing problem and many are realizing that this momentary convenience comes at a cost.³

¹See *Plastics: Consumer Benefits*, AM. CHEMISTRY COUNCIL, <https://plastics.americanchemistry.com/Consumer-Benefits/> (last visited Nov. 5, 2020).

²See World Wildlife Fund, *Plastics: Convenience Numbs Common Sense*, MEDIUM (Apr. 21, 2018), <https://medium.com/wwftogetherpossible/plastics-convenience-numbs-common-sense-9dfc4a7b7991>.

³See Özgül Calicioglu, *Drowning in Plastics: A Problem of Too Much Convenience?*, WORLD BANK: WORLD BANK BLOGS (Nov. 28, 2019) <https://blogs.worldbank.org/eastasiapacific/drowning-plastics-problem-too-much-convenience>.

One major negative consequence is plastic pollution in oceans. It is estimated that between 4.8 million and 12.7 million metric tons entered the ocean in just 2010 alone.⁴ Once in the ocean, the plastics do not biodegrade easily and continue to persist in the environment.⁵ When these plastics do slowly break down, carbon is released into the water and atmosphere, which contributes to global warming.⁶ Ocean plastics also pose serious harm to marine life, choking or starving marine wildlife.⁷ Harms extend beyond the individual organisms that consume the plastics and bioaccumulate through the food chain.⁸

Sources of Ocean Plastics

Ocean plastics can originate from both land and ocean sources. It is estimated that about 20 percent of plastic waste enters the marine environment from ocean-based sources, such as fishing, cargo ships, and offshore platforms.⁹ Land-based sources make up the remaining 80 percent, through spillage of pellets, littering, dumping, stormwater discharges, and general poor waste management.¹⁰ As the two sources of plastics pose somewhat different issues, they also warrant somewhat different solutions. This discussion will largely focus on the land-based sources.

Within the category of land-based sources, there are a variety of factors that contribute to increased plastic waste in the oceans. For instance, producers of raw materials can reduce direct inputs of plastic by taking additional steps to prevent spillage of plastic pellets into the ocean.¹¹ These producers

⁴See Jenna R. Jambeck et al., *Plastic Waste Inputs from Land into the Ocean*, SCIENCE, Feb. 13, 2015 at 768, DOI: 10.1126/science.1260352; see also World Economic Forum, *The New Plastics Economy: Rethinking the Future of Plastics*, ¶14 (Jan. 2016) http://www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf (estimating in 2016 about 8M8 million tons each year, and expecting a doubling by 2030 if no action is taken).

⁵See W.C. Li et al., *Plastic Waste in the Marine Environment: A Review of Sources, Occurrence and Effects*, SCI. OF THE TOTAL ENV'T, May 24, 2016 at 333, <https://doi.org/10.1016/j.scitotenv.2016.05.084>.

⁶See Monica Isola, *Plastic Contributes to Global Warming as It Breaks Down, Researchers Find*, YALE CLIMATE CONNECTIONS (Nov. 7, 2018), <https://www.yaleclimateconnections.org/2018/11/common-plastics-emit-global-warming-pollution/>.

⁷See *What Is the Great Pacific Garbage Patch?*, NAT'L OCEAN SERV. (Nov. 5, 2020), <https://oceanservice.noaa.gov/facts/garbagepatch.html>.

⁸See W.C. Li et al, *supra* note 5.

⁹See *id.*; *Marine Debris Program: Sources*, NAT'L OCEAN SERV. (Nov. 5, 2020), <https://marinedebris.noaa.gov/types-and-sources/sources>.

¹⁰See *Marine Debris Program: Sources*, *supra* note 9.

¹¹See Julissa Treviño and Undark, *The Lost Nurdles Polluting Texas Beaches*, THE ATLANTIC (JUL. 5, 2019), <https://www.theatlantic.com/science/archive/2019/07/plastic-pellets-nurdles-pollute-oceans/593317/>.

can also reduce the amount of problematic plastic that enters into circulation by choosing to source materials that contain post-consumer plastics, are biodegradable, or are more easily recycled. Packaged goods manufacturers can also help to reduce plastic waste, as these manufacturers can dictate both the amount and types of plastic used in products and package designs.¹² Consumers may also play a role by reducing demand for products with short lifespans¹³ and conveniently packaged goods.¹⁴ Under this presumption, greater consumer awareness could shift the market away from a dependence on single-use plastics.¹⁵ Additionally, consumers can make sure to properly recycle and dispose of plastic waste to reduce the amount of plastic that ends up in the oceans.¹⁶ From there, recycling facilities can improve technology to increase the amount of collected plastic that is actually being recycled. Currently, a significant volume of recyclable material is often sent to the landfill,¹⁷ which increases the chances of plastics entering the ocean during transportation.¹⁸

Challenges to Solving the Ocean Plastics Problem

Spread in the Environment

Once the plastic enters the ocean, natural currents can transport plastics around the globe, meaning plastics from one country can pollute the waters of another. These plastics are found at a range

¹² For example, this includes the type of materials, the choice of color, or the use of mixed materials. See Rebecca Davis and Christopher Joyce et al., *Plastics: What's Recyclable, What Becomes Trash – and Why*, NPR (Aug. 21, 2019), <https://apps.npr.org/plastics-recycling/>.

¹³ See Noah M. Sachs, *Planning the Funeral at the Birth: Extended Producer Responsibility in the European Union and the United States*, 30 HARV. ENV'T. L. REV. 51, 60 (2020).

¹⁴ See Greg Kelly et al., *The New Model for Consumer Goods*, MCKINSEY & CO. (Apr. 2, 2018), <https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/the-new-model-for-consumer-goods>.

¹⁵ Evidence of public awareness causing a shift in demand, and consequently some shifts in supply. See Stephen Buranyi, *The Plastic Backlash: What's Behind Our Sudden Rage – and Will It Make a Difference?*, THE GUARDIAN (Nov. 13, 2018), <https://www.theguardian.com/environment/2018/nov/13/the-plastic-backlash-whats-behind-our-sudden-rage-and-will-it-make-a-difference>.

¹⁶ But see, Matt Wilkins, *More Recycling Won't Solve Plastic Pollution*, SCI. AM.: OBSERVATIONS (Jul. 6, 2018), <https://blogs.scientificamerican.com/observations/more-recycling-wont-solve-plastic-pollution/> (arguing that increased consumer recycling will never solve the problems of plastic pollution).

¹⁷ See Livia Albeck-Ripka, *Your Recycling Gets Recycled, Right? Maybe, or Maybe Not*, THE NEW YORK TIMES (May 29, 2018), <https://www.nytimes.com/2018/05/29/climate/recycling-landfills-plastic-papers.html> (noting that Waste Management threw out about 25% of their recycling).

¹⁸ See *How Does Plastic End Up in the Ocean?*, WORLD WILDLIFE FUND, <https://www.wwf.org.uk/updates/how-does-plastic-end-ocean> (last visited Nov. 6, 2020).

of depths of the ocean, from the surface down to the ocean floor.¹⁹ This dispersion of plastics makes cleanup and tracking more difficult.

