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The United States' Lagging Role in Addressing the Global Plastics Crisis Can Be Saved by Subnational Actors

Amy Mull†

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I. Introduction

By 2050, the world's oceans will contain more plastic waste than fish.¹ Global plastic waste has reached crisis levels, with single-use plastics as the leading cause.² The environmental impact has worsened with the COVID-19 global health pandemic, and the

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¹ ELLEN MACARTHUR FOUND., THE NEW PLASTICS ECONOMY: RETHINKING THE FUTURE OF PLASTICS 17 (2014), https://www.ellenmacarthurfoundation.org/assets/downloads/EllenMacArthurFoundation_TheNewPlasticsEconomy_Pages.pdf [<https://perma.cc/TWH7-ND8W>].

² See Hannah Ritchie & Max Roser, *Plastic Pollution*, OUR WORLD IN DATA (Sept. 2018), <https://ourworldindata.org/plastic-pollution#global-plastic-production> [<https://perma.cc/6WPV-LHAR>].

ultimate effects of the virus are still unknown at this time.³ In response to COVID-19, restaurants pivoted from reusable products to single-use plastics, municipalities repealed plastic bag bans, and individuals purchased single-use masks, latex gloves, and plastic bottles of hand sanitizer in record quantities.⁴ This “Covid waste”⁵ exacerbates an already significant environmental challenge — one for which the United States is sorely unprepared.

The United States, as the leading single-country exporter of plastic waste, greatly contributes to this international problem.⁶ And, with recent changes in the international plastic waste trade that greatly limits its ability to export waste, the United States faces significant challenges in handling its own plastic waste domestically.⁷ The United States desperately needs to reduce single-use plastics in order to lessen the drastic environmental impact these items have on water and food systems, as well as human health.⁸

While other nations have stepped forward to address this growing calamity, the United States has stepped back.⁹ Ideally, the

³ See, e.g., Emma Newburger & Amelia Lucas, *Plastic Waste Surges as Coronavirus Prompts Restaurants to Use More Disposable Packaging*, CNBC (June 28, 2020), <https://www.cnbc.com/2020/06/28/coronavirus-plastic-waste-surges-as-restaurants-use-more-disposable-packaging.html> [<https://perma.cc/7NDA-BXGP>].

⁴ *Id.*; Ashifa Kassam, ‘More Masks than Jellyfish’: Coronavirus Waste Ends Up in Oceans, *GUARDIAN* (June 8, 2020), <https://www.theguardian.com/environment/2020/jun/08/more-masks-than-jellyfish-coronavirus-waste-ends-up-in-ocean> [<https://perma.cc/E34N-WJDJ>].

⁵ *Id.*

⁶ See Laura Parker, *Shipping Plastic Waste to Poor Countries Just Got Harder*, *NAT’L GEOGRAPHIC* (May 10, 2019), <https://www.nationalgeographic.com/environment/2019/05/shipping-plastic-waste-to-poor-countries-just-got-harder/#close> [<https://perma.cc/X6WD-Y84C>].

⁷ See, e.g., Christopher Joyce, *Where Will Your Plastic Trash Go Now that China Doesn’t Want it?*, *NPR* (Mar. 13, 2019), <https://www.npr.org/sections/goatsandsoda/2019/03/13/702501726/where-will-your-plastic-trash-go-now-that-china-doesnt-want-it> [<https://perma.cc/EPM5-P6AE>].

⁸ See, e.g., Press Release, Basel Convention, Governments Agree Landmark Decisions to Protect People and Planet from Hazardous Chemicals and Waste, Including Plastic Waste (May 10, 2019), available at <http://www.brsmeas.org/?tabid=8005> [<https://perma.cc/5R9T-AS7Y>] [hereinafter Press Release, Basel Convention].

⁹ See generally Juliet Eilperin & Brady Dennis, *Administration Finalizes Repeal of 2015 Water Rule Trump Called ‘Destructive and Horrible,’* *WASH. POST* (Sept. 11, 2019), https://www.washingtonpost.com/climate-environment/administration-finalizes-repeal-of-2015-water-rule-trump-called-destructive-and-horrible/2019/09/11/fddfa49a-d4aa-11e9-9343-40db57cf6abd_story.html [<https://perma.cc/RA78-99TW>] (describing the

United States should take action at the federal level to comport with international law, specifically the Basel Convention's recent plastics amendment,¹⁰ and mirror the European Union's ("EU") actions,¹¹ learning from its member states' strategies and successes. As ratifying the Basel Convention or adopting any plastic-reducing federal legislation is highly unlikely at this time due to the current political climate and receding environmental protections,¹² sub-national actors are the most effective means the United States has to advance policy and legislation to reduce single-use plastics.¹³ Through its states and municipalities, the United States can still be a global leader and respond to the quickly worsening domestic and international plastic waste crisis.

This Note analyzes the need for the United States to respond to the plastic marine waste crisis and the best means for it to do so. Part I explores the background and current state of the global plastics problem, exacerbated by changes in the international plastic waste trade. Part II considers the international response, including the Basel Convention's recent plastics amendment and the EU's leadership in decreasing plastics usage to reduce waste. Part III examines how the United States has addressed plastic waste and usage reduction, and Part IV offers recommendations for how the United States can advance policy and legislation to curb its contribution to the ever-growing marine plastic waste crisis.

II. The Global Plastics Problem and the International Plastics Waste Trade

In merely a century, plastic usage has increased exponentially. First produced in 1907,¹⁴ plastics did not become widespread until the 1950s.¹⁵ Since then, production has expanded rapidly,

ways in which President Trump has worked to repeal environmental protections).

¹⁰ *Id.*

¹¹ See *EU Advances its Strategy for Plastics in a Circular Economy*, PACKAGINGLAW.COM (June 4, 2018), <https://www.packaginglaw.com/news/eu-advances-its-strategy-plastics-circular-economy> [<https://perma.cc/5RP7-9DQ7>] [hereinafter *EU Advances its Strategy*]. See generally Council Directive 2019/904, 2019 O.J. (L 155) (EU).

¹² Eilperin & Dennis, *supra* note 9.

¹³ See generally, Judith Resnick, *Law's Migration: American Exceptionalism, Silent Dialogues, and Federalism's Multiple Ports of Entry*, 115 YALE L. J. 1564 (2006); Peter J. Spiro, *The States and International Human Rights*, 66 FORDHAM L. REV. 567 (1997).

¹⁴ Ritchie & Roser, *supra* note 2.

¹⁵ Roland Geyer, Jenna R. Jambeck, & Kara Lavender Law, *Production, Fate and*

outpacing most other manmade materials.¹⁶ Compared to 1950, annual plastics production has increased more than 2000 percent.¹⁷ Global production is increasing steadily each year with no signs of slowing down.¹⁸ In 2015, the world produced 381 million tonnes (Mt)¹⁹ of plastic, which according to one U.S. statistic is the approximate equivalent to the mass of two-thirds²⁰ of the world population.²¹ This aggressive growth of plastics production is attributed to a global shift to single-use plastics, especially in higher-income countries like the United States, which prioritize consumer convenience and profits over environmental concerns.²²

The environmental impact of plastic waste is immense in its both scope and duration. Surging growth in single-use plastics correlates to surging growth in plastic waste. Of all of the plastics produced from 1950 on, 70% was used only once, with most being discarded in landfills or the natural environment.²³ For example, in 2015, humans generated approximately 7.8 billion tonnes of plastic waste globally.²⁴ Of that, only 9% was recycled, 12% was incinerated, and 79% was discarded in landfills or the natural environment.²⁵ Similarly, in the United States, of the 35 million U.S. tons of plastics generated in 2015, 9% was recycled, 16% incinerated, and 75% disposed of in landfills or the natural environment.²⁶ At this rate, plastics in landfills and the natural

Use of All Plastics Ever Made, 3 SCI. ADVANCES 1, 1 (2017).

¹⁶ *Id.*

¹⁷ This figure was calculated by multiplying 381/17-22.4117 by 100-2241.17%. See Ritchie & Roser, *supra* note 2.

¹⁸ *Id.* (excepting a slight downturn in 2009 and 2010, attributed to the 2008 global financial crisis).

¹⁹ *Id.* Note that tonnes are metric tons, equal to 1,000 kilograms or 2,204 pounds (1.1 U.S. tons).

²⁰ See *U.S. and World Population Clock*, U.S. CENSUS BUREAU, <https://www.census.gov/popclock> [<https://perma.cc/JXA7-6Y23>] (last visited Oct. 8, 2019) (assuming individual mass of 75 kilograms, 165 pounds, with a world population of 7.6 billion).

²¹ Ritchie & Roser, *supra* note 2.

²² See *id.*

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ See *Plastics: Material-Specific Data*, EPA, <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-data> [<https://perma.cc/NML6-XJ5B>] (last updated Oct. 30, 2019).

environment will reach twelve billion Mt by 2050.²⁷ Since few plastics are biodegradable, they “accumulate, rather than decompose.”²⁸ Thus, the “[d]urability of plastic ensures that wherever it is, it does not ‘go-away’; that is, by placing plastics in landfill we may simply be storing a problem for the future.”²⁹

Plastics, either discarded improperly or having migrated from landfills (e.g., unsecured waste, especially light-weight plastics, is carried by wind), reside in all major oceans and most freshwater systems.³⁰ Oceans contain an estimated 100 to 150 million Mt of plastic,³¹ the majority of which is attributed to “lack of efficient collection schemes and proper waste management facilities.”³² In other words, plastic waste not regularly picked up via trash or recycling collection or dumped in a landfill with no way to secure it is carried into waterways and eventually into the ocean. In 2010 alone, eight million Mt of mismanaged plastic waste entered oceans.³³ By 2025, one Mt of plastic will be in the ocean for every three Mt of fish, and by 2050, plastics will surpass fish by mass.³⁴ Plastic migrates along ocean currents, with the Arctic Ocean having the highest concentration of plastics of the world’s oceans.³⁵ Currents move water north from the Atlantic Ocean to the Arctic Ocean, where the water cools and sinks,³⁶ leaving the buoyant

²⁷ Ritchie & Roser, *supra* note 2.

²⁸ Geyer, Jambeck & Law, *supra* note 15, at 1.

²⁹ David K. A. Barnes et al., *Accumulation and Fragmentation of Plastic Debris in Global Environments*, 364 PHIL. TRANSACTIONS ROYAL SOC’Y 1985, 1986 (2009).

³⁰ *See id.*; *see also* Frederic Gallo et al., *Marine Litter Plastics and Microplastics and Their Toxic Chemicals Components: The Need for Urgent Preventive Measures*, 30 ENVTL. SCI. EUR. 1, 2 (2018).

³¹ Gallo et al., *supra* note 30, at 2; *see* Barnes, et al., *supra* note 29.

³² Gallo et al., *supra* note 30, at 2.

³³ Jenna R. Jambeck, Comments Given at the 2015 AAAS Annual Meeting: Plastic Waste Inputs from Land into the Ocean (Feb. 12, 2015) (transcript available at <https://jambeck.engr.uga.edu/landplasticinput> [<https://perma.cc/N5UA-PA7R>]).

³⁴ ELLEN MACARTHUR FOUND., *supra* note 1, at 17.

³⁵ *See* Cheryl Katz, *Why Does the Arctic Have More Plastic than Most Places on Earth?*, NAT’L GEOGRAPHIC (Oct. 30, 2019), <https://www.nationalgeographic.com/science/2019/10/remote-arctic-contains-more-plastic-than-most-places-on-earth/#:~:text=Arctic%20Ocean%20surface%20waters%20hold,turning%20up%20in%20Arctic%20wildlife> [<https://perma.cc/F7EK-LWTF>].

³⁶ *See id.*

plastic waste behind.³⁷ Most of the plastic waste in the southern Arctic Ocean “seems to be from northwestern Europe and the east coast of North America.”³⁸

Beyond broader environmental concerns, plastic waste poses a critical risk to humans because of its effect on food safety and health.³⁹ Ingesting plastic can cause injury or starvation for marine creatures and disrupt the aquatic food chain.⁴⁰ Additionally, plastics contain chemical additives that may be toxic⁴¹ and transfer to animal tissues if ingested directly or indirectly from polluted prey.⁴² This chemical transference may result in impaired reproduction, low birth rates, certain types of cancers, and loss of biodiversity.⁴³ Much remains unknown about the health risks to humans who ingest plastic particles or chemicals transferred through food, water, or other means of exposure.⁴⁴ However, studies link plastic exposure to symptoms in the cardiovascular, renal, immune, gastrointestinal, neurological, reproductive, and respiratory systems, with long-term effects including cancers, diabetes, reproductive issues, and developmental problems.⁴⁵

Every method of dealing with plastic waste poses unique challenges. Most plastic waste accrues in space-constrained landfills and the natural environment, allowing plastic waste to accumulate or migrate to water systems.⁴⁶ With plastics at every

³⁷ *Id.*

³⁸ *Id.*

³⁹ *See generally* Jambeck, *supra* note 33 (explaining that there is increasing concern regarding the harmful effects of microplastics to marine animals and thus to food safety and human health).

⁴⁰ *See generally id.* (“[T]he prospect of plastics getting into food is a major concern here. Eaten by small creatures at the bottom of the food web, microplastics can potentially ‘biomagnify’ as those organisms are eaten by successively larger ones – eventually working their way into humans.”).

⁴¹ Gallo et al., *supra* note 30, at 3, 5, 7; Gianna Andrews, *Plastics in the Ocean Affecting Human Health*, TEACH THE EARTH, https://serc.carleton.edu/NAGTWorkshops/health/case_studies/plastics.html [https://perma.cc/6X2M-YJW2] (last visited Oct. 17, 2019).

⁴² Gallo et al., *supra* note 30, at 3, 5, 7.

⁴³ *See generally* Gallo et al., *supra* note 30 (explaining that long-term exposure to endocrine disruptor chemicals lead to permanent changes in the endocrine system).

⁴⁴ Jambeck, *supra* note 33; Andrews, *supra* note 41.

⁴⁵ David Azoulay, et al., *Plastic & Health: The Hidden Costs of a Plastic Planet*, CTR. FOR INT'L ENVTL. L. 1, 2, 8, 62 (2019).

⁴⁶ Gallo et al., *supra* note 30, at 2–4; Barnes, et al., *supra* note 29, at 1986–87.

depth of the ocean, from the surface to 14,000-feet-below on the ocean floor, removal is a daunting endeavor.⁴⁷ Nor is recycling a viable alternative, as many countries lack the necessary infrastructure.⁴⁸ The only way to permanently eliminate plastic waste is through “destructive thermal treatment,”⁴⁹ such as incineration. However, burning plastics releases toxic fumes and is thus harmful to human health.⁵⁰ Reducing plastic usage is the best option, but is difficult based on its widespread use and the prioritization of convenience over environmental and health concerns.⁵¹

Many countries address these challenges by transporting their waste to other countries in a market known as the international plastic waste trade, now a \$200 billion global industry.⁵² China, with both inexpensive labor and the capacity and infrastructure to handle plastics recycling, was at one time the world’s biggest importer of plastic waste.⁵³ In 2017, approximately seventy percent of the world’s plastic waste went to China to be recycled.⁵⁴ The United States, the world’s largest single-country exporter of plastic waste,⁵⁵ was exporting almost 700,000 tons of plastic waste to China each year as of 2016.⁵⁶

Running out of space due to its own overflowing landfills, China began to restrict plastic waste imports in 2013.⁵⁷ This was because “instances of waste smuggling and mislabeling of materials as recyclable were common, as were incredibly contaminated

⁴⁷ Jambeck, *supra* note 33. Also of note, the U.N. Environment Programme estimated the economic impact of marine plastics (excluding microplastics) at approximately \$13 billion per year, including plastic littering and beach clean-up costs, but not including estimated costs related to human health. Gallo et al., *supra* note 30, at 4.