Absence of Regulation

Ocean plastic management currently suffers from the tragedy of the commons. Most of the pollution is found in the high seas, which have minimal regulation and no private ownership.²⁰ Without regulation, individuals have minimal incentives to take on additional expenses to prevent plastics from entering the ocean. These challenges are only exacerbated by the international nature of the ocean plastics problem. The consequences of local sources of pollution span the entire globe. The harms are distributed across the general public, through the degradation of the oceans and marine life.

Cost

Furthermore, ocean cleanup is difficult and expensive. For example, The Ocean Cleanup designed a system to collect plastic waste from the ocean. Just one system cost about 21 million euros (or about \$24.6 million).²¹ The costs are high, in part because this is a new area of technology and research.²² In addition, once the plastic has been collected, disposal of the plastic is also generally expensive, especially compared to other materials such as paper or glass.²³ The cost of managing plastic waste after recovery makes recovery itself less economically viable.

¹⁹See Dongdong Zhang et al., *Microplastic Pollution in Deep Sea Sediments and Organisms of the Western Pacific Ocean*, ENV. POLLUTION, Jan. 10, 2020 at 1, <https://doi.org/10.1016/j.envpol.2020.113948>.

²⁰See Brian Palmer, *High Seas: Few Rules, Fewer Sheriffs*, NAT'L RES. DEF. COUNCIL (Jan. 16, 2019), <https://www.nrdc.org/stories/high-seas-few-rules-fewer-sheriffs>.

²¹ This number includes design, development, production, and only 1 year of operating costs. See Jeff Kart, *The Ocean Cleanup Is Starting, Aims to Cut Garbage Patch by 90% by 2040*, FORBES (Aug. 28, 2018), <https://www.forbes.com/sites/jeffkart/2018/08/28/the-ocean-cleanup-is-starting-aims-to-cut-garbage-patch-by-90-by-2040/#1cc3454b253e>.

²² The first successful deployment of The Ocean Cleanup's system was only after several years of simply researching the scope of the problem, beginning with a feasibility study published in 2014. See BOYAN SLAT ET AL., *HOW THE OCEANS CAN CLEAN THEMSELVES: A FEASIBILITY STUDY* (2014).

²³ per 2011; see European Environment Agency, *Price Development of Plastic, Paper and Glass Waste* (Nov. 29, 2012), <https://www.eea.europa.eu/data-and-maps/figures/price-developments-for-selected-waste-1>.

Assigning Responsibility

Finally, causation is also difficult to pinpoint. Just a single piece of ocean plastics traverses a long chain of control, from raw materials, to production, use, and disposal. Identifying causation can help identify which actors can and should bear responsibility for the plastic waste problems. With no single “wrongdoer,” assigning responsibility is more challenging.

EPR as a Solution to Plastic Waste

Extended producer responsibility (EPR) allocates responsibility for the management of post-consumer waste on the producers.²⁴ This can take multiple forms, including actual physical responsibility of taking the waste goods from the consumers at the point of disposal, administrative management of the disposal infrastructure, or financial responsibility. EPR is touted as a useful tool to address some of the negative externalities of production.²⁵

Benefits of EPR

To start, EPR can be used to cover costs needed to manage existing pollution and to remedy harms stemming from that waste.²⁶ In the context of plastics, EPR could extend to ocean cleanup. EPR shifts the economic burden of plastic waste further upstream onto producers, away from those who directly suffer the harms of plastic waste.²⁷ Secondly, producers exercise at least some control over the degree and nature of plastic waste generation. As with general product liability theory, internalization of the downstream costs of plastic waste should incentivize upstream decisions to minimize these downstream harms, so long as the upstream solutions are less expensive than their downstream liability.²⁸

²⁴See *Extended Producer Responsibility*, ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, <https://www.oecd.org/env/tools-evaluation/extendedproducerresponsibility.htm> (last visited May 16, 2020).

²⁵See Kleoniki Pouikli, *Concretising the Role of Extended Producer Responsibility in European Waste Law and Policy Through the Lens of the Circular Economy*, 20 ERA FORUM 491, 493 (2020).

²⁶See Sachs, *supra* note 13, at 81 (noting collection is typically performed by municipalities).

²⁷See Organisation for Economic Co-Operation and Development, *The State of Play on Extended Producer Responsibility (EPR): Opportunities and Challenges*, at 8–9 (2014), <https://www.oecd.org/environment/waste/Global%20Forum%20Tokyo%20Issues%20Paper%2030-5-2014.pdf>.

²⁸See Sachs, *supra* note 13, at 53.

Furthermore, EPR leaves flexibility for industry actors to innovate and develop their own mechanisms to efficiently reduce harms.

Concerns with EPR

Effectiveness

Critics are skeptical of the practical significance of design incentives. There are various forms of EPR, which each allocate financial liability somewhat differently. If responsibility is determined collectively based on industry or product type, rather than the specific producer's actual contribution to the waste problem, then any upstream incentives may be significantly diluted. Producers that are grouped together may face collective action problems.²⁹ Alternatively, EPR responsibility could be determined based on each producer's individual contribution to plastic waste. These EPR systems more directly internalize the downstream costs,³⁰ but can be difficult and costly to implement.³¹

Fairness

Another critique is that EPR schemes place excessive burdens on upstream producers and manufacturers and too little on consumers and government entities. For one, consumers still retain control over waste disposal, after use.³² There is a moral hazard that consumers have no incentives to dispose of plastics properly if producers are paying to manage the waste problem. Secondly, even if the consumer properly disposes of plastics, many countries currently lack plastic waste management capacity and

²⁹For example, some producers can free ride on design improvements made by others within their fee group. See Atalay Atasu & Ravi Subramanian, *Extended Producer Responsibility for E-Waste: Individual or Collective Producer Responsibility?*, 21 PROD. & OPERATIONS MGMT. 1042 (2012). The efficacy of collective EPR schemes will depend on the relationship between producers within the fee group and whether that relationship can control free riding.

³⁰See Sachs, *supra* note 13, at 75.

³¹See Atasu & Subramanian, *supra* note 29; see also *id.* at 76–77 (expressing skepticism in applying true cost internalization for more complex e-waste products and identifying “many EU EPR programs have defaulted to collective responsibility as a matter of practical necessity”).

³²See Sachs, *supra* note 13 (noting industry challenges that the *consumer* is the polluter and therefore is the one that should pay).

instead export plastic waste to other countries in East Asia and Pacific.³³ Once exported, there is little oversight over how this plastic is subsequently managed.³⁴ As one producer notes, truly addressing the plastic waste problem would require the burdensome development of an entirely new industry around plastic waste management.³⁵

Similarly, EPR also raises equity questions about the global allocation of responsibility. In 2014, China was the largest producer of plastics materials at 26 percent, followed by Europe and the NAFTA countries at around 20 percent each.³⁶ Yet, in 2016, it is estimated that the United States generated the most plastic waste in the entire world and contributed the most plastic waste to coastal environments.³⁷ The question of allocating responsibility between producer and consumer also implicates the allocation of responsibility between developed versus developing nations.