⁴⁸ Jambeck, *supra* note 33.

⁴⁹ Geyer, Jambeck & Law, *supra* note 15, at 1.

⁵⁰ Azoulay, et al., *supra* note 45, at 62.

⁵¹ *Id.* at 63–64.

⁵² See Parker, *supra* note 6.

⁵³ Joyce, *supra* note 7; Parker, *supra* note 6.

⁵⁴ Joyce, *supra* note 7.

⁵⁵ Parker, *supra* note 6.

⁵⁶ Joyce, *supra* note 7.

⁵⁷ Colin Parts, *Waste Not Want Not: Chinese Recyclable Waste Restrictions, Their Global Impact, and Potential U.S. Responses*, 20 CHI. J. INT’L L. 291, 297 (2019).

shipments.”⁵⁸ The Chinese government extended restrictions in 2017, heightening inspection requirements, and ultimately banning certain plastic waste after finding that two-thirds of the country’s recycling companies were violating environmental regulations.⁵⁹ Finally, in 2018 China banned 99% of all plastic waste imports.⁶⁰

Exporter countries, faced with rapidly accumulating plastic waste, diverted the plastic waste to other countries, including the Philippines, Malaysia, Indonesia, Thailand, and Vietnam.⁶¹ Malaysia (a country less than half the size of Texas⁶²) became the world’s largest importer of plastic waste, with an increase of more than 600% in one year.⁶³ This figure does not include the thousands of Mt of contaminated plastic waste entering the country illegally declared as other imports and which cannot be recycled.⁶⁴

Recipient countries, too, are becoming overwhelmed with plastic waste. Those lacking a recycling infrastructure resort to dumping waste in landfills which contaminates soil and water supplies, or incinerating it, releasing toxic fumes.⁶⁵ Meanwhile, some waste containers clog ports, inhibiting trade.⁶⁶ As a result, recipient countries have begun to follow China’s lead. Thailand will ban plastic waste imports by 2021.⁶⁷ Vietnam plans to stop

⁵⁸ *Id.* at 298.

⁵⁹ *Id.* at 300.

⁶⁰ Joyce, *supra* note 7.

⁶¹ See Hannah Ellis-Petersen, *Treated Like Trash: South-East Asia Vows to Return Mountains of Rubbish from West*, *GUARDIAN* (May 27, 2019), <https://www.theguardian.com/environment/2019/may/28/treated-like-trash-south-east-asia-vows-to-return-mountains-of-rubbish-from-west> [<https://perma.cc/E6DZ-SZSJ>].

⁶² *Malaysia - Location, Size, and Extent*, *NATIONS ENCYCLOPEDIA*, <https://www.nationsencyclopedia.com/Asia-and-Oceania/Malaysia-LOCATION-SIZE-AND-EXTENT.html> [<https://perma.cc/DL7K-TNZ9>] (last visited Oct. 23, 2019) (reporting Malaysia’s size as 127,317 square miles); *Texas: Location, Size, and Extent*, *CITY-DATA.COM*, <http://www.city-data.com/states/Texas-Location-size-and-extent.html> [<https://perma.cc/S6Z8-G4SX>] (last visited Oct. 23, 2019) (reporting Texas’s size as 266,807 square miles).

⁶³ See Madison Cecil, *Southeast Asian Countries Restrict Imported Plastic Waste*, *PSU VANGUARD* (July 15, 2019), <https://psuvanguard.com/southeast-asian-countries-restrict-imported-plastic-waste/> [<https://perma.cc/3HZE-ZBVL>].

⁶⁴ Ellis-Petersen, *supra* note 61.

⁶⁵ *Id.*; Cecil, *supra* note 63.

⁶⁶ Ellis-Petersen, *supra* note 61.

⁶⁷ Jamie Fullerton, *Thailand to Ban Foreign Plastic Waste from 2021 as South East Asia Buckles Under Waste Influx*, *TELEGRAPH* (Oct. 15, 2018), <https://www.ft.com/content/06b5a136-ce09-11e8-b276-b9069bde0956>

importing waste by 2025 and is working through a backlog of containers at its ports.⁶⁸ India also plans to ban plastic waste imports.⁶⁹ The Philippines returned falsely labeled plastic waste to Canada and threatened to sever diplomatic ties if Canada did not accept its returned waste and continued to flaunt waste importing regulations by mislabeling it.⁷⁰ Malaysia is considering a plan to ban the import of plastic waste by 2022,⁷¹ but currently makes roughly \$842 million USD in plastic waste industry profits, so the country will suffer a great economic loss if it does so.⁷² As Zuraida Kamaruddin, housing minister of Malaysia stated, “plastic recycling is quite lucrative . . . So I am also thinking should we miss this economic opportunity?”⁷³

Bans on plastic waste imports reduce available markets for exporter countries “thereby disrupting national waste collection and management schemes in the United States and elsewhere.”⁷⁴ With a severely reduced ability to export its plastic waste, the United States now ships less plastic waste as a result and has pursued other options.⁷⁵ Some American communities are reducing recycling programs since it is ultimately exported,⁷⁶ while others are storing

[<https://perma.cc/SX7W-BLVW>].

⁶⁸ Dat Nguyen, *Vietnam to End Plastic Scrap Imports from 2025*, VN EXPRESS INT’L (Mar. 27, 2019), <https://e.vnexpress.net/news/business/economy/vietnam-to-end-plastic-scrap-imports-from-2025-3900351.html> [<https://perma.cc/C4DK-H4A9>]; see Cecil, *supra* note 63.

⁶⁹ Colin Staub, *India Confirms Scrap Plastic Ban Will Be Delayed*, RESOURCE RECYCLING (Mar. 19, 2019), <https://resource-recycling.com/recycling/2019/03/19/india-may-postpone-scrap-import-ban/> [<https://perma.cc/45TV-QR4E>].

⁷⁰ *Philippines Sends Tonnes of Rubbish Back to Canada*, BBC NEWS (May 31, 2019), <https://www.bbc.com/news/world-asia-48455440> [<https://perma.cc/F6J7-9XRM>].

⁷¹ Colin Staub, *Malaysia Outlines New Plastic Import Criteria*, RESOURCE RECYCLING (Oct. 31, 2018), <https://resource-recycling.com/plastics/2018/10/31/malaysia-outlines-new-plastic-import-criteria/> [<https://perma.cc/3GP6-MXUW>].

⁷² Cecil, *supra* note 63. Although profit estimates were not found for other countries, including China, plastic waste recycling in China was a ~\$6 billion industry as of 2014. COSTAS VELIS, GLOBAL RECYCLING MARKETS: PLASTIC WASTE 16 (2014), https://www.iswa.org/fileadmin/galleries/Task_Forces/TFGWM_Report_GRM_Plastic_China_LR.pdf [<https://perma.cc/53WK-SH5P>].

⁷³ *Id.*

⁷⁴ Paul E. Hagen, et al., *Basel Convention Recasts the Circular Economy for Plastics*, NAT’L L. REV. (May 17, 2019), <https://www.natlawreview.com/article/basel-convention-recasts-circular-economy-plastics> [<https://perma.cc/76FW-AGEZ>].

⁷⁵ *Id.*

⁷⁶ Dylan Darling, *Some Recyclables Get Kicked to Curb*, REGISTER-GUARD (Apr. 10,

plastics in available warehouse space.⁷⁷ Overall, however, the amount of plastic waste diverted to landfills and the natural environment is increasing domestically.

III. The International Response via the Basel Convention and the European Union

A. *The Basel Convention*

Because of plastic waste's immensely detrimental environmental and health effects, as well as the challenges of responding to this growing problem, many urge that waste needs to be managed on a global scale.⁷⁸ In response to this issue, representatives from approximately 180 countries met last year to amend the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal ("the Convention").⁷⁹ This international environmental agreement was originally negotiated in the late 1980s in response to "toxic trade," hazardous waste exported to developing countries as a cheap disposal option.⁸⁰ The Convention was adopted in 1989 with "an overarching objective of protecting human health and the environment against the adverse effects of hazardous . . . and other wastes."⁸¹ In May 2019, parties to the treaty amended the Convention to include plastic waste in its "legally-binding framework which will make global trade in plastic waste more transparent and better regulated, whilst also ensuring that its management is safer for human health and the environment."⁸² A Plastic Waste Partnership was also established to assist with data collection, implementation, pilot programs, education, and outreach.⁸³

2018), <https://www.registerguard.com/rg/news/local/36633611-75/new-rules-in-place-for-curb-side-recycling-in-eugene.html>.csp [https://perma.cc/DT8C-UNWZ].

⁷⁷ Joyce, *supra* note 7.

⁷⁸ See generally Olivier Barsalou & Michael Hennessy Picard, *International Environmental Law in an Era of Globalized Waste*, 17 CHINESE J. INT'L L. 887 (2018).

⁷⁹ Press Release, Basel Convention, *supra* note 8.

⁸⁰ *History of the Negotiations of the Basel Convention*, BASEL CONVENTION, <http://www.Basel.int/TheConvention/Overview/History/Overview/tabid/3405/Default.aspx> [https://perma.cc/2SYS-7RN3] (last visited Nov. 21, 2019).

⁸¹ Press Release, Basel Convention, *supra* note 8.

⁸² *Id.*

⁸³ *Plastic Waste Partnership: Overview*, BASEL CONVENTION,

The amended treaty's new rules went into effect in 2020.⁸⁴ These regulations require exporting countries to obtain consent from recipient countries prior to shipping plastic waste.⁸⁵ Waste shipments need to have international movement documents from their points of origin to their final destinations to help prevent waste smuggling.⁸⁶ In addition, plastic waste needs to comply with waste movement restrictions, meaning that waste exports can only occur if the countries involved meet certain criteria.⁸⁷ The criteria include: (1) the exporting country lacking sufficient disposal or recycling capacity, (2) the exporting country lacking disposal and recycling facilities that can manage the waste in an environmentally sound manner, or (3) the importing country needing waste as a raw material for recycling industries.⁸⁸ The treaty prohibits movement of waste between parties and non-parties, except under a separate agreement that provides an "equally sound management structure for transboundary waste movements."⁸⁹ The Convention also launched a working group to determine whether to expand the classification of hazardous types of plastic waste.⁹⁰ In addition, the Convention updated the technical guidelines for environmentally-sound waste management regarding plastic waste management and recycling practices.⁹¹

<http://www.basel.int/Implementation/Plasticwastes/PlasticWastePartnership/tabid/8096/Default.aspx> [<https://perma.cc/4RT7-L2NF>] (last visited Oct. 21, 2019); see U.N. Env'tl. Programme, Conf. of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Terms of Reference for the Basel Convention Partnership on Plastic Waste and Workplan for the Working Group of the Partnership on Plastic Waste for the Biennium 2020–2021, UNEP/CHW.14/INF/16/Rev.1 (2019).

⁸⁴ See Emily Holden, *Nearly All Countries Agree to Stem Flow of Plastic Waste into Poor Nations*, GUARDIAN (May 10, 2019), <https://www.theguardian.com/environment/2019/may/10/nearly-all-the-worlds-countries-sign-plastic-waste-deal-except-us> [<https://perma.cc/B94U-PLMV>].

⁸⁵ *International Agreements on Transboundary Shipments of Hazardous Waste*, EPA, <https://www.epa.gov/hwgenerators/international-agreements-transboundary-shipments-hazardous-waste#implications> [<https://perma.cc/WU8Z-VFUZ>] (last visited Oct. 27, 2019) [hereinafter *International Agreements*]; see Parker, *supra* note 6.

⁸⁶ *International Agreements*, *supra* note 85.

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ Hagen, et al., *supra* note 74.

⁹¹ *Id.*

The United States signed but never ratified the Convention, making it a non-party, or an observer, to the treaty.⁹² During the May 2019 meeting, representatives from the United States argued against the amendments, supporting voluntary measures rather than binding terms.⁹³ The United States also suggested that improving infrastructure for waste management in developing countries would be a better alternative to regulating waste exports.⁹⁴ As a non-party to the original 1989 Convention, however, the United States did not have a strong negotiating position and was unable to vote.⁹⁵ But even as a non-signor, the United States will be impacted by the treaty because of its significant participation in the plastic waste trade and because many waste-importing nations are signatories to the treaty.

First, regardless of the United States' non-party status, Articles 10 and 18 of the Vienna Convention on the Law of Treaties state that:

[T]he signature does not establish the consent to be bound. However, it . . . expresses the willingness of the signatory state to continue the treaty-making process . . . [and] creates an obligation to refrain, in good faith, from acts that would defeat the object and the purpose of the treaty.⁹⁶

So, while the United States might not be bound by the Convention, it still has an obligation to refrain from acting in opposition to the treaty.⁹⁷

In addition, the Convention will impact the United States

⁹² See *Frequent Questions on International Agreements on Transboundary Shipments of Waste*, EPA, <https://www.epa.gov/hwgenerators/frequent-questions-international-agreements-transboundary-shipments-waste> [<https://perma.cc/VL2J-HR3V>] (last visited Oct. 27, 2019). While the United States is a signatory, in 1992 the Senate gave consent to ratification. However, legislation must be implemented prior to ratification by President, and since no implementing legislation was enacted, the United States continues in its non-party status. See *International Agreements*, *supra* note 85; see also *Basel Convention on Hazardous Waste*, U.S. DEP'T OF STATE ARCHIVE, <https://2001-2009.state.gov/g/oes/env/c18124.htm> [<https://perma.cc/5B8K-JEW4>] (last visited Oct. 16, 2019) [hereinafter *Basel Convention*].

⁹³ Parker, *supra* note 6.

⁹⁴ *Id.*; Holden, *supra* note 84.

⁹⁵ Parker, *supra* note 6; *Basel Convention*, *supra* note 92.

⁹⁶ *What Is the Difference Between Signing, Ratification and Accession of UN Treaties?*, U.N., <http://ask.un.org/faq/14594> [<https://perma.cc/R8ST-QUDQ>] (last visited Oct. 25, 2019).