On the flipside, others may be concerned about consumers bearing the brunt of the costs under EPR. After all, even if producers are directly responsible, these increased costs can still be passed to the consumer through increased prices.³⁸

³³ U.S., Japan, and Germany were the top exporters to China. With the new import regulation in 2018, countries are shifting to other nearby countries. The new plastic importers may see an increase in mismanaged waste due to flooding their recycling supply chain. See Sara Kiley Watson, *China Has Refused to Recycle the West's Plastics. What Now??*, NPR (June 28, 2018), <https://www.npr.org/sections/goatsandsoda/2018/06/28/623972937/china-has-refused-to-recycle-the-wests-plastics-what-now>.

³⁴ See Roger Harrabin, *Bill Proposes Ban on Plastic Waste Exports*, BBC: SCI. (Jan. 30, 2020), <https://www.bbc.com/news/science-environment-51315458> and *The Plastic Waste Trade in the Circular Economy*, EUR. ENV'T AGENCY (Jul. 23, 2020), <https://www.eea.europa.eu/themes/waste/resource-efficiency/the-plastic-waste-trade-in>. China's ban and the increased awareness of mismanaged plastic waste have pushed some governments to consider banning exports to certain countries. In 2010, 60% of the global mismanaged waste came from East Asia and Pacific. See Hannah Ritchie and Max Roser, *Plastic Pollution*, OUR WORLD IN DATA (Sep. 2018), <https://ourworldindata.org/plastic-pollution#all-charts-preview>.

³⁵ See *OECD Joint Workshop on Extended Producer Responsibility and Waste Minimisation Policy in Support of Environmental Sustainability* ¶57-58 ENV/EPOC/PP(99)11/Final/Part1 (May 4–7, 1999) [hereinafter OECD Joint Workshop].

³⁶ See *Plastics – the Facts 2015*, PLASTICSEUROPE, (2015), https://www.plasticseurope.org/application/files/3715/1689/8308/2015plastics_the_facts_14122015.pdf.

³⁷ See Kara Lavender Law et al., *The United States' Contribution of Plastic Waste to Land and Ocean*, 6 SCI. ADVANCES, no. 44, 2020, at 2 (accounting for both direct and indirect pathways, such as the US exports to other countries which are subsequently mismanaged).

³⁸ See EPA, GUIDELINES FOR PREPARING ECONOMIC ANALYSIS, at 8-5, 8-9 (2010).

Government Programs Utilizing EPR

A few limited jurisdictions have implemented plastic EPR schemes with varying degrees of success. Germany was one of the first countries to shift the costs of packaging waste (including plastics) to producers in 1991.³⁹ Additionally, Der Gruener Punkt (“Green Dot”) certified those companies that reduced plastic packaging and made the packaging easier to recycle.⁴⁰ Some have expressed concerns about the high price tag of the system.⁴¹ Still, recycling rates increased for all materials, including plastics,⁴² and the program has generally been considered successful in meeting targets.⁴³ Several other European countries have since followed suit, creating EPR schemes in connection with the EU Packaging and Packaging Waste Directive.⁴⁴

More recently, in 2018, India developed a nascent EPR scheme to support its single-use plastic bans.⁴⁵ Implementation has been trickier, due to the large informal market for plastic recycling.⁴⁶ Additionally, EPR in India struggles from the lack of guidelines and targets.⁴⁷ However, India is

³⁹See *The Producer Pays*, KNOWLEDGE@WHARTON (April 4, 2017), <https://knowledge.wharton.upenn.edu/article/the-producer-pays/>. This has been paired with more systematic improvements of lower recycling costs and improved packaging materials optimization. See Joachim Quoden, *Effects of the Introduction of an EPR Management System on the Economy*, in Organization for Economic Cooperation and Development, ECONOMIC ASPECTS OF EXTENDED PRODUCER RESPONSIBILITY 120, 127, 130 (2004).

⁴⁰See *Our Goal: Closing Loops – Together for the Environment*, DERGRÜNEPUNKT <https://www.gruener-punkt.de/> (last visited Nov. 6, 2020).

⁴¹See Sachs, *supra* note 13, at 72 (citing a cost of 1.8B8 billion euros a year, but failing to provide the comparable cost savings and benefits).

⁴²See Clean Production Action, *Extended Producer Responsibility*, Clean Production Action, at 16 (2004), https://www.cleanproduction.org/static/ee_images/uploads/resources/EPRtoolkitColourFinal.pdf.

⁴³See Sachs, *supra* note 13, at 69.

⁴⁴See Council Directive 94/62/EC, 1994 O.J. (L 365); see also, *id.* at 68 (“EPR legislation has been adopted, or is about to be adopted, in all twenty-five EU Member States, and for the most part, the objectives of European EPR programs to reduce landfill impacts and stimulate a closed-loop recycling system are being met.”).

⁴⁵See Priyanka Pulla, *Making India’s Polluters Pay*, THE HINDU (Dec. 15, 2018), <https://www.thehindu.com/sci-tech/energy-and-environment/making-indias-polluters-pay/article25753356.ece>

⁴⁶See *id.* Several producer responsibility organizations (PROs) have formed, which allow companies to pool resources and take advantage of economies of scale. See Dinesh Raj Bandela & Richa Agarwal, *Whose Waste Is It?*, DOWNTOEARTH (Feb. 10, 2019), <https://www.downtoearth.org.in/news/waste/whose-waste-is-it-63077>. However, rather than developing a larger collection infrastructure to help reduce mismanaged waste, many PROs are simply purchasing the plastic from the informal market. *Id.*

⁴⁷See Pulla, *supra* note 45.

committed to the EPR model and is developing a nationally unified working model and stricter EPR policies.⁴⁸

Theory of Voluntary EPR

Because voluntary programs are not limited by state boundaries, they allow for cross-jurisdictional cooperation. A global solution helps address the global plastic supply chain. Voluntary programs also promote efficiency. They are quicker to set up than governmental instruments. Additionally, EPR uses financial incentives to drive industry innovation and development. Voluntary programs will adapt to a changing industry to maximize efficiency. At the same time, a voluntary EPR scheme may minimize direct government management, reducing administrative costs that would otherwise be covered by taxpayers.

However, there are certainly shortcomings to voluntary programs. To start, there is the baseline question of garnering support. It is not immediately clear why companies would voluntarily take on greater liability. Even with a few industry supporters, there remains the challenge of obtaining high levels of voluntary participation. Of the companies that do voluntarily commit, there needs to be some mechanism to motivate and ensure compliance. Finally, if the requirements are set too loosely or superficially, companies may abuse these voluntary programs for marketing or public relations benefits, without taking any real actions.⁴⁹ This concern of greenwashing creates a risk of voluntary EPR schemes doing more harm than good.