⁹⁷ *Id.*

significantly due to its heavy participation in the plastic waste trade. The Environmental Protection Agency (“EPA”) stated that, “Although the United States is not currently a party to the Basel Convention, this treaty still affects U.S. importers and exporters.”⁹⁸ Recycling and plastics industry members anticipate “regulatory hurdles” and “administrative burden[s]” in order to comply with the treaty.⁹⁹ Since parties are prohibited from trading with non-parties without an Article 11 agreement, which would place constraints on plastic waste traders similar to those of the treaty’s recent amendments, the United States will need to comply with these requirements when trading with parties to the Convention.¹⁰⁰ Therefore, any time the United States exports plastic waste to a party to the Basel Convention, it will be bound by the Convention by extension.¹⁰¹

However, the greatest risk to the United States is economic, with a further limitations on its plastic waste importer partners.¹⁰² Compliance with the Basel Convention is largely self-regulated by the parties.¹⁰³ If a party does not conform to the Convention, including the Article 11 agreements, it is at risk of being called before the Basel Convention’s Compliance Committee.¹⁰⁴ A party can report another party, self-report, or be identified by the Basel Convention Secretariat for non-compliance.¹⁰⁵ Compliance is a multi-layered system, focusing on facilitating adherence to the treaty in a cooperative manner.¹⁰⁶ The Compliance Committee

⁹⁸ *International Agreements*, *supra* note 85.

⁹⁹ Parker, *supra* note 6.

¹⁰⁰ *International Agreements*, *supra* note 85; Hagen, et al., *supra* note 74. *See, e.g.*, Agreement Between the Government of the United States of America and the Government of Malaysia Concerning the Transboundary Movement of Hazardous Wastes From Malaysia to the United States, Malay.-U.S. Mar. 10, 1995, T.I.A.S. No. 12612.

¹⁰¹ *See International Agreements*, *supra* note 85; Hagen, et al., *supra* note 74.

¹⁰² *See* Hagen, et al., *supra* note 74.

¹⁰³ *See Compliance: Overview and Mandate*, BASEL CONVENTION, <http://www.basel.int/Implementation/LegalMatters/Compliance/OverviewandMandate/tabid/2308/Default.aspx> [<https://perma.cc/33MD-TP22>] (last visited June 2, 2020).

¹⁰⁴ *See generally* FOOD & AGRIC. ORG. U.N. & U.N. ENV’T PROGRAMME, PROCEDURES AND MECHANISMS ON IMPLEMENTATION AND COMPLIANCE WITH THE BASEL AND ROTTERDAM CONVENTIONS (2019), <http://www.basel.int/Portals/4/download.aspx?d=UNEP-CHW-RC-PUB-GUID-IMPL-Compliance-Procedure-2020.English.pdf> [<https://perma.cc/6LP8-HBNQ>].

¹⁰⁵ *Id.* at 9.

¹⁰⁶ *See id.* at 12–13.

focuses on facilitating cooperation with the parties but has the ability to recommend further measures to the Conference of the Parties, the Convention's supreme decision-making body, as a method of escalating non-compliance issues.¹⁰⁷ Thus, the United States' actions could potentially put a party at risk of being non-compliant with the Convention.

Additionally, a party may take legal action on its own. While this raises the visibility of a country's non-compliance, an extra-judicial court order is not legally binding and has limited effect.¹⁰⁸ A prime example is the Philippines' reaction to Canada's false labeling of plastic waste products.¹⁰⁹ There, a Philippine court ordered the return of mislabeled shipping containers full of waste,¹¹⁰ but the Canadian government, not bound by the Philippine court, ignored the court order.¹¹¹ The issue gained attention from environmental groups and others who wrote separate articles regarding Canada's obligation to receive its waste, but these arguments centered on the country's moral, rather than legal, obligations to take back these containers.¹¹²

Therefore, the greatest risk that the Convention poses to the United States is an economic one. A party could simply decide not to engage in plastic waste trading with the United States to avoid the risk noncompliance with the Convention or a situation similar to one between Canada and the Philippines.¹¹³ Alternatively, a party could decide to charge the United States more for services to offset these risks.¹¹⁴ With fewer importers accepting plastic waste, the plastic waste market favors the importers.¹¹⁵

¹⁰⁷ *Id.* at 14.

¹⁰⁸ *See, e.g., Legal Opinion Finds Canada in Violation of Basel Convention*, INT'L POLLUTANTS ELIMINATION NETWORK (Apr. 17, 2019), <https://ipen.org/news/legal-opinion-finds-canada-violation-basel-convention> [<https://perma.cc/4RVG-E2AR>] [hereinafter *Legal Opinion*].

¹⁰⁹ *Philippines Sends Tonnes of Rubbish Back to Canada*, *supra* note 70.

¹¹⁰ *Legal Opinion*, *supra* note 108.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *See, e.g., id.*

¹¹⁴ *Id.*

¹¹⁵ *See Parts*, *supra* note 57, at 293, 321–22.

B. The United Nations' Research on Countries' Varied Legal Approaches

Leading up to the Convention, in 2018, the United Nations Environment Programme (“UNEP”) reviewed 192 countries’ legislative and regulatory restraints on single-use plastics and published a summary report of its findings.¹¹⁶ Of the wide range of approaches — including bans, restrictions, taxes, industry-specific, product-specific, trade-based, and voluntary measures — legal restraints on single-use plastics are the most common.¹¹⁷ For example, 66% of the countries surveyed enacted legislation to regulate plastic bags, with the most common restrictions being bans on free retail distribution or on plastic bags generally.¹¹⁸ Italy, for example, bans non-biodegradable and non-compostable plastic bags altogether and prohibits retailers from distributing plastic bags for free.¹¹⁹ Far fewer countries (14%) have enacted legislation banning other single-use products (such as straws) or materials (like polystyrene).¹²⁰

The second most common approach, adopted by one-third of the countries in the report, is Extended Producer Responsibility mandates for single-use plastics.¹²¹ Extended Producer Responsibility means that a producer’s responsibility for a product is extended to the post-consumer stage of that product’s life cycle, and may extend to responsibility for clean-up or recycling, or other ways of managing the waste generated by its products.¹²² Germany, for example, has a comprehensive requirement that includes manufacturers to take back used plastic products, participate in collective waste disposal systems for plastic packaging, and offer deposit-refunds, where customers pay deposit fees for containers

¹¹⁶ U.N. ENV’T PROGRAMME, LEGAL LIMITS ON SINGLE-USE PLASTICS AND MICROPLASTICS: A GLOBAL REVIEW OF NATIONAL LAWS AND REGULATIONS 3 (2018), https://wedocs.unep.org/bitstream/handle/20.500.11822/27113/plastics_limits.pdf [<https://perma.cc/7HDY-DGYM>].

¹¹⁷ *Id.*

¹¹⁸ *Id.* at 10, 13.

¹¹⁹ *Id.* at 39.

¹²⁰ *Id.* at 47. See Part III for a discussion of the United States’ legislative response, which is limited at the federal level to microplastics, not discussed in this Note.

¹²¹ U.N. ENV’T PROGRAMME, *supra* note 116, at 57.

¹²² *Id.* at 41.

and receive deposits back when they return the containers.¹²³ Other countries, such as Norway, require manufacturers producing certain types of plastic products to contribute funds for waste management.¹²⁴

C. *The European Union Leadership on Reducing Plastic Waste*

UNEP's research found that EU countries have the most advanced legislation to combat plastic waste. This is a direct result of the EU's *Directives on Packaging and Packaging Waste* that require members to establish systems for returning, collecting, and recycling plastic packaging and waste.¹²⁵

The EU is ahead of the curve on addressing the plastic waste issue due to its comprehensive yet flexible approach which allows its member states to adopt their own unique solutions to the problem. In December 2015, the EU's executive body, the European Commission ("the Commission"), adopted "an EU Action Plan for a circular economy" with "plastics as a key priority."¹²⁶ A circular economy "gradually decouple[es] economic activity from the consumption of finite resources, and design[s] waste out of the system."¹²⁷

In January 2018, the Commission published the *Strategy for Plastics in a Circular Economy*, calling for the EU and member states to reduce "the unnecessary generation of plastic waste, especially waste from single-use items."¹²⁸ Next came the *Single-Use Plastics Directive* ("the Directive") to reduce plastic waste and

¹²³ *Id.* at 60.

¹²⁴ *Id.*

¹²⁵ *Id.* at 58.

¹²⁶ *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A European Strategy for Plastics in a Circular Economy*, at 1, COM (2018) 28 final (Jan. 16, 2018) [hereinafter *Strategy for Plastics*].

¹²⁷ *Concept: What is a Circular Economy? A Framework for an Economy that is Restorative and Regenerative by Design*, ELLEN MACARTHUR FOUND., <https://www.ellenmacarthurfoundation.org/circular-economy/concept#:~:text=Looking%20beyond%20the%20current%20take,waste%20out%20of%20the%20system> [https://perma.cc/J5C9-ZS5N] (last visited Sept. 28, 2020).

¹²⁸ *Strategy for Plastics*, *supra* note 126. See generally *Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the Implementation of the Circular Economy Action Plan*, COM (2019) 190 final (Mar. 4, 2019).

promote reusable, sustainable products.¹²⁹ The Directive mandates reduced consumption of plastic containers and bans specific single-use plastics (e.g., straws, plates, cutlery) where alternatives already exist.¹³⁰ It also enhances labeling requirements for plastic products to avoid false environmental claims and modifies design requirements for certain plastic containers, requiring some to have attached lids, and setting a 25% recycled content target for certain plastic bottles by 2025.¹³¹ Additionally, the Directive increases goals to collect plastic packaging for recycling to 90% by 2029 and includes Extended Producer Responsibility to cover the cost of plastic ocean debris cleanup.¹³² Member states have until July 2021 to comply with most of these provisions.¹³³

Although consumer demand for recycled plastics is currently low (approximately 6% of overall plastics demand in the EU), the Commission believes that increasing recycling rates will increase availability and ultimately consumer demand for recycled plastics.¹³⁴ The Commission is also investing €100 million to develop more recyclable plastic materials as well as plastic alternatives.¹³⁵ As a result of these efforts, the Commission expects both cost-avoidance and cost-savings, forecasting €6.5 billion in consumer savings and €22 billion in saved costs from avoiding environmental damages by 2030.¹³⁶

¹²⁹ Council Directive 2019/904, *supra* note 11; see *EU Advances its Strategy*, *supra* note 11.

¹³⁰ Council Directive 2019/904, *supra* note 11, art. 19(b)(3).

¹³¹ *Id.*; see *EU Advances its Strategy*, *supra* note 11; see also European Commission Press Release IP/19/2631, Circular Economy: Commission Welcomes Council Final Adoption of New Rules on Single-Use Plastics to Reduce Marine Plastic Litter, (May 20, 2019) [hereinafter Circular Economy].

¹³² Circular Economy, *supra* note 131; European Commission Press Release IP/18/5, Plastic Waste: A European Strategy to Protect the Planet, Defend our Citizens and Empower our Industries (Jan. 15, 2018) [hereinafter Plastic Waste].

¹³³ Council Directive 2019/904, art. 4(1), *supra* note 11.

¹³⁴ *Strategy for Plastics*, *supra* note 126, at 2.; see *Europe Adopts Strategy for Plastics*, PACKAGINGLAW.COM (Jan. 29, 2018), <https://www.packaginglaw.com/news/europe-adopts-strategy-plastics> [<https://perma.cc/PLA3-UN4Y>] [hereinafter *Europe Adopts Strategy*].

¹³⁵ *Strategy for Plastics*, *supra* note 1286, at 14; see *Europe Adopts Strategy*, *supra* note 134; European Commission Statement STATEMENT/19/1873, Circular Economy: Commission Welcomes European Parliament Adoption of New Rules on Single-Use Plastics to Reduce Marine Litter, (Mar. 26, 2019); Plastic Waste, *supra* note 132.

¹³⁶ Circular Economy, *supra* note 131.

The Commission also has the ability to monitor and regulate member states' compliance with the Directive.¹³⁷ The Commission may take legal action against a non-compliant member state by launching an infringement procedure.¹³⁸ The procedure begins with the Commission first sending a formal notice and requesting additional information about the member state's compliance efforts.¹³⁹ The Commission then reviews the member state's information and responds with a formal request for compliance.¹⁴⁰ The formal request includes a description of areas where the member state needs to improve and a timeframe in which to demonstrate initial progress, typically two months.¹⁴¹ The member state then must follow up within the timeframe to update the Commission on the measures it has taken to become compliant.¹⁴² If a member state still does not comply, the Commission then refers the case to the European Court of Justice ("ECJ"), which seeks financial penalties.¹⁴³ An ECJ decision may award financial penalties as a lump sum or as a daily payment, and are determined based on the length of time the member state has been non-compliant, the significance of the breached laws, and the member state's ability to pay.¹⁴⁴ The threat of financial penalties appears to be an effective incentive for compliance as most cases are resolved in the infringement procedure rather than through the ECJ.¹⁴⁵

IV. The United States' Inadequate Response to Plastic Waste

In contrast to the EU, the United States' response to plastic waste is fragmented. At the federal level, plastics are not regulated "except in relation to reduction of solid waste generation."¹⁴⁶ Many

¹³⁷ *Applying EU Law*, EUR. COMM'N, https://ec.europa.eu/info/law/law-making-process/applying-eu-law_en [https://perma.cc/US9N-FDE3] (last visited Oct. 27, 2019).

¹³⁸ *Id.*

¹³⁹ *Infringement Procedure*, EUR. COMM'N, https://ec.europa.eu/info/law/law-making-process/applying-eu-law/infringement-procedure_en [https://perma.cc/K83Y-5N9F] (last visited Oct. 27, 2019).

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ *Infringement Procedure*, *supra* note 139.

¹⁴⁶ U.N. ENV'T PROGRAMME, *supra* note 116, at 3; *see* Solid Waste Disposal Resource Recovery and Conservation Act, 42 U.S.C. § 6914b-1 (2018) (mentioning

have criticized the outdated nature of federal environmental regulations broadly, but particularly as they relate to plastics.¹⁴⁷ The only legislative progress with respect to plastics was Congress's amendment to the Federal Food, Drug and Cosmetic Act with the Microbead-Free Waters Act of 2015.¹⁴⁸ This legislation prohibited the inclusion of plastic microbeads in cosmetics and non-prescription drugs.¹⁴⁹ The legislation was enacted in response to a public health concern that microbeads, too small for water filtration systems, were entering the water supply.¹⁵⁰ Ingested by marine life, these microbeads then entered the food supply and were ultimately ingested by humans.¹⁵¹

While no federal statutes or regulations speak specifically to plastics entering the ocean, the Clean Water Act and the Navigable Protections Water Rule regulate "discharge of pollutants into the navigable waters."¹⁵² The Act and the Rule's evolution demonstrate the challenges of a path forward for federal plastic waste regulation. The Clean Water Act of 1972 ("CWA") authorized the EPA to implement pollution control programs and made any discharge of pollutants into "navigable waters" illegal.¹⁵³ The CWA defined "navigable waters" as "the waters of the United States, including the territorial seas," which refer to the bodies of water subject to federal jurisdiction.¹⁵⁴ However, the CWA did not define "waters of the

plastics only in reference to degradable plastic rings requirement).