Applications of Voluntary EPR

Despite concerns, some private, voluntary EPR schemes have emerged in the plastic industry. Not surprisingly, a few non-profit and NGO driven initiatives have emerged. The World Wildlife Fund has

⁴⁸See Zia Haq, *New Guidelines to Put Recycling Onus on Plastic Manufacturers*, HINDUSTANTIMES (Oct. 7, 2019), <https://www.hindustantimes.com/india-news/new-guidelines-to-put-recycling-onus-on-plastic-manufacturers/story-kQ4n9pOTq6x605sAa24y5K.html>.

⁴⁹ See Jane Hoffman and Michael Hoffman, *What Is Greenwashing?*, SCI. AM. (Apr. 1, 2009), <https://www.scientificamerican.com/article/greenwashing-green-energy-hoffman/>.

introduced the Extended Producer Responsibility Project.⁵⁰ WWF's efforts are focused on developing EPR legal regimes in target countries around the world, primarily in Asia and South America.⁵¹ Additionally, Project STOP works together with local government, industry, and other partners to develop waste management systems in communities with "high levels of ocean plastic leakage and dedicated government support,"⁵² leveraging funding from the plastic industry to address post-consumer waste.⁵³ Due to the community-tailored nature of this undertaking, it will be difficult to scale this program quickly. Another model is the Minderoo Foundation, which focuses on resin producers. Its goal is to use a voluntary EPR to push up the price of virgin plastics, helping to drive greater innovation and decrease the costs of recycled plastics.⁵⁴ As it is still in its early conception phase, it remains to be seen how industry will respond.

Other initiatives are supported by a combination of public and private funding. The Recycling Partnership works together with municipalities around the US to develop curbside recycling infrastructure. Supported by a combination of city funds with private sector donations,⁵⁵ it has helped to collect about 230 million pounds of recyclable plastics and other materials. Circulate Capital is an investment management fund. It formed Circulate Capital Ocean Fund (CCOF) which is dedicated to preventing ocean plastic, with a goal for plastic recycling to be a profitable investment.⁵⁶ Several private

⁵⁰ See *Extended Producer Responsibility Project*, WORLD WILDLIFE FUND (Oct. 28, 2020), <https://wwf.panda.org/?356332/Extended-Producer-Responsibility-Project>.

⁵¹ See Xin Chen, *WWF's EPR Project at a Glance*, WORLD WILDLIFE FUND, http://d2ouvy59p0dg6k.cloudfront.net/downloads/20190905_wwf_s_epr_project_external.pdf (last visited Nov. 6, 2020).

⁵² See *Our Approach*, PROJECT STOP, <https://www.stopoceanplastics.com/our-approach/> (last visited Nov 6, 2020).

⁵³ See, e.g., *Pasuruan*, PROJECT STOP, https://www.stopoceanplastics.com/en_gb/pasuruan/ (Feb. 20, 2020). This project may have also sourced some funding from an external government.

⁵⁴ See Lisa Cox, *Andrew Forrest Launches US\$300m War on Plastic to Tackle Ocean Pollution*, THE GUARDIAN (Sept. 25, 2019), <https://www.theguardian.com/australia-news/2019/sep/25/andrew-forrest-launches-us300m-war-on-plastic-to-tackle-ocean-pollution>.

⁵⁵ See *We're All in This Together*, THE RECYCLING PARTNERSHIP, <https://recyclingpartnership.org/funding-partners/> (last visited Nov. 6, 2020) (noting funders ranging from ExxonMobil to Amazon, and the Plastics Industry Association).

⁵⁶ See Newsfile Corp., *Circulate Capital Closes US \$106M Fund to Protect Asia's Ocean from Plastic*, YAHOO! FIN. (Dec. 4, 2019), <https://finance.yahoo.com/news/circulate-capital-closes-us-106m-152600477.html>.

corporations are investors in CCOF, including the first investor, PepsiCo.⁵⁷ There is also a mix of public funding as the initiative is backed by USAID.⁵⁸ Although still relatively new, CCOF is working with over \$100 million and has announced two investments in Asian plastic recycling companies.⁵⁹ These hybrid publicly-privately funded organizations may benefit from a financial advantage.

Finally, some initiatives are both funded and lead by industry. Terracycle, a private recycling company focused on hard-to-recycle plastics, runs a recycling program financed by product goods manufacturers and free to consumers.⁶⁰ In this voluntary, individual EPR program,⁶¹ packaging for each brand family is collected separately, simplifying both the allocation of cost and the recycling processing. However, this system places considerable onus on the consumer to sort out all packaging and would likely be very difficult to scale. Several other industry-led initiatives have also emerged. The Kenya Association of Manufacturers has proposed a three-year plan for shifting responsibility to plastic producers.⁶² Several companies have also formed a consortium to support innovation in chemical recycling.⁶³ This indicates a readiness for industry actors to join forces and collaborate on the plastic waste problem.

The proliferation of these voluntary EPR schemes highlights the potential of a well-developed initiative with the right participants.

⁵⁷ Several other major plastics companies joined soon after, including Coca-Cola, Danone, Dow, Procter & Gamble, Unilever, and Chevron Phillips Chemical. *See id.*

⁵⁸*See Our Story*, CIRCULATE CAPITAL, <https://www.circulatecapital.com/> (last visited Nov. 6, 2020).

⁵⁹*See Our Investment Portfolio*, CIRCULATE CAPITAL, <https://www.circulatecapital.com/investments> (last visited Nov. 7, 2020)

⁶⁰*See Free Recycling Programs*, TERRACYCLE, <https://www.terracycle.com/en-US/brigades> (last visited Nov. 7, 2020). Some companies include a fundraiser aspect to the collection drive.

⁶¹ Collection and recycling are free for consumers, and the costs to the producers are directly connected to the costs of recycling the packaging waste.

⁶²*See Kenya Plastic Action Plan*, KENYA ASS'N OF MFRS. (Nov. 2019), http://kam.co.ke/kam/wp-content/uploads/2019/12/KPAP_Document-pages.pdf.

⁶³*See Citeo, Total, Recycling Technologies, Mars and Nestlé Join Forces to Develop Chemical Recycling of Plastics in France*, TOTAL (Oct. 12, 2019), <https://www.total.com/media/news/press-releases/citeo-total-recycling-technologies-mars-and-nestle-join-forces-develop-chemical-recycling-plastics>.

Analysis of NPE, and how it might support a voluntary EPR scheme

The New Plastics Economy (NPE) is a non-profit charity of the Ellen MacArthur foundation. Its mission is to promote a circular economy for plastics.⁶⁴ Launched together with UN Environment in October 2018, one of the organization's projects is the Global Commitment.⁶⁵ It invites a diverse set of signatories from both the public and private sectors⁶⁶ to work towards a set of circular plastics economy targets by 2025. These 2025 targets vary by signatory, but largely focus on increasing recycled content and using recyclable materials.⁶⁷ Industry signatories include major leaders in the "fast moving consumer goods" industry, "plastic packaging producers" and "global retailers"⁶⁸ and represent "20% of all plastic packaging produced globally."⁶⁹

⁶⁴See *The Initiative*, ELLEN MACARTHUR FOUND., <https://www.newplasticseconomy.org/about/the-initiative> (last visited Nov. 7, 2020).