¹⁴⁷ See Waterkeeper Alliance, *Legal Petition Seeks Ban on Plastic Pollution from Petrochemical Plants*, WATERKEEPER ALLIANCE (July 23, 2019), <https://waterkeeper.org/legal-petition-seeks-ban-on-plastic-pollution-from-petrochemical-plants/> [<https://perma.cc/98MA-UJSP>].

¹⁴⁸ See Microbead-Free Waters Act of 2015, 21 U.S.C. § 301 (2018); *The Microbead-Free Waters Act: FAQs*, U.S. FOOD & DRUG ADMIN., <https://www.fda.gov/cosmetics/cosmetics-laws-regulations/microbead-free-waters-act-faqs> [<https://perma.cc/GQW6-HE9K>] (last updated Aug. 24, 2020).

¹⁴⁹ *The Microbead-Free Waters Act: FAQs*, *supra* note 148.

¹⁵⁰ *Id.*

¹⁵¹ *See id.*

¹⁵² 33 U.S.C. § 1251(a)(1) (2018).

¹⁵³ §§ 1311(a), 1362(12), 1251; *see Summary of the Clean Water Act*, <https://www.epa.gov/laws-regulations/summary-clean-water-act> [<https://perma.cc/7HV4-X495>] (last visited June 12, 2020) ("The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. 'Clean Water Act' became the Act's common name with amendments in 1972.").

¹⁵⁴ § 1362(7).

United States” (“WOTUS”).¹⁵⁵

WOTUS was defined by a 1986 rule, which specified which types of rivers, streams, wetlands, and other bodies of water were subject to federal jurisdiction.¹⁵⁶ The 2015 Clean Water Rule modified and broadened the definition of WOTUS, expanding federal oversight to more bodies of water that fed into navigable waters.¹⁵⁷ However, lawsuits ensued, criticizing the 2015 Rule as being overly broad, and ultimately resulted in numerous courts enjoining the Rule.¹⁵⁸ This left a patchwork of regulations, with the Rule blocked in twenty-seven states, in effect in twenty-two states and the District of Columbia, and with an unclear status in New Mexico because of a pending lawsuit.¹⁵⁹

In 2019, the 2015 rule was reversed, reverting to the narrower 1986 definition of WOTUS.¹⁶⁰ Then, the 2020 Navigable Waters Protection Rule was finalized and codified a definition of WOTUS.¹⁶¹ As this definition was narrower than the 2015 Clean Water Rule’s, it reduced the number of federally-protected waters,

¹⁵⁵ See, e.g., § 1362; Paul Sonderegger & Spenser Owens, ‘Waters of the United States’ Rule from EPA, Corps May Make Real Estate Development More Easily Achievable and Less Costly, AM. BAR ASS’N, https://www.americanbar.org/groups/real_property_trust_estate/publications/ereport/rpte-ereport-winter-2019/_waters-of-the-united-states-rule-from-epa--corps-may-make--real/ [https://perma.cc/WJX4-XE6C] (last visited June 27, 2020).

¹⁵⁶ 33 C.F.R. §§ 328.3(a)(1)–(4) (1986).

¹⁵⁷ Clean Water Rule: Definition of “Waters of the United States”, 80 Fed. Reg. 37,054, 37,055 (June 29, 2015); *Summary of the Clean Water Act*, *supra* note 153; see Eilperin & Dennis, *supra* note 9.

¹⁵⁸ Valerie Volcovici, *Trump EPA Repeals Obama-Era Water Protections to Boost Industry*, REUTERS (Sept. 12, 2019), <https://www.reuters.com/article/us-usa-epa-water-idUSKCN1VX1XC> [https://perma.cc/22XK-46LR]; Pamela King, *WOTUS Lawsuits Start Long, Muddy Legal Battle*, E&E NEWS (Oct. 24, 2019), <https://www.eenews.net/stories/1061365079> [https://perma.cc/GM6J-PN2L].

¹⁵⁹ Volcovici, *supra* note 158; King, *supra* note 158.

¹⁶⁰ 33 U.S.C. § 1251 (2018); *Definition of “Waters of the United States” – Recodification of Pre-Existing Rules*, EPA, <https://www.epa.gov/wotus-rule/definition-waters-united-states-recodification-pre-existing-rules> [https://perma.cc/WWF7-M3PP] (last visited Nov. 1, 2019); see *What They Are Saying | EPA, U.S. Army Repeal 2015 Rule Defining “Waters of the United States,”* EPA (Sept. 13, 2019), <https://www.epa.gov/newsreleases/what-they-are-saying-epa-us-army-repeal-2015-rule-defining-waters-united-states> [https://perma.cc/WWF7-M3PP]; see also Eilperin & Dennis, *supra* note 9.

¹⁶¹ The Navigable Waters Protection Rule: Definition of “Waters of the United States”, 85 Fed. Reg. 22,250 (Apr. 21, 2020); 40 C.F.R. § 120.2 (2020).

and resulted in numerous legal challenges over weaker environmental regulations.¹⁶² The Navigable Waters Protection Rule has been widely criticized by environmental groups as being too lax.¹⁶³ As EPA Administrator Andrew Wheeler stated regarding environmental regulations after the 2015 Clean Water Rule's repeal, "What we have today is a patchwork across the country We need to have a uniform regulatory approach."¹⁶⁴ However, this patchwork regulation will continue until legal challenges to the Navigable Waters Protection Rule are resolved. And, if the narrower definition of WOTUS stands, fewer pollutants in fewer bodies of waters will be regulated.

Federal legislation and regulations regarding plastics are sorely lacking. And, based on the repeal of the Clean Water Rule, Congress is unlikely to strengthen environmental restrictions in the near future. While environmental reforms lack traction at the federal level, states and municipalities have made progress in reducing the use of single-use plastics.¹⁶⁵ These restrictions have largely been promulgated by states and municipalities bordering oceans.¹⁶⁶ As of 2019, eight states had adopted legislation directed at preventing and discouraging the use of single-use plastics.¹⁶⁷

Similar to the EU member states, these states targeted specific single-use plastics (e.g., bags), and enacted legislation including bans, fees, labeling requirements, recycling mandates, or a combination of these restrictions.¹⁶⁸ California, for example, enacted ban-and-fee legislation, banning non-compostable plastic bags and requiring retailers to charge for compostable bags to

¹⁶² See, e.g., *Chesapeake Bay Found. v. Wheeler*, No. 1:20-cv-01064 (D. Md. filed Apr. 27, 2020); *S. Carolina Coastal Conservation League v. Wheeler*, No. 2:20-cv-01687 (D.S.C. filed Apr. 29, 2020); *California v. Wheeler*, No. 20-cv-03005-RS, 2020 WL 3403072 (N.D. Cal. June 19, 2020); *Navajo Nation v. Wheeler*, No. 2:20-cv-00602 (D.N.M. filed June 22, 2020).

¹⁶³ See, e.g., Volcovici, *supra* note 158; Ariel Wittenberg, *Final WOTUS Rule Drains Wetland Protections*, E&E NEWS (Jan. 23, 2020), <https://www.eenews.net/stories/1062159101> [<https://perma.cc/LZ3U-54XX>].

¹⁶⁴ Eilperin & Dennis, *supra* note 9.

¹⁶⁵ See *State Plastic and Paper Bag Legislation*, NAT'L CONF. ST. LEGISLATURES (Nov. 1, 2019), <http://www.ncsl.org/research/environment-and-natural-resources/plastic-bag-legislation.aspx> [<https://perma.cc/GL6J-BG6E>].

¹⁶⁶ See *id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

incentivize consumers to use reusable shopping bags.¹⁶⁹ Vermont banned plastic bags and placed restrictions on plastic straws and polystyrene containers.¹⁷⁰ The District of Columbia enacted fee legislation, with a surcharge for single-use bags for specific types of businesses.¹⁷¹ In Maine, retailers may only provide single-use plastic bags if they provide collection receptacles on-site and recycle the bags.¹⁷²

In states lacking legislation, municipalities and counties have also progressed in restricting plastics.¹⁷³ Hawaii, for instance, has a de facto statewide ban as its each of its counties has independently enacted bans on non-biodegradable plastic bags.¹⁷⁴ Boston, Chicago, Seattle, and Montgomery County, Maryland have also passed single-use plastic bag bans or levied fees despite their states having no ban.¹⁷⁵ Some states, however, have taken action to limit political subsidiaries from passing ordinances regarding plastics. As of 2019, fourteen states have pre-empted municipality action on single-use plastics, reserving these regulatory decisions for state legislatures.¹⁷⁶

V. A Way Forward for the United States via Subnational Actors

Arguably, the most effective way for the United States to align with emerging international law is at the state and municipal level rather than at the federal level. When the Kyoto Protocol was established in 1997 as an international effort to reduce greenhouse

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ See *State Plastic and Paper Bag Legislation*, *supra* note 165.

¹⁷² *Id.*

¹⁷³ *Id.* On the other hand, some states have repealed subsidiary-specific plastic bag bans. One such example is North Carolina, which in 2017 repealed an eight-year ban of plastic bags on the Outer Banks. See N.C. GEN. STAT. § 130A-22 (2017); *Plastic Bag Ban Repealed After Override of Governor's Veto*, OUTER BANKS VOICE (Oct. 4, 2017), <https://outerbanksvoice.com/2017/10/04/plastic-bag-ban-repealed-after-override-of-governors-veto/> [<https://perma.cc/2MQT-DKLLK>] (discussing the North Carolina General Assembly's override of Governor Roy Cooper's veto on a bill amending local restrictions on the use of single-use plastics).

¹⁷⁴ *State Plastic and Paper Bag Legislation*, *supra* note 165.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.* States with pre-emptive legislation include Arizona, Idaho, Indiana, Iowa, Florida, Michigan, Minnesota, Mississippi, Missouri, North Dakota, Oklahoma, Tennessee, Texas, and Wisconsin.

gas emissions, the United States, responsible for 25% of global emissions, initially signed the Protocol only to withdraw its support in 2001.¹⁷⁷ In response, municipalities like Seattle enacted their own legislation mirroring the Kyoto Protocol.¹⁷⁸ Subnational actors, “[p]articularly on the issue of climate change . . . have debated, promoted, and even adopted international norms, sought to coordinate lines of action with their foreign counterparts, and otherwise taken independent and collective action to address global warming.”¹⁷⁹

States have played a significant role in compliance with international law, which further undercuts the “nationalist conception of international law,”¹⁸⁰ or the idea that international law is dependent upon nations’ adherence. Some states have adopted laws implementing treaties that have not been, and may never be, ratified by the Senate.¹⁸¹ For example, many states have adopted the Uniform Probate Code, which conforms to numerous provisions in the Hague Convention on the Conflicts of Laws Relating to the Form of Testamentary Dispositions, demonstrating that states have incorporated treaty provisions without federal ratification.¹⁸²

Subnational actors like states can also typically effect change faster than the federal government. Some advocates have gone so far as to recommend that states be able to become parties to treaties directly, “with Washington as messenger rather than commander.”¹⁸³ Analyzing states’ roles in international human rights, legal scholar Peter J. Spiro argues, “Better to have some parts of a nation than none at all; if thirty states signed on to the Children’s Rights Convention in the face of the Senate’s continuing failure to ratify it, then that by itself would represent a gain[.]”¹⁸⁴ In addition, adoption of a treaty or regulation by a critical proportion

¹⁷⁷ Resnick, *supra* note 13, at 1645.

¹⁷⁸ *Id.* at 1645–46.

¹⁷⁹ Robert B. Ahdieh, *Foreign Affairs, International Law, and the New Federalism: Lessons from Coordination*, 73 MO. L. REV. 1185, 1186 (2008).

¹⁸⁰ Julian G. Ku, *The State of New York Does Exist: How the States Control Compliance with International Law*, 82 N.C. L. REV. 457, 496 (2004).

¹⁸¹ *Id.* at 498.

¹⁸² *Id.* at 501.

¹⁸³ Spiro, *supra* note 13, at 569.

¹⁸⁴ *Id.*

of subnational units would have “competitive ripples” and “inevitably put pressure on other units to follow suit.”¹⁸⁵

Whether through collaboration or “competitive ripples,” change may also be achieved at the municipal level. For example, in 2005, ten mayors crafted their own climate protection program agreement, which was later adopted by the United States Conference of Mayors and ultimately endorsed by more than 200 mayors.¹⁸⁶ The United States Conference of Mayors and other national organizations, such as the National League of Cities, National Conference of State Legislatures, and National Governors’ Association use “their institutional voices to shape policies.”¹⁸⁷ While many of these organizations were established to influence national policies, they have since expanded their scope to international concerns.¹⁸⁸

As sub-national actors’ participation in international affairs grows,¹⁸⁹ some argue that they should be able to be parties to treaties, and thereby gain more traction on critical issues.¹⁹⁰ The accomplishments highlighted above demonstrate that “a single national voice is [no longer] necessary for coordination,”¹⁹¹ and international law is quickly evolving past the traditional federalist notion. Thus, “[c]oordination can be achieved in foreign affairs even with multiple voices.”¹⁹²

Ideally, the United States would enact federal legislation both comporting with the Convention and mirroring the EU’s flexible regulatory framework, limiting its contributions to the plastic waste crisis. Because federal action is unlikely, subnational actors’ initiatives are the best way for the United States to limit the use of single-use plastics as a major step in preventing plastic waste from entering food and water systems. Subnational actors not only play a critical role in the United States’ ability to reduce single-use plastics, but also directly bear the burden of the increasing strain on recycling programs, landfills, and debris management.

Similar to states and municipalities’ responses to the Uniform

¹⁸⁵ *Id.*

¹⁸⁶ Resnick, *supra* note 13, at 1645–46.

¹⁸⁷ *Id.* at 1647.

¹⁸⁸ *See id.* at 1647–48.

¹⁸⁹ Ahdieh, *supra* note 179, at 1188.

¹⁹⁰ Spiro, *supra* note 13, at 569.

¹⁹¹ Ahdieh, *supra* note 179, at 1188.

¹⁹² *Id.* at 1185.

Probate Code and Kyoto Protocol, these subnational actors could just as easily adopt provisions of the Convention. Simultaneously, they can analyze the EU member states' varied approaches to identify the best means to implement their own unique plastic waste regulations. The best option for the United States to comply with international law in addressing plastic waste may thus be accomplished by subnational actors, moving far past the "nationalist conception of international law."¹⁹³

VI. Conclusion

The United States plays a crucial part in contributing to the global plastics crisis and should therefore play a crucial role in resolving it. At the federal level, the United States will likely never ratify the Convention, especially since it argued against the adoption of the recent plastic waste amendments. Alternatively, the United States could take voluntary measures, as it argued for during the Convention, and it could follow the EU's model by allowing states to identify individual means to achieve stated goals. However, since the U.S. federal government has recently relaxed, rather than strengthened, its environmental regulations, this solution too is highly unlikely.

Therefore, the best alternative is for subnational actors, the states and municipalities most directly impacted by the drastic reduction of plastic waste exports and the resulting challenges, to lead the United States in reducing single-use plastics to ultimately reduce the production of plastic waste. States and municipalities can pass legislation individually, compete, and collaborate to comport with international law.

¹⁹³ Ku, *supra* note 180, at 467.