⁶⁵See *New Plastics Economy Global Commitment*, ELLEN MACARTHUR FOUND., <https://www.ellenmacarthurfoundation.org/assets/downloads/13319-Global-Commitment-Definitions.pdf> (last visited Nov. 7, 2020) [hereinafter NPE Global Commitment].

⁶⁶ Specifically, recycling companies, raw materials producers, governments, NGOs, and investors.

⁶⁷ For example, packaged goods companies' targets are based on their plastic packaging, whereas recycling industry targets are focused on increasing capacity and quality. See NPE Global Commitment, *supra* note 65, at 2.

⁶⁸See *New Plastics Economy Global Commitment: June 2019 Report*, ELLEN MACARTHUR FOUND. (Jun. 17, 2019), <https://www.newplasticseconomy.org/assets/doc/GC-Report-June19.pdf> [hereinafter NPE Global Commitment 2019 Report].

⁶⁹See *The Initiative*, *supra* note 64.

Compatibility of EPR and NPE



Potential for EPR

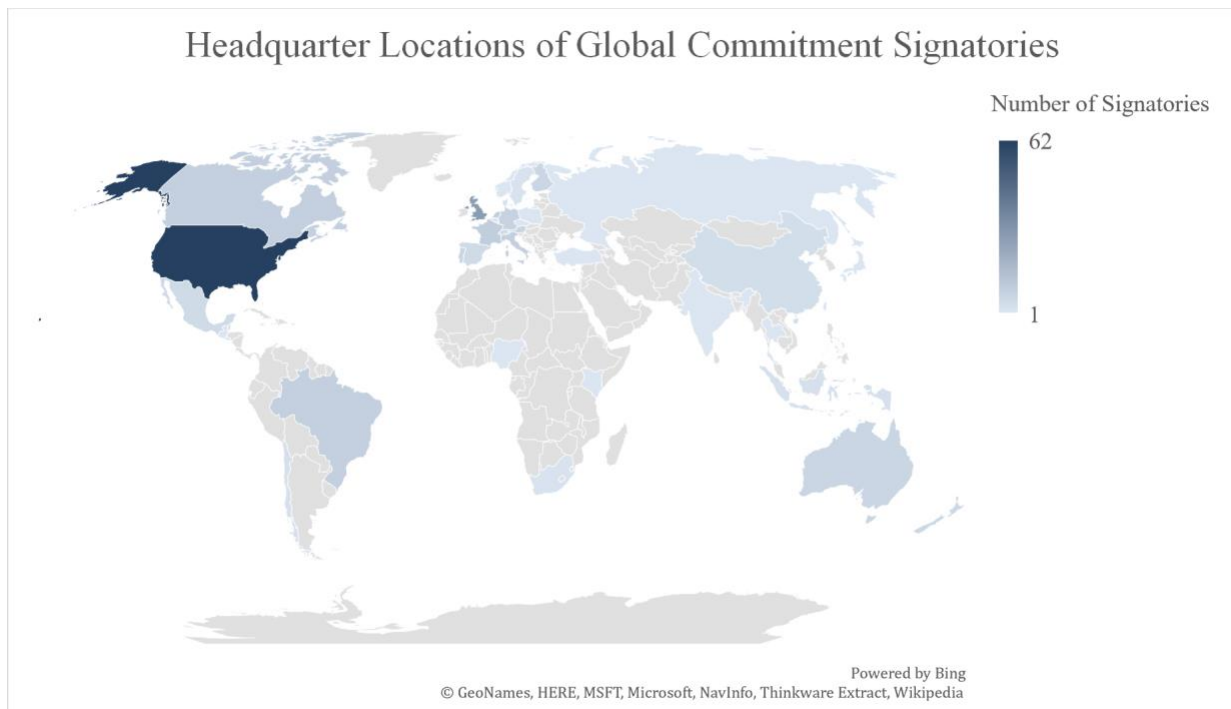
Both EPR and NPE consider the entire lifecycle of the product, seeking to minimize waste in product design and promote recycling of any waste product.⁷⁰ The Global Commitment is focused primarily on forward-looking improvements, targeting design and production decisions to reduce plastic waste in the long run. However, these design changes will take time to implement, and plastic waste has already been accumulating in the environment for many years. A voluntary EPR scheme would place financial responsibility on the plastic industry for any existing and remaining waste, helping to complete the circular economy.

Additionally, NPE creates a solid working framework to introduce an EPR scheme for plastic waste. In fact, pairing EPR with a series of production-side targets addresses the concerns about the limited influence of a collective industry EPR scheme on upstream factors such as product design and

⁷⁰ See Louis Dawson, 'Our Waste, Our Resources; A Strategy for England'—Switching to a Circular Economy Through the Use of Extended Producer Responsibility, 21 ENV'T. L. REV. 210, 214 (2019); see also Pouikli, *supra* note 25, at 493.

production.⁷¹ For example, the Global Commitment to “take action to” address single-use and unnecessary packaging⁷² is also an upstream goal of EPR, since it would help to reduce the volume of plastic entering the oceans. Signatories also commit to set recycled content targets.⁷³ This supports EPR by driving up demand of recycled plastic materials. Importantly, signatories commit to “100% of plastic packaging to be reusable, recyclable, or compostable.”⁷⁴ This also complements EPR by reducing recycling costs and improving recycling rates.

Together, NPE and EPR will further reinforce incentives to reduce and improve plastic packaging, and increase recycling, while providing funding to address existing plastic waste and environmental degradation.



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⁷¹ See discussion *supra* “Concerns with EPR.”

⁷² NPE Global Commitment, *supra* note 65.

⁷³ See *id.*

⁷⁴ *Id.*

⁷⁵ See *Signatories*, ELLEN MACARTHUR FOUND., <https://www.ellenmacarthurfoundation.org/resources/apply/global-commitment-progress-report/signatories> (last visited Nov. 19, 2020).

EPR is also compatible with the structure of NPE. Due to the international scope of the problem of the plastics problem, it is valuable that NPE works across borders with minimal transaction costs. Because NPE is a private entity, there are no jurisdictional restrictions or need for international treaties as NPE continues to grow and expand its reach.⁷⁶ Under a global EPR scheme, companies operating in multiple countries can sign as a single entity encompassing all subsidiaries. Those companies can then more efficiently adopt uniform corporate policy and designs to meet EPR requirements, across the different countries in which they operate. Additionally, an international EPR scheme helps to address the global nature of the plastic supply chain. In contrast, government mandated EPR programs, such as Germany's packaging waste program discussed above,⁷⁷ have been directed towards specific jurisdictions, resulting in fractured and inefficient treatment.

It is also valuable that the Global Commitment brings together actors from various aspects of the plastic industry. EPR is bolstered by the support from all parts of the supply chain. Optimal product design would incorporate environmental considerations from the choice of raw material through to the product distribution. This helps to address the causation problem, by including all industry actors that are in the chain responsibility. NPE helps to bring together each of these different parties under the shared goal of developing a circular economy to reduce plastic waste.

Governance of NPE

Compliance

Compliance will be one of the most important hurdles for voluntary EPR. While there are many motivators to comply, which will be discussed below, they may not be sufficient to secure compliance if compliance costs outweigh the benefits and the environmental goals become unprofitable.⁷⁸

⁷⁶ Currently, NPE signatories are based in 44 different countries, including the 20 different government entities. *See id.*

⁷⁷ *See* discussion *supra* Section "Government Programs Utilizing EPR."

⁷⁸ In contrast to, for example, self-regulating standards in the tech industry, where the disadvantages of noncompliance are much greater. *See* ENFORCEMENT OF TRANSNATIONAL REGULATION, at 55 (Fabrizio Cafaggi ed. 2014).

Currently, NPE relies on public reporting to encourage compliance. NPE publishes a cumulative annual report compiling the progress of each signatory towards the 2025 targets.⁷⁹ Companies that fail to submit a report are explicitly identified, creating some public accountability.⁸⁰ NPE could also consider providing a certification system as a further compliance tool, not unlike Germany's Green Dot program.⁸¹ The fact that some of the signatories are dominant actors in their respective industries, may further increase the competitive value of such a certification and spur increased participation.

Decision-Making

NPE Global Commitments currently take the form of rulemaking. NPE sets standards and signatories define targets consistent with these standards. If the NPE standards become more demanding, signatories will be interested in governance controls that promote the legitimacy of NPE.⁸² A voluntary EPR program that collects fees would open additional questions of how the resources should be directed and utilized, which further drives the need for legitimacy.⁸³ This could be achieved through implementing global administrative law tools of transparency, participation, reason giving and review. In its current form, it is not clear which if any of these are present.

The annual reports provide detailed information on the performance of the signatories, which is an important achievement of transparency in the plastics industry.⁸⁴ However, there is minimal transparency from NPE itself. For example, little information is provided on the decision-making process

⁷⁹ See generally NPE Global Commitment 2019 Report, *supra* note 68; *The Global Commitment: 2020 Progress Report*, ELLEN MACARTHUR FOUND. (Nov. 2019), <https://www.ellenmacarthurfoundation.org/assets/downloads/Global-Commitment-2020-Progress-Report.pdf> [hereinafter NPE Global Commitment 2020 Report].

⁸⁰ See NPE Global Commitment 2020 Report, *supra* note 79, at 7 n. 2.

⁸¹ See *supra* subsection "Government Programs Utilizing EPR"; see also Singapore's "Reduced Packaging" eco-label, TOWARDS ZERO WASTE, <https://www.towardszerowaste.gov.sg/waste-streams/packaging-waste/> (last visited Nov. 7, 2020).

⁸² Legitimacy is important for attracting signatories and exerting influence. It can help to ensure efficiency, prevent arbitrary decisions, ensure that decisions still align with the intents and purposes of the NPE, and account for the will of the signatories. See generally Richard B. Stewart, *The Normative Dimensions and Performance of Global Administrative Law*, 13 I CON 499 (2015).

⁸³ See, e.g., *id.* at 502 (discussing concerns of disregard).

⁸⁴ See NPE Global Commitment 2020 Report, *supra* note 79, at 63–65.

for defining the Global Commitment general goals and individual targets. As such, it is also unknown to the general public how much participation signatories have in the NPE.⁸⁵ Participation is particularly relevant now, as the NPE was set to review and modify the Global Commitment by October 2020.⁸⁶ There is some degree of reason-giving in setting the Global Commitments, in the detailed Global Commitment Definitions.⁸⁷ Similar publications on the decision-making process would help support the implementation of an EPR scheme. Currently, NPE does not penalize individual signatories for failing to meet targets. However, if enforcement mechanisms are adopted to support a voluntary EPR scheme, a review process for its enforcement decisions will be more important for legitimacy. These governance mechanisms can increase administrative costs, but they would improve performance and legitimacy.

Motivating Factors for Signatories to Commit to an EPR Scheme within NPE

Pre-empt Regulation

Currently, only a few international instruments discuss ocean plastics, and they are generally of limited scope.⁸⁸ However, there is growing interest in regulation both at the national⁸⁹ and international⁹⁰ scale. The European Commission recently adopted a comprehensive Circular Economy Action Plan as

⁸⁵ This is both on the individual level for setting targets, but also more generally for defining the underlying goals of the Global Commitment. Specifically, also, whether the “core partners” who formed the original signatory group have any special involvement.

⁸⁶ See NPE Global Commitment, *supra* note 65, at 1.

⁸⁷ See *id.*

⁸⁸ See, e.g., Sara Savarani & Bryce Rudyk, *Ocean Plastic Pollution: A Survey of Existing Global Agreements and Proposals for Reform*, GUARINI CTR. ON ENV'T, ENERGY & LAND USE L. (2018); see generally Luisa Cortat Simonetti Goncalves & Michael Gerbert Faure, *International Law Instruments to Address the Plastic Soup*, 43 Wm. & Mary ENV'T. L. & POL'Y REV. 871, 881 (2019) (noting that the instruments do not directly address the issue of ocean plastic pollution).

⁸⁹ Individual countries may choose to adopt domestic EPR policies. Singapore is requiring companies to collect data on their plastic packaging and conducting a feasibility study on the implementation of an EPR scheme. *Packaging Waste*, TOWARDS ZERO WASTE, <https://www.towardszerowaste.gov.sg/waste-streams/packaging-waste/> (last visited Nov. 7, 2020). In the US, the bill “Break Free From Plastic Pollution Act of 2020” was introduced to the Senate in February 2020. It includes a specific provision for marine cleanup in the participation fees. Break Free From Plastic Pollution Act of 2020, S.B. 3263, 116th Cong. § 12102(b)(3)(B)(ii)(II) (2020).

⁹⁰ At the international level, there is push for a new UN treaty to address plastic waste. See, e.g., *NGOs and Businesses Call for UN Treaty on Plastic Pollution*, (Oct. 14, 2020), <https://www.ellenmacarthurfoundation.org/news/ngos-and-businesses-call-for-un-treaty-on-plastic-pollution>.

one component of the European Green Deal.⁹¹ The resolution committed to more specifically target policy at production and manufacturing to address packaging waste and plastics.⁹² As the Commission develops specific directives and policy frameworks, and until the regulatory gap is filled globally, there is significant potential for the plastic industry to set their own international standards that lawmakers across different jurisdiction may follow and adopt legislation consistent with industry norms.⁹³ Signatories may benefit from voluntarily adopting an EPR scheme, as such a scheme could pre-empt pending and future government regulation.

As evidenced in other industries, early movers are sometimes able to shape the regulatory environment, at least on the national scale. PaintCare, formed by manufacturers, advocated and developed model legislation for a mandatory EPR scheme.⁹⁴ In British Columbia, the Pharmaceutical Manufacturing Industry voluntarily formed a product stewardship program to set standards in managing the proper disposal of leftover pharmaceuticals.⁹⁵ The manufacturers explicitly engaged in this voluntary program with the hope of spurring regulatory action, and “on the understanding that the provincial government would later bring in a ‘level playing field’ regulation to ensure that all manufacturers abide by the same rules.”⁹⁶ Government regulation followed just one year after in 1997,⁹⁷ and other provinces in Canada have adopted similar legislation.⁹⁸

⁹¹ See *EU Circular Economy Action Plan*, EUR. COMM’N, <https://ec.europa.eu/environment/circular-economy/> (Oct. 11, 2020).

⁹² See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, §§ 3.3–3.4, COM (2020) 98 final (Nov. 3, 2020).

⁹³ See Steven Sarno & Lauren Hopkins, *The Rise of Mandatory Product Stewardship Programs*, ABA (July 1, 2015), https://www.americanbar.org/groups/environment_energy_resources/publications/trends/2014-2015/july-august-2015/the_rise_mandatory_product_stewardship_programs/.

⁹⁴ See *id.*

⁹⁵ See OECD Joint Workshop, *supra* note 35, at 67.

⁹⁶ *Id.*

⁹⁷ See Post-Consumer Residual Stewardship Program Regulation, B.C. Reg. 111/97 (Can.), *repealed by* Recycling Regulation, B.C. Reg. 449/2004 (Can.).

⁹⁸ See, e.g., Collection of Pharmaceuticals and Sharps - Responsibilities of Producers, O. Reg. 298/12 (Can.); Waste Reduction and Prevention Act, C.C.S.M. 16/2010 (Can.); Environmental Protection Act, R.S.P.E.I. 1988, cap. E-09. Furthermore, the original stewardship association has since grown to encompass much broader responsibility, and remains producer funded. See *About HPSA*, HEALTH PRODS. STEWARDSHIP ASS’N, <http://healthsteward.ca/about/about-hpsa/> (last visited Nov. 7, 2020).

Moral Convictions

Some signatories support the NPE vision of a circular plastic economy for moral reasons. These likely include the signatories who have already met many of the NPE commitment targets even prior to joining as a signatory. For example, rPlanet Earth is a packaging company which was founded on sustainable principles,⁹⁹ so many of the virgin and difficult-to-recycle plastics were never even part of its portfolio.¹⁰⁰ Purpose-driven companies are increasing in popularity, both in and out of the environmental sphere.¹⁰¹ Good ethics boosts public trust, improving the longevity of the business.¹⁰² The signatories who support NPE for moral reasons will likely feel similar obligations to address ocean plastic pollution, and thus may be willing to voluntarily adopt an EPR policy.

Economic Gain

Some of the benefits from EPR are more concrete, such as economic gain. Consumer demand is pushing industry to indicate their commitment to sustainable business practices. The choice to join the Global Commitment signals a commitment to sustainability and can provide good publicity. Additionally, a growing number of investors are interested in sustainable companies.¹⁰³ Joining the Global Commitment and taking real responsibility to make the company more sustainable could translate to greater access to capital, as more investors consider sustainability to be a core deciding factor. Many of these same benefits will exist in the context of EPR. The only question will be the level of responsibility and whether the cost exceeds the value of the economic benefit.

⁹⁹ See generally RPLANET EARTH, <https://www.rplanetearth.com/> (last visited Nov. 7, 2020).

¹⁰⁰ See NPE Global Commitment 2019 Report, *supra* note 68, at 300.

¹⁰¹ See generally Josh Bersin, *The Rise of the Social Enterprise: A New Paradigm for Business*, FORBES (Apr. 3, 2018), <https://www.forbes.com/sites/joshbersin/2018/04/03/the-rise-of-the-social-enterprise-a-new-paradigm-for-business/?sh=3aa05d3671f0>.

¹⁰² See EDELMAN, EDELMAN TRUST BAROMETER 2020 GLOBAL REPORT, at 24 (2020).

¹⁰³ See, e.g., *Index Family Overview*, SAM, <https://www.spglobal.com/esg/csa/indices/index> (last visited Nov. 19, 2020); *Sustainable Investing*, BLACKROCK, <https://www.blackrock.com/us/individual/investment-ideas/sustainable-investing> (last visited Nov. 7, 2020).

Furthermore, plastic waste management is becoming a part of the business model. Companies at various points in the plastic supply chain are vertically integrating by acquiring recycling facilities. As a result, plastic producers have a greater financial stake in the recycling business and are internalizing some of the costs of plastic waste management.¹⁰⁴ These acquisitions are driven in part by an increased demand for recycled plastics.¹⁰⁵ For example, DAK Americas cited “consumer interest in sustainable products” as a key factor for its acquisition of Perpetual Recycling Solutions.¹⁰⁶ Similarly, Imerys Performance Additives, which produces mineral-additives for plastics among other materials, fully acquired the plastic recycler Regain Polymers,¹⁰⁷ possibly due to increased demand for recycled plastics stemming from the EU Directive 94/62/EC.¹⁰⁸ Even larger companies, such as Ikea, are purchasing a stake in plastic recycling.¹⁰⁹ These new hybrid producer-recycler companies will benefit from an EPR requirement that helps to increase demand for recycling while decreasing the processing costs.

¹⁰⁴ See Alan Barton, *To Go Circular, First Go Vertical*, U.S. CHAMBER OF COMMERCE FOUND. (April 16, 2018), <https://www.uschamberfoundation.org/blog/post/go-circular-first-go-vertical>.

¹⁰⁵ See, e.g., Jared Paben, *Indorama Provides Details on Purchase of PET Recycling Firm*, PLASTICS RECYCLING UPDATE (Feb. 26, 2020), <https://resource-recycling.com/plastics/2020/02/26/indorama-provides-details-on-purchase-of-pet-recycling-firm/> (acquisition of Green Fiber International by Indorama); Jared Paben, *How Much Indorama Paid for a U.S. PET Processor*, PLASTICS RECYCLING UPDATE (June 5, 2019), <https://resource-recycling.com/plastics/2019/06/05/how-much-indorama-paid-for-a-u-s-pet-processor/> (acquisition of Custom Polymers PET by Indorama); Megan Smalley, *Taiwanese Company Acquires Phoenix Technologies International*, RECYCLING TODAY (June 4, 2019), <https://www.recyclingtoday.com/article/taiwan-far-eastern-new-century-acquires-phoenix-pet-recycler/> (acquisition of Phoenix Technologies by Far Eastern New Century).

¹⁰⁶ Colin Staub, *Brand Owner Demand Leads to Perpetual Purchase*, PLASTICS RECYCLING UPDATE (Jan. 16, 2019), <https://resource-recycling.com/plastics/2019/01/16/brand-owner-demand-leads-to-perpetual-purchase/>.

¹⁰⁷ See *Imerys Acquires UK Plastic Recycler*, RECYCLING TODAY (Sept. 17, 2017) <https://www.recyclingtoday.com/article/imerys-acquires-uk-plastic-recycler/>.

¹⁰⁸ *C.f. Bringing Plastics Full Circle*, IMERYS PERFORMANCE MINERALS, <https://www.imerys-performance-additives.com/your-market/recycled-plastics#environmental-benefits> (last visited Nov. 7, 2020) (noting the need for an increase of local recycling in Western markets and attributing the EU directive as the reason for developing an improved recycled plastics technology).

¹⁰⁹ See Press Release, Morssinkhof Rymoplast, *Morssinkhof Rymoplast builds a new plastics recycling plant in the Netherlands* (Jan. 15, 2018), <https://www.morssinkhofplastics.nl/wp-content/uploads/2018/01/Press-Release-Morssinkhof-Rymoplast-Heerenveen.pdf> (noting the investment from Ikea is spurring the construction of a new recycling facility).

Increased Participation

More indirectly, many signatories will benefit from the participation of other signatories due to economies of scale. For each individual company to individually attempt to clean up ocean plastics, the startup costs may be too high¹¹⁰ and the process too inefficient.¹¹¹ If more parties contribute to the costs of cleanup, they can collectively fund more expensive but more efficient ocean cleanup projects and research. In order to increase these benefits, some of the larger companies may be able to exert sufficient influence as a dominant actor in their industry, inducing both business partners and competitors to also join the NPE.¹¹² The benefit may be greatest to the smaller signatories who would not otherwise be able to fund any significant cleanup efforts on their own. These companies would contribute comparatively small financial amounts, while still being able to publicize the larger, collective initiative. Nonetheless, all signatories could benefit from the economies of scale that a collective EPR scheme could provide.

Additionally, the economies of scale can benefit signatories in their business operations, such as reducing the cost of waste management for recycling companies. Sorting out and sending non-recyclable materials to the landfill is an added cost that can be reduced if the other signatories, such as raw plastic manufacturers and packaging producers, increase recyclable content. Similarly, packaged goods companies seeking to use more post-consumer content in their packaging will benefit from expanded recycling capacity and increased production of recycled plastic. This incentive continues up the supply chain to packaging manufacturers and raw materials producers, who will also benefit from the increased supply, and consequently reduced price, of recycled plastics.

¹¹⁰ See Kart, *supra* note 21 and accompanying text.

¹¹¹ For example, another method involves manually removing plastic, but it is slow and inefficient relative to the rate of input. *Compare Cleaning the Ocean, Rivers, and Coastlines, One Pound at a Time*, <https://4ocean.com/progress/> (updated Nov. 6, 2020) (highlighting 11,282,623 pounds of waste recovered from the ocean since 2017) with Jenna R. Jambeck et al., *Plastic Waste Inputs from Land into the Ocean*, 347 *SCIENCE* 768, at 770, <https://advances.sciencemag.org/content/6/44/eabd0288> (estimating between 4.8–12.7 million MT of plastic entering the oceans each year).

¹¹² See Richard B. Stewart, Michael Oppenheimer & Bryce Rudyk, *Building Blocks for Global Climate Protection*, 32 *STAN. ENV'T. L.J.* 341, 358 (2013) (identifying the role of dominant market actors as a building block in the context of reducing greenhouse gas emissions).

Pre-existing Voluntary Commitments

Many signatories already engage in some form of donations or investments for plastic recycling and ocean management. These voluntary contributions are, in some ways, a sort of voluntary EPR, and indicate a willingness to contribute to some of the downstream costs. Some are funding research and innovation to address ocean plastics.¹¹³ Most resembling an EPR scheme, Coca-Cola pledged to recycle as many plastic bottles as it produces.¹¹⁴

Rather than building a new organization from scratch, NPE provides a foundation in circular economy goals and a working group of participants across the industry and world. While these motivations may not cover all actors in the plastics industry, they could be enough to gather a critical mass for a voluntary EPR scheme. Although imperfect, NPE provides a good starting point.

Conclusion

I propose that a voluntary EPR program is compatible with the New Plastics Economy's existing Global Commitment and could be integrated into the program. However, this important step would not be a "silver bullet" solution to the global plastics pollution, merely a step in the right direction. Just as the plastics problem involves multiple actors around the globe, so too must the solution involve multiple parties addressing the problem from different approaches. This is one proposal to take advantage of the flexibility and global reach of a private institution and the compatibility of EPR with a circular economy.

There is still significant room for regulatory action. Governments can support EPR by requiring producer participation and supporting enforcement. Or, governments can take parallel action by banning single use plastics, subsidizing recycling, and defining material standards, among many others.

¹¹³See, e.g., *Press Release: The Partnership Announces First Investment in Pathway to Recyclability Initiative*, RECYCLING PARTNERSHIP (Nov. 6, 2019), <https://recyclingpartnership.org/press-release-the-partnership-announces-first-investment-in-pathway-to-recyclability-initiative/>; see also *Cutting River Plastic Waste*, BENIOFF OCEAN INITIATIVE, https://boi.ucsb.edu/active_projects/river-plastics-pollution (last visited May 17, 2020).

¹¹⁴See Daniel Thomas, *Davos 2020: People Still Want Plastic Bottles, Says Coca-Cola*, BBC (Jan. 21, 2020), <https://www.bbc.com/news/business-51197463>.

Unfortunately, the COVID-19 pandemic has disrupted many lives and caused businesses to rethink existing operations. On one hand, it might delay progress of plastic waste initiatives. Economic downturns place financial pressures on companies, which can lead to less voluntary spending,¹¹⁵ and the drop in oil prices pushes down the price of virgin plastics.¹¹⁶ At the same time, consumer demand for single-use plastics is rising, as consumers place perceived public health benefits from single-use plastics, such as plastic grocery bags, over sustainability.¹¹⁷ On the other hand, as the world seeks a pathway to recovery, it is an opportunity to build back better.¹¹⁸ The increased plastic demand underscores the importance of an effective waste management system. Promisingly, many signatories have indicated continued if not increased commitments despite the current global pandemic.¹¹⁹ As the world recovers, a voluntary EPR may be one important mechanism to address our plastic waste problem.

¹¹⁵ C.f. Bruno Berthon, *Sustainability and the Great Recession*, THE GUARDIAN (Sept. 24, 2013), <https://www.theguardian.com/sustainable-business/sustainability-great-recession.24,2013>.

¹¹⁶ See Luke Denne, *Coronavirus Pandemic Threatens to Undo Progress on Plastic Pollution*, NBCNEWS (May 15, 2020), <https://www.nbcnews.com/science/environment/coronavirus-pandemic-threatens-undo-progress-plastic-pollution-n1207231>.

¹¹⁷ See Laura Tenenbaum, *The Amount of Plastic Waste Is Surging Because of the Coronavirus Pandemic*, FORBES (Apr. 25, 2020), <https://www.forbes.com/sites/lauratenenbaum/2020/04/25/plastic-waste-during-the-time-of-covid-19/#1efbe7547e48>.

¹¹⁸ See generally *The Circular Economy: A Transformative Covid-19 Recovery Strategy*, ELLEN MACARTHUR FOUND. (Oct. 27 2020), <https://www.ellenmacarthurfoundation.org/assets/downloads/The-circular-economy-a-transformative-Covid19-recovery-strategy.pdf>.

¹¹⁹ See NPE Global Commitment 2020 Report, *supra* note 79.